J-10

CITY COUNCIL AGENDA ITEM

TO: Members of the Troy City Council
FROM: Lori Grigg Bluhm, City Attorney LGB
Allan T. Motzny, Assistant City Attorney ATM
DATE: July 7, 2016
SUBJECT: Stonecrest Planned Unit Development Conservation Easement

The attached Agreement for Conservation Easement is the last remaining piece for the Stonecrest Planned Unit Development (PUD) Agreement on Livernois Road, across from Town Center. This PUD Agreement was finalized on November 23, 2015, and the agenda materials for this item are provided as background. The PUD Agreement required the parties to negotiate a conservation easement for an estimated 5.93 acres of the easternmost property. The conservation agreement was not able to be completed prior to the finalization of all other Stonecrest PUD documents, since we were awaiting a springtime wetlands delineation. The wetlands delineation has now been completed, and is attached. Based on this delineation, the conservation easement area governs the easternmost 5.77 acres of property, which includes both regulated and unregulated wetlands.

As required by the Stonecrest PUD documents, the attached proposed conservation easement prohibits any development on the designated property, and requires it to remain in an undeveloped state. The developer, as grantor, is required to maintain the easement area, and handle the upkeep and maintenance of the property. The City is the grantee of the easement, and has the right to enforce the conservation easement provisions. The conservation easement is required to be recorded with the Oakland County Register of Deeds, and is perpetual.

The purpose of the conservation easement is to protect the functions and values of the existing wetlands on the property, and to preserve open space. It will provide for long term protection and preservation of natural resources and natural features. Based on this public benefit, City Administration recommends approval of the attached Agreement for Conservation Easement.

Please let us know if you have any questions concerning this Agreement or the Stonecrest PUD.

Proposed Resolution

RESOLVED, that the Agreement for Conservation Easement by and between NP Troy, LLC and the City of Troy is hereby approved, and the Mayor and City Clerk are authorized to execute the document, and authorize its recording with the Oakland County Register of Deeds. A copy of the approved Agreement for Conservation Easement shall be attached to the original minutes of this meeting.

AGREEMENT FOR
CONSERVATION EASEMENT

THIS CONSERVATION EASEMENT is entered into on June 29, 2016, by and between **NP TROY, LLC,** a Missouri limited liability company, whose address is 5015 NW Canal Street, Suite 200, Riverside, Missouri 64150 ("Grantor") and **THE CITY OF TROY**, a Michigan municipal corporation, whose address is 500 West Big Beaver Road, Troy, Michigan 48084 ("Grantee").

The Grantor is the fee simple title holder of real property located in the City of Troy, Oakland County, State of Michigan, legally described and depicted in a survey in **Exhibit "A"** attached hereto.

The Conservation Easement (the "Easement Premises") consists of ± 5.77 acres. A survey map legally describing and depicting the Easement Premises is included as part of **Exhibit "A"** attached hereto. The Parties shall record this Agreement with the Oakland County Register of Deeds.

ACCORDINGLY, for value received of One Dollar ($1.00), Grantor hereby conveys unto the Grantee, forever and in perpetuity, this Conservation Easement as set forth in this Agreement on the terms and conditions stated below.

Covenants, Terms, Conditions and Restrictions

1. The purpose of this Agreement is to protect the functions and values of existing or established wetlands and flood plain areas and their natural resource values on the Easement Premises, and the protection of the benefits to the public derived from wetlands, flood plains and

integral habitat, by requiring Grantor to maintain the Easement Premises in its natural and undeveloped condition as hereinafter stated and limited.

2. Except as otherwise provided in this Agreement, required under applicable law, or as permitted in writing by Grantee in accordance with this Agreement, Grantor shall refrain from, and seek to limit any other person from, altering or developing the Easement Premises in any way in violation of this Agreement. This includes the following:

(a) Any material alteration of the surface topography; except as otherwise permitted herein;

(b) Establishment of any new paths, trails, or roads;

(c) The placement of fill material;

(d) Dredging, removal or excavation of any soil or minerals;

(e) Drainage of surface or groundwater, except as presently exists in the flood plain, or as specified in any engineering drawings approved by the City of Troy pursuant to the Development Agreement for Stonecrest Senior Living and Memory Care Residence and Joint City Park Development between NP Troy, LLC and the City of Troy, Michigan dated November 23, 2015, and recorded in Liber 49299, Page 1, Oakland County Records, as hereafter amended;

(f) Construction or placement of any structure;

(g) Plowing, tilling, mowing or cultivating the soils or vegetation;

(h) Removal of vegetation, including the planting of non-native species;

(i) Ranching, grazing, farming;

(j) Use of chemical herbicides, pesticides, fungicides, fertilizers, spraying with biocides, larvicides or any other agent or chemical treatments unless required under applicable law or permitted in writing by the Grantee;

(k) Construction of unauthorized utility or petroleum lines, unless permitted in writing by the Grantee;

(l) Storage or disposal of ash, garbage, trash, debris, abandoned equipment or accumulation of machinery bio-solids or other waste materials, including accumulated vegetative debris, such as grass clippings, leaves, yard waste or other material collected and deposited from areas outside the Easement Premises; provided that if third-parties are coming onto the Easement Premises in violation of Section 2, paragraphs (l) and (m)of this Agreement, the Grantee may, in writing, permit Grantor to erect fences, berms, signs, notices, warnings, or other devices to restrict or eliminate such acts of third parties;

(m) Use or storage of automobiles, trucks or off-road vehicles, including, but not limited to, snowmobiles, dune buggies, all-terrain vehicles and motorcycles;

(n) Placement of billboard or signs, except as otherwise allowed in this Agreement, or by written permission of Grantee to keep trespassers and third parties from coming onto or otherwise utilizing the Easement Premises;

(o) Actions or uses detrimental or adverse to water conservation and purity, and fish, wildlife, wetlands or habitat preservation.

3. Cutting down, burning, destroying, or otherwise altering or removing living trees, tree limbs, shrubs or other vegetation is prohibited within the Easement Premises, except with the written permission of Grantee, granted expressly for the removal of trees or limbs to eliminate danger to health and safety, to reduce a threat of infestation posed by diseased vegetation, or invasive non-native plant species that endanger the health of native species.

4. Grantor is not required to restore the Easement Premises due to alterations resulting from causes beyond the Grantor's control, including, but not limited to, unauthorized actions by third parties; natural causes or natural disasters, such as unintentional fires, floods, storms or natural earth movement, or natural or normal changes occurring within the flood plain or wetlands areas, unless the MDEQ or FEMA requires restoration after Grantor has timely elected to exercise any administrative or legal remedies available to it relating to any required restoration.

5. Grantor, or its authorized agents or representatives, may enter the Easement Premises to perform activities within the Easement Premises consistent with this Agreement, including, but not limited to, any legal requirements of the Michigan Department of Environmental Quality ("MDEQ") or the Federal Emergency Management Agency ("FEMA") relating to the flood plain within the Easement Premises. Any activities undertaken pursuant to this Agreement shall be performed in a manner to minimize the adverse impacts to existing wetland areas or the flood plain within the Easement Premises.

6. Grantor warrants that Grantor has good and sufficient title to the Easement Premises described in **Exhibit "A"**.

7. Grantor represents that, to the Grantor's actual knowledge, but without any environmental studies having been carried out and without a thorough examination of the Easement Premises, that no hazardous substances or hazardous or toxic wastes have been generated, treated, stored, used, disposed of or deposited in or on the Easement Premises.

8. This Agreement does not grant or convey to Grantee or members of the general public any right to possession or use of the Easement Premises. Grantee shall have the right to enforce this Agreement.

9. Grantor shall continue to be responsible for the upkeep and maintenance of the Easement Premises to the extent it is required by law.

10. Grantor or Grantee, and their respective authorized employees and agents, may enter the Easement Premises at reasonable times to determine whether the Easement Premises are being maintained in compliance with the terms of this Agreement and for purposes of taking any significant corrective actions. If Grantee is entering the Easement Premises for the purpose of taking significant corrective actions resulting from the acts of Grantor, its employees, agents, successors or assigns, Grantor shall be provided with not less than thirty (30) days prior written notice to provide the opportunity to cure any failure of Grantor, its successors or assigns, to comply with its obligations under this Agreement.

11. This Agreement shall be binding upon the successors and assigns of the Parties and shall run with the land in perpetuity. In the event the conservation easement granted hereunder shall ever be condemned, in whole or in part, under the right of eminent domain, such proceeds shall be apportioned between the Grantee and the Grantor on the basis of the relative monetary values of the conservation easement granted under this Agreement and the remaining Easement Premises, if any.

12. This Agreement may be modified only in writing through amendment of the Agreement by the Parties. Any modification shall maintain the purpose and intent of the Agreement as set forth in paragraph 1 above.

13. A delay in enforcement shall not be construed as a waiver of the Grantee's rights to enforce the conditions of this Agreement.

14. If any portion of this Agreement is determined to be invalid by a court of law, the remaining provisions will remain in force.

15. This Agreement will be construed in accordance with Michigan law. All legal action related to this Agreement must be filed and pursued in Michigan state courts.

16. This documents sets forth the entire agreement of the Parties. It is intended to supersede all prior discussions or understandings.

17. After this Agreement is executed, Grantor shall have the right to place and maintain, at Grantor's expense, signs, fences, notices, warnings, or other suitable markings on the Easement Premises to clearly demarcate the boundary of the Easement Premises and/or to caution third parties about trespassing or violating the terms of this Agreement. All signage must comply with City of Troy ordinances.

18. The terms "Grantor" and "Grantee", wherever used in this Agreement, and any pronouns used in place thereof, shall include, respectively, the above-named Grantor and its successors, assigns, and the above-named Grantee and its successors and assignees. Grantee

may not assign or transfer its rights under this Agreement to anyone other than a valid, recognized legal municipal entity which legally succeeds Grantee, if any.

INWITNESS WHEREOF, the Parties have executed this Conservation Easement Agreement on the date first above written. In signing this Agreement, the signatories warrant that they have the authority to execute this Conservation Easement Agreement.

"GRANTOR"

NP TROY, LLC
a Missouri limited liability company

By:_____
NATHANIEL HAGEDORN
Its: Manager

Dated: June 29, 2016

STATE OF MISSOURI)
) SS
COUNTY OF PLATTE)

The foregoing instrument was acknowledged before me this 29th day of June, 2016, by NATHANIEL HAGEDORN, the Manager of NP Troy, LLC, a Missouri limited liability company, on behalf of the company.

_____
Print Name: Amy M. Smith
Notary Public, ~~Platte~~ Clay County, Missouri
My Commission Expires: December 1, 2017
Acting in the County of Platte

AMY M. SMITH
Notary Public - Notary Seal
STATE OF MISSOURI
Clay County
My Commission Expires: December 1, 2017
Commission # 13552904

"GRANTEE"

CITY OF TROY, a Michigan Municipal Corporation

By:_____
Name: Dane Slater
Its: Mayor

Dated: _____, 2016

By:_____
Name: M. Aileen Dickson
Its: City Clerk

Dated:_____, 2016

STATE OF MICHIGAN)
) SS.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2016, by Dane Slater, Mayor and M. Aileen Dickson, City Clerk of the City of Troy, a Michigan municipal corporation, on behalf of the Corporation.

_____
Print Name:_____
Notary Public, Oakland County, Michigan
My Commission Expires:_____
Acting in the County of Oakland

DRAFTED BY:
Thomas G. Sawyer, Esq.
Hutson, Sawyer, Rupp & Schroeder
292 Town Center Dr., Troy, MI 48084

WHEN RECORDED RETURN TO:
M. Aileen Dickson, City Clerk
City of Troy
500 W. Big Beaver Rd.
Troy, MI 48084

EXHIBIT "A"

LEGAL DESCRIPTIONS

LEGAL DESCRIPTION – "STONECREST" PARCEL:

(Per PEA, Inc.)

Part of the North 1/2 of Lot 22, and part of Lot 23 and Lot 24 of "Supervisor's Plat No. 26", as recorded in Liber 57, Page 59, Oakland County Records, except the West 23 feet of the North 1/2 of Lot 22, and the West 23 feet of Lot 23 and Lot 24, thereof, being lands in the Southwest 1/4 of Section 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, more particularly described as:

Commencing at the West 1/4 of said Section 22;
thence along the West line of said Section 22, S00°24'00"W, 393.83 feet;
thence S89°33'46"E (recorded as S89°36'00"E), 75.00 feet to the East line of Livernois Road (75 foot half width) and the POINT OF BEGINNING;

thence continuing S89°33'46"E, 1256.95 feet along the North line of said Lot 24 to the Northeast corner of said Lot 24, also being the East line of said "Supervisor's Plat No. 26";
thence along said East line, S00°30'14"E (recorded as S00°30'E), 325.93 feet;
thence N89°33'24"W, 1262.09 feet to the aforementioned East line of Livernois Road;
thence along said East line N00°24'00"E, 325.75 feet to the POINT OF BEGINNING.
Containing ±9.421 acres of land. Subject to any easements and restrictions of record.

Legal Description – Conservation Area:

(Per PEA, Inc.)

A parcel of land over the above described "Stonecrest" parcel, being part of the Southwest 1/4 of Section 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, said easement being more particularly described as:

Commencing at the West 1/4 of said Section 22;
thence along the West line of said Section 22, S00°24'00"W, 393.83 feet;
thence S89°33'46"E, 75.00 feet to the East line of Livernois Road (75 foot half width);
thence continuing S89°33'46"E, 506.21 feet along the North line of said Lot 24 to the POINT OF BEGINNING;

thence along said easement the following nine (9) courses:

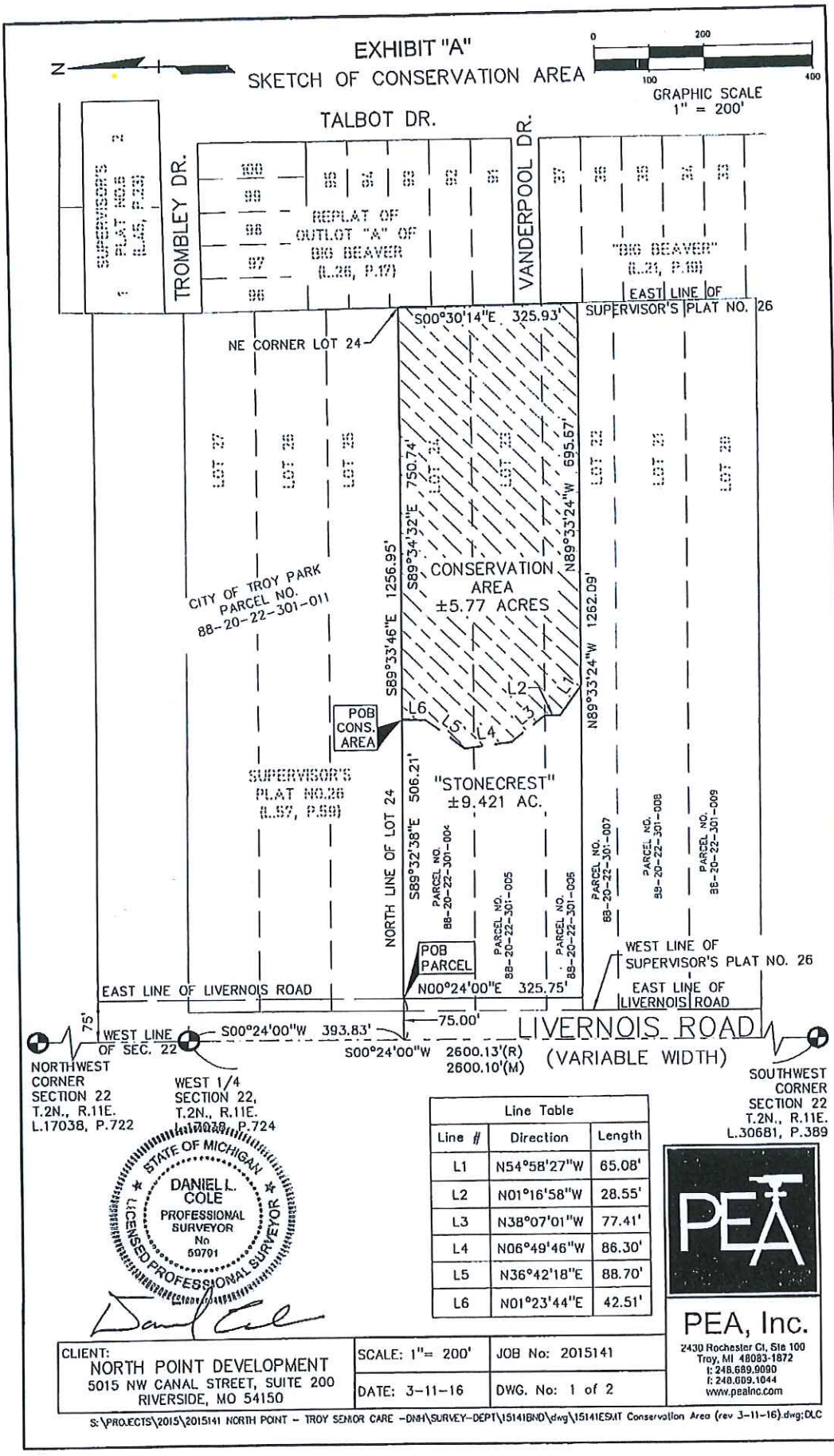
1) continuing S89°33'46"E, 750.74 feet to the Northeast corner of said Lot 24, also being the East line of said "Supervisor's Plat No. 26";
2) along said East line, S00°30'14"E, 325.93 feet;
3) N89°33'24"W, 695.67 feet;
4) (L1) N54°58'27"W, 65.08 feet;
5) (L2) N01°16'58"W, 28.55 feet;
6) (L3) N38°07'01"W, 77.41 feet;
7) (L4) N06°49'46"W, 86.30 feet;
8) (L5) N36°42'18"E, 88.70 feet and;
9) (L6) N01°23'44"E, 42.51 feet to the aforementioned North line of Lot 24 and the POINT OF BEGINNING.

Containing ±5.77 acres of land.

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1672
t: 248.689.9090
f: 248.689.1044
www.peainc.com

CLIENT: NORTH POINT DEVELOPMENT 5015 NW CANAL STREET, SUITE 200 RIVERSIDE, MO 54150	SCALE: –	JOB No: 2015141
	DATE: 3-11-16	DWG. No: 2 of 2

S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE –DNH\SURVEY-DEPT\15141BND\dwg\15141ESMT Conservation Area (rev 3-11-16).dwg;DLC



Line Table		
Line #	Direction	Length
L1	N54°58'27"W	65.08'
L2	N01°16'58"W	28.55'
L3	N38°07'01"W	77.41'
L4	N06°49'46"W	86.30'
L5	N36°42'18"E	88.70'
L6	N01°23'44"E	42.51'

STATE OF MICHIGAN
DANIEL L. COLE
PROFESSIONAL SURVEYOR
No 50701
LICENSED PROFESSIONAL SURVEYOR

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

CLIENT: NORTH POINT DEVELOPMENT 5015 NW CANAL STREET, SUITE 200 RIVERSIDE, MO 54150	SCALE: 1"= 200'	JOB No: 2015141
	DATE: 3-11-16	DWG. No: 1 of 2

S:\PROJECTS\2015\2015141 NORTH POINT - TROY SENIOR CARE -DNH\SURVEY-DEPT\15141BND\dwg\15141ESMT Conservation Area (rev 3-11-16).dwg;DLC

Mr. Allan Motzny
Assistant City Attorney
City of Troy
500 W. Big Beaver
Troy, MI 48084

June 17, 2016

Re: Conservation Area & Easement for "Stonecrest Senior Living and Memory Care Residences and Joint City Park Development"

Dear Allan,

Please consider this letter and enclosed documentation additional information for the "Stonecrest Senior Living and Memory Care Residences and Joint City Park Development" with the intent of establishing the conservation area and easement.

I have enclosed correspondence from the civil engineer of record, wetland boundary survey, and boundary maps from the National Wetland Inventory to establish the baseline of this conservation area.

Please review the enclosed documents and provide written response as to their receipt and the City agreement for our records.

Regards,

Jed Momot | Project Manager

NorthPoint Development
d: 816.384.2293 | c: 573.366.8829
5015 NW Canal Street - Suite 200
Riverside, MO 64150
www.beyondthecontract.com

Enclosures: Letter – May 31, 2016 Re: "Wetland Delineation, 26 Acre Site – Final Boundary Determination"

Letter – December 18, 2016 Re: "Wetland Delineation, 26 Acre Site"

Wetland Boundary Survey dated May 3, 2016

NWI (National Wetland Inventory) Troy Stonecrest Boundary Map

Cc: Mark Pomerenke, NorthPoint Development

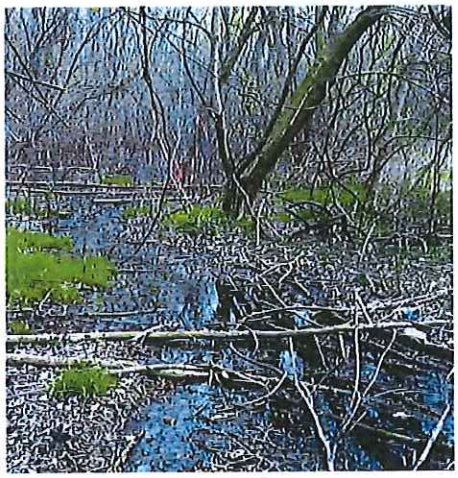
Civil Engineers | Land Surveyors | Landscape Architects
experienced. responsive. passion for quality.
Branch Office: 7927 Nemco Way, Suite 115 • Brighton, MI 48116
t: 517.546.8583 • f: 517.546.8973 • www.peainc.com

May 31, 2016
PEA Project No. 2015-141

Mr. Mark Pemerenke
Northpoint Development
5105 NW Canal Street, Suite 200
Riverside, MO 64150

RE: Wetland Delineation, 26 Acre Site - Final Boundary Determination
Stonecrest
City of Troy, Michigan

On May 3, 2016, the Michigan Department of Environmental Quality (MDEQ) inspected the subject site and reviewed the PEA wetland boundary. The attached sketch dated May 3, 2016 reflects the final wetland boundary as approved by the MDEQ. The photo below illustrates the seasonal wetland hydrology at the time of the MDEQ inspection.



Prepared by:
PEA, INC.

Jeffrey T. Smith, PLA, LEED AP
Director of Landscape Architecture

Civil Engineers | Land Surveyors | Landscape Architects
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December 18, 2015
PEA Project No. 2015-141

Mr. Mark Pemerenke
Northpoint Development
5105 NW Canal Street, Suite 200
Riverside, MO 64150

RE: Wetland Delineation, 26 Acre Site
Stonecrest
City of Troy, Michigan

On December 10, 2015, PEA, Inc. evaluated the subject property for the field indicators of the presence of wetlands as defined by the State of Michigan. The site was inspected for the presence of all three wetland indicators (wetland hydrology, hydric soils, and hydrophytic vegetation) as defined by USACE wetland delineation manual (1987) and The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0).

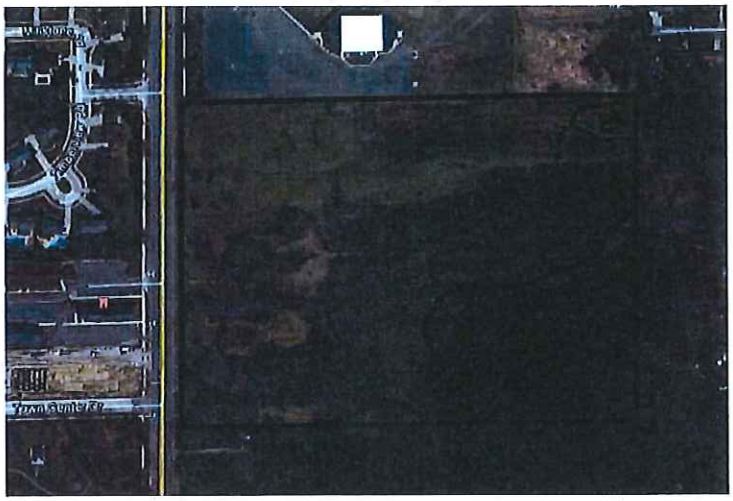
The combined subject parcels are approximately 26 acres. The site lies east of Livernois Road in Troy. The site previously had single family residential homes, but is currently vacant land. The majority of the property consists of wooded or shrubby areas with open lawn or fields being concentrated near the road frontage along Livernois or at the north end of the site. Two wetlands were found on the site. One large wetland area occupies the east end of the property and a smaller emergent wetland was found in the northeast corner of the site. Well defined hydric soils were found throughout the property, but wetlands were only identified in the areas where all three wetland indicators were present. The following is a description of the wetland found on the property.

Wetland A (flags A-1 to A-25)
This is a large wooded wetland with some pockets of scrub shrub and emergent wetland. The wetland occupied the east side of the property. The wetland was dry at the time of the delineation, but there were indicators of hydrology including water marks on trees, cracked soils, sparsely vegetated areas or bare soils and water stained leaves. The hydric soil indicator (A12) *thick dark surface* was present. The hydric soils extended well beyond the wetland boundary which was defined primarily by evidence of wetland hydrology and a change in the vegetative character. Wetland vegetation in the wooded areas included box elder (*Acer negundo*), black willow (*Salix nigra*) and cottonwood (*Populus deltoides*). The pockets of emergent wetland included reed canary grass (*Phalaris arundinancea*) and common reed grass (*Phragmites australis*).

Wetland B (flags B-1 to B-6)
This is an emergent wetland in the northeast corner of the property. Water was found at an approximate depth of 12 inches and a mowed area that was included in the wetland boundary was saturated with 2-3 inches of surface water. The wetland was dominated by common reed grass (*Phragmites australis)* but also included redtwig dogwood (*Cornus stolonifera*). The hydric soil indicator (A12) *thick dark surface* was present. The hydric soils is this wetland also extended beyond the wetland boundary which was defined primarily by evidence of wetland hydrology and a change in the vegetative character.

Wetland A

Wetland B



Map of approximate wetland locations

Michigan Department of Environmental Quality wetland regulations

Wetlands within 500' of an inland lake, pond, river, or stream, as defined by Part 303 of the Wetlands Protection Act are considered a regulated wetland.

Wetlands that are not within 500' of an inland lake, pond, river or stream, but are more than 5 acres in size are considered regulated wetlands.

The MDEQ reserves the right to regulate wetlands less than 5 acres in size and more than 500 feet from an inland lake, pond, river, or stream if the MDEQ has determined that these wetlands are essential to the preservation of the State's natural resources.

The MDEQ requires that any wetland alterations that total over 1/3 of an acre in size must be mitigated. The MDEQ can also require mitigation of smaller areas of disturbance, if they believe the wetland to be of high environmental significance for habitat or water quality. The preference of the MDEQ is that wetland mitigation takes place on the project property.

Opinion of regulatory status

Many factors influence the extent of a wetland boundary, including weather patterns, drainage, changes in vegetation, and activities on the site or on adjacent properties at the time of the investigation. The wetland observations completed by PEA for the subject parcel are based on the conditions of the site at the time of our investigation and current policy regarding the procedures used to delineate wetlands.

Please be advised that the MDEQ, U.S. Army Corps of Engineers, and the U.S. Environmental Protection Agency regulate wetlands and ultimately reserve final judgment on the extent of wetlands on any given site. The determination of a wetland on a specific site can vary depending on the conditions offered above, as well as on the agency representative conducting the determination, and current wetland regulations.

The following regulatory status of the wetlands is the opinion of PEA, Inc. based on the field conditions at the time of the wetland delineation and verification in December of 2015.

WETLAND 'A' is a regulated wetland due to its size of over 5 acres

WETLAND 'B' is an unregulated wetland due to its size of less than 5 acres. This is wetland is also over 500' from an inland lake, stream, or pond.

Prepared by:
PEA, Inc.

Jeffrey T. Smith, PLA, LEED A.P.
Project Manager

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STONECREST TROY City/County: TROY / OAKLAND Sampling Date: 12-10-15
Applicant/Owner: NORTHPOINT DEVELOPMENT State: MI Sampling Point: A
Investigator(s): JTS Section, Township, Range: S22, T2N, R11E
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): CONCAVE
Slope (%): _____ Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: _____ NWI classification: PEOLCX - wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	Is the Sampled Area within a Wetland? Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks: FLAGS A-1 - A-25

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'R)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	45	Y	FACW-
2. Populus deltoides	40	Y	FAC+
3. Salix nigra	15	N	OBL
4.			
5.			
	100	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15'R)			
1. Salix nigra	15	Y	OBL
2.			
3.			
4.			
5.			
	15	= Total Cover	

Herb Stratum (Plot size: 5'R)			
1. Poa pratensis	15	Y	FAC-
2. Fragaria vesca	5	Y	FACU
3. Asarum canadense	5	Y	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25	= Total Cover	

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
12	10YR 2/1	100	N/A				ORGANIC	dry
24	10YR 8/1	95	10YR 5/8	10	PL	D	Mineral	MOIST

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☑ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (Includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Stonecrest, Troy City/County: Troy, Oakland Sampling Date: 12-10-15
Applicant/Owner: Northpoint Development State: Sampling Point: ~~A~~ B3
Investigator(s): Section, Township, Range: S22, T2N, R11E
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none):
Slope (%): Lat: Long: Datum:
Soil Map Unit Name: NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	Is the Sampled Area within a Wetland? Yes ✓ No
Hydric Soil Present?	Yes ✓ No	
Wetland Hydrology Present?	Yes ✓ No	

Remarks: FLAGS B-1 - B-6

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'R)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15'R)			
1. Cornus stolonifera	25	Y	FACW
2. Salix nigra	10	N	OBL
3. Crataegus	10	N	UPL
4.			
5.			
	45 = Total Cover		

Herb Stratum (Plot size: 5'R)			
1. Phragmites australis	80	Y	FACW+
2. Phalaris arundinacea	15	N	FACW+
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	95 = Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
12	10YR 3/1	100	N/A				Organic	moist
24	10YR 8/1	90	10YR 5/8	10	PL	D	Mineral	wet - water in hole

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
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- ___ Inundation Visible on Aerial Imagery (B7)
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- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): _____

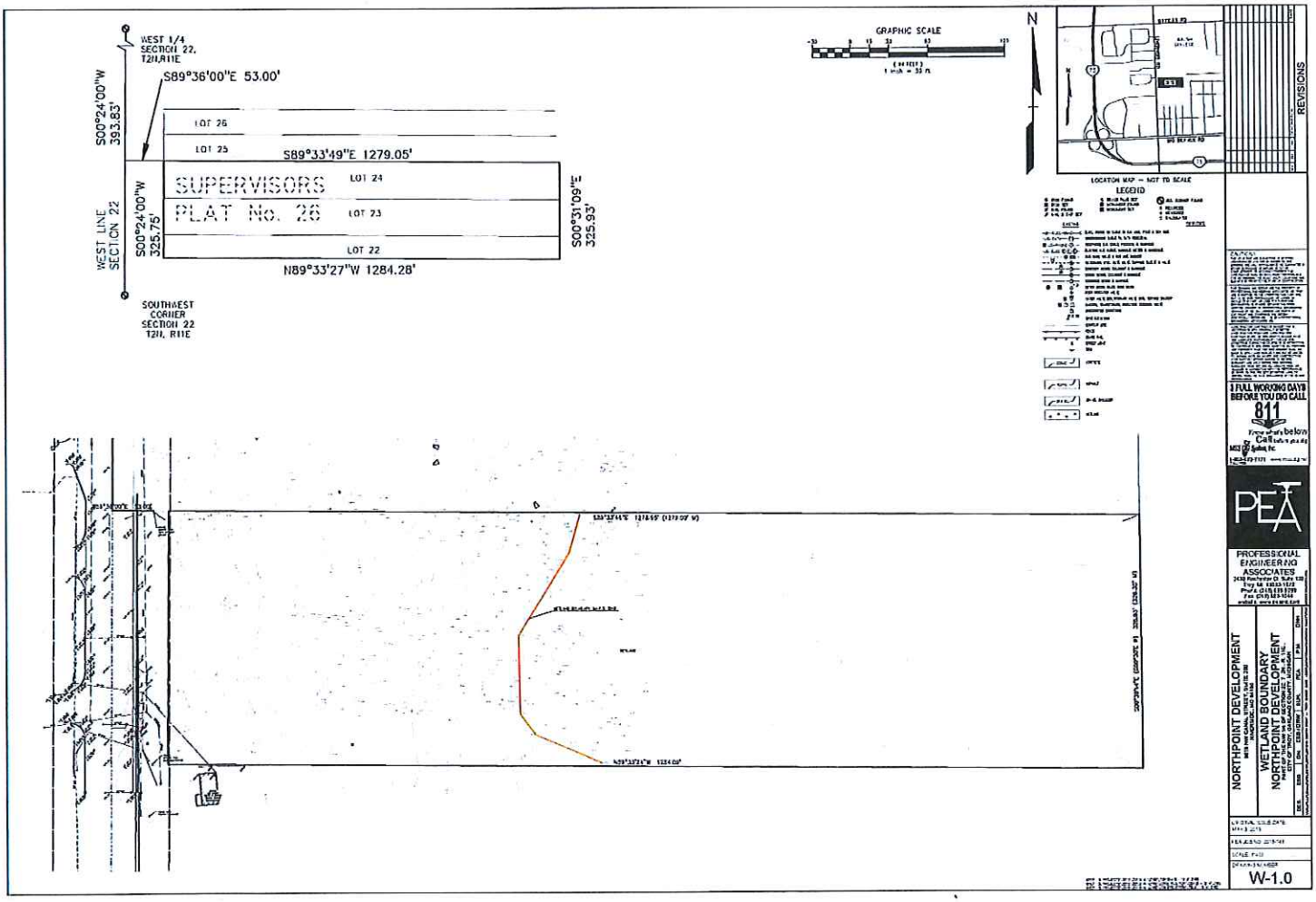
Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 12

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:


WEST 1/4
SECTION 22,
T2N,R11E
S89°36'00"E 53.00'
S00°24'00"W
393.83'
LOT 26
LOT 25
S89°33'49"E 1279.05'
SUPERVISORS
PLAT No. 26
LOT 24
LOT 23
LOT 22
S00°24'00"W
325.75'
WEST LINE
SECTION 22
S00°31'09"E
325.93'
N89°33'27"W 1284.28'
SOUTHWEST
CORNER
SECTION 22
T2N, R11E
GRAPHIC SCALE
N
LOCATION MAP — NOT TO SCALE
LEGEND
REVISIONS
3 FULL WORKING DAYS
BEFORE YOU DIG CALL
811
Know what's below
Call
PEA
PROFESSIONAL
ENGINEERING
ASSOCIATES
NORTHPOINT DEVELOPMENT
WETLAND BOUNDARY
NORTHPOINT DEVELOPMENT
W-1.0

U.S. Fish and Wildlife Service

National Wetlands Inventory

TROY STONECREST NATIONAL WELANI

May 27, 2016

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

CITY COUNCIL AGENDA ITEM

Date: November 18, 2015

To: Brian Kischnick, City Manager

From: Mark F. Miller, Director of Economic & Community Development
R. Brent Savidant, Planning Director

Subject: PUBLIC HEARING - PLANNED UNIT DEVELOPMENT APPLICATION (PUD 014) – Proposed Stonecrest Planned Unit Development, East side of Livernois between Big Beaver and Wattles, Section 22, Currently Zoned R-1E (One Family Residential) District

The applicant, Northpoint Development, seeks approval for the proposed Stonecrest Planned Unit Development (PUD). The applicant proposes a 100-bed, 70,000 square foot assisted living facility on the subject site.

The site abuts the undeveloped City park site to the north, which is proposed to include a trailhead and dog park. The applicant proposes to enter into a partnership with the City to increase the overall development potential of the subject site while also assisting the City with development of the park site. A significant portion of the applicant's site is encumbered by wetlands and floodplain. The applicant proposes to use the City's park site for land balancing, stormwater management and some parking. In exchange for using City property, the applicant proposes contributing the following benefits:

- Construction of an 80-space shared parking lot, entry drive and landscaping located on City park property
- Construction of sidewalk along Livernois and internal sidewalks on City park property
- Site grading for City park property
- Construction of detention basin and fountain on City park property to be used as amenity for City park
- $50,000 in contribution for City park improvements

Improvements on the City park property will be constructed concurrently with construction of the senior assisted living project. Ongoing future maintenance responsibilities are outlined in Attachment 1 of this memorandum.

The applicant indicated they have met with residential neighbors potentially affected by the development, to listen to their concerns and address these concerns through site design.

The Planning Commission held a public hearing on this item on September 22, 2015 and recommended approval of the application by an 8-0 vote, subject to a number of conditions. All conditions were addressed in the attached site plan.

CITY COUNCIL AGENDA ITEM

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the project. City Management recommends approval of the Planned Unit Development project.

_____ _____

City Attorney's Review as to Form and Legality Date

Attachments:

1. Outline of Maintenance Responsibilities
2. Map
3. Site plan
4. Minutes from September 22, 2015 Planning Commission Regular meeting
5. Agenda item from September 22, 2015 Planning Commission Regular meeting
6. Public Comment
7. PUD Agreement

G:\PUD's\PUD 014 Stonecrest\CC Memo_Public Hearing 2015 11 23.doc

ATTACHMENT 1 to REMA

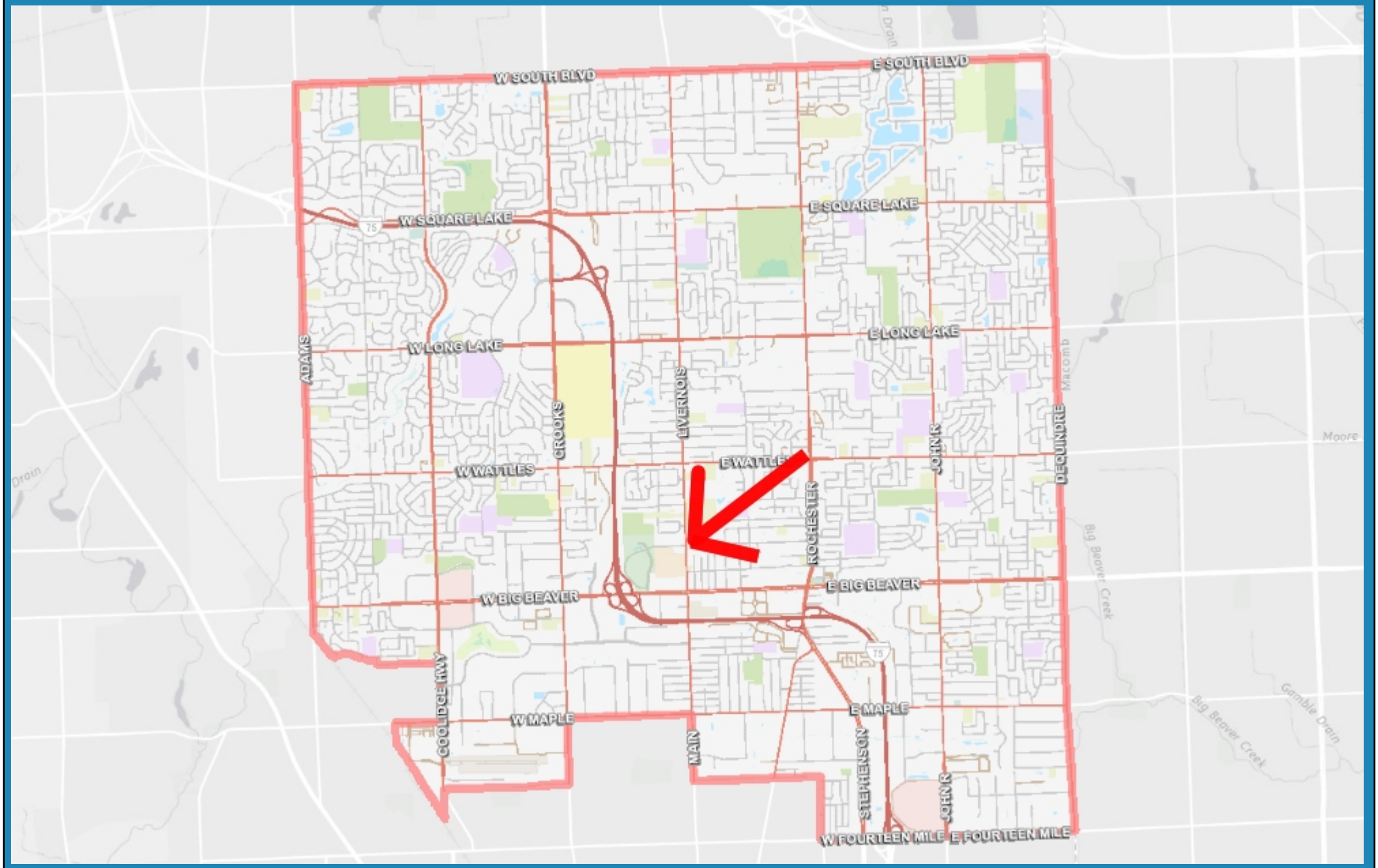
DETAILED OUTLINE OF MAINTENANCE, UPKEEP, REPAIR AND REPLACEMENT RESPONSIBILITIES OF GRANTOR (CITY OF TROY) AND GRANTEE (DEVELOPER) ON GRANTOR PROPERTY (INCLUDING THE PERPETUAL EASEMENTS AND OTHER AREAS OF THE CITY PARK PROPERTY) AND BY GRANTEE (DEVELOPER) ON THE GRANTEE PROPERTY

ITEM	GRANTOR/CITY OF TROY RESPONSIBLE FOR MAINTENANCE, UPKEEP, REPLACEMENT AND REPAIR	GRANTEE/DEVELOPER RESPONSIBLE FOR MAINTENANCE, UPKEEP, REPLACEMENT AND REPAIR
GRANTOR/CITY PARK PROPERTY PERPETUAL EASEMENT AND OTHER LOCATIONS		
Concrete Sidewalks – Snow Removal (including along Livernois Road and connecting sidewalks from parking lot to Developer assisted living facility, but *excluding* asphalt or concrete pathways)		X
Concrete Sidewalks – Slab Replacement/Repairs	X	
Asphalt Pathways – Snow Removal	X	
Asphalt Pathways – Surface Repairs	X	
Parking Lot/Entry Drive Easement – Repair and Resurfacing/Restriping		X

Parking Lot/Entry Drive Easement Sweeping	X	
Parking Lot/Entry Drive Easement – Snow Removal		X
Parking Lot Easement Lighting – Electricity Cost		X
Parking Lot Easement Lighting - Repair/replace Fixtures Bulbs, electrical conduit and wires as necessary		X
City Park Lighting (Non Parking Lot Easement) – Electricity Cost	X	
City Park Lighting (Non Parking Lot Easement) - Repair/replace Fixtures Bulbs, electrical conduit and wires as necessary	X	
Storm Water Detention/Retention Easement (Including Bio Swales) – Grass cutting, weed removal, bank stabilization, general cleanup, dredging and repair	X	
Storm Water Detention/Retention Easement - Keep pipes and drains reasonably clear of debris		X
Fountain – Mechanical Maintenance, Repair and Replacement and Storage		X
City Park Amenities (All Buildings, Structures, Fences/Gates) – Maintenance, Repair and Replacement	X	
City Park Amenities – Electricity Cost	X	
City Park Trash Pickup/Dog Waste Pick-up and Bag Replacement	X	
Ancillary City Park Amenities (including but not limited to Benches, Trash Cans, Bicycle Racks) – Maintenance, Repair and Replacement	X	

Turf Grass – Grass Cutting, Sod Replacement, Weed Maintenance, Repairs and Replacement on City of Troy Property	X	
City Park Landscaping (All non-turf grass Plant Materials including trees, shrubs, flowers) – Pruning, Watering, Replacement	X	
Assisted Living Facility Ground Sign Easement – Maintenance/Repair/Replacement		X
Signage for City Park, Wayfinding Signage, Traffic Signage – Maintenance/Repair/Replacement	X	
Underground Utilities included in the PUD improvements by Developer – Water, Sanitary Sewer, Storm Sewer, etc. – Maintenance and Repair		X
All Future Improvements to City Park not included in the PUD Agreement improvements by Developer – Maintenance, Repair, Replacement and Utility Costs	X	
GRANTEE/DEVELOPER/GRANTEE PROPERTY		
All Facilities, Utilities and Improvements on Grantee Property, Maintained by Grantee/Developer		X

City of Troy GIS Online



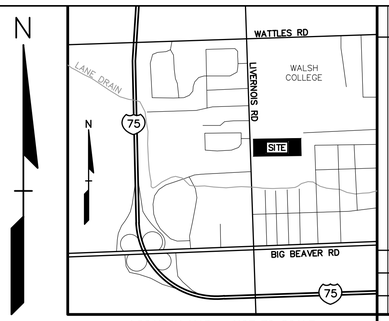
14,989 0 7,494 14,989 Feet

Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

PRELIMINARY AND CONCEPTUAL SITE PLANS FOR

STONECREST

PART OF THE SW 1/4 OF SECTION 22, T.2N., R.11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN



LOCATION MAP – NOT TO SCALE

DEVELOPER:

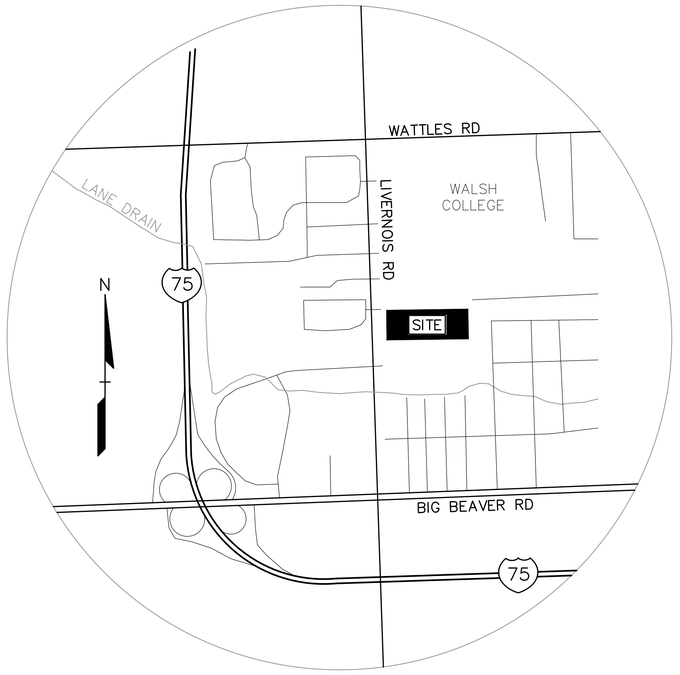
NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64105
CONTACT: MARK POMERENKE
PHONE: (816) 888–7391

ARCHITECT:

PI ARCHITECTS
3500 JEFFERSON ST. SUITE 303
AUSTIN, TX 78731
CONTACT: ERIC LANCON
PHONE: (512) 231–1910

CIVIL ENGINEER/LANDSCAPE ARCHITECT:

PROFESSIONAL ENGINEERING ASSOCIATES, INC.
2430 ROCHESTER CT., SUITE 100
TROY, MI 48083
PHONE: (248) 689–9090
FAX: (248) 689–1044
CONTACT: EMIL S. BUNEK III, PE
JANET EVANS, R.L.A.



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS:

C–0.0	COVER SHEET
C–1.0	TOPOGRAPHIC SURVEY
C–1.1	TREE LIST
C–1.2	TREE PRESERVATION PLAN
C–2.0	PRELIMINARY SITE PLAN
C–3.0	PRELIMINARY GRADING PLAN
L–1.0	PRELIMINARY LANDSCAPE PLAN
	SITE PHOTOMETRIC PLAN

ARCHITECTURAL PLANS

SK1	FIRST FLOOR PLAN
SK2	FIRST FLOOR PLAN – WEST HALF
SK3	FIRST FLOOR PLAN – MIDDLE SECTION
SK4	FIRST FLOOR PLAN – EAST HALF
SK5	FIRST FLOOR PLAN – SECOND FLOOR PLAN
SK6	ROOM DETAILS
SK7	ELEVATION PLAN
SK9	SECTION @ LEFT WING

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2015\2015141\DWG\TOPOBASE–15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE–15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\TBLK–15141.DWG

REVISIONS

No.	BY	CHK	DESCRIPTION	DATE

STATE OF MICHIGAN
EMIL S. BUNEK III
ENGINEER
6201058445
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

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Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.peainc.com

NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

COVER SHEET
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE – 2NH\Dwg\Site Plans\(C–0.0) COVER–15141.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: AS NOTED

DRAWING NUMBER:
C-0.0

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT
3165	BX	7	Box elder	Acer negundo	GOOD	X3
3166	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3167	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3168	BX	8	Box elder	Acer negundo	GOOD	
3169	E	12	American Elm	Ulmus americana	FAIR	
3170	SM	31	Silver Maple	Acer saccharinum	POOR	
3171	EE	8	Siberian Elm	Ulmus pumila	GOOD	
3172	WH	12	White Willow	Salix alba	POOR	
3173	NS	19	Norway Spruce	Picea Abies	FAIR	
3174	NS	7	Norway Spruce	Picea Abies	FAIR	
3175	C	15	Catalpa	Catalpa speciosa	GOOD	
3176	C	31	Catalpa	Catalpa speciosa	GOOD	
3177	BX	6	Box elder	Acer negundo	GOOD	
3178	BS	15	Blue Spruce	Picea pungens	GOOD	
3179	SM	22	Silver Maple	Acer saccharinum	FAIR	
3180	SM	18	Silver Maple	Acer saccharinum	GOOD	
3181	BW	10	Black Walnut	Juglans nigra	GOOD	
3182	BX	7	Box elder	Acer negundo	POOR	X2
3183	BW	7	Black Walnut	Juglans nigra	FAIR	
3184	BP	15	Bradford Pear	Pyrus calleryanna	POOR	
3185	BP	14	Bradford Pear	Pyrus calleryanna	POOR	
3186	BP	7	Bradford Pear	Pyrus calleryanna	POOR	
3187	BX	14	Box elder	Acer negundo	POOR	X2
3188	EE	16	Siberian Elm	Ulmus pumila	FAIR	X2
3189	AP	15	Domestic Apple	Malus sylvestris	POOR	
3190	CT	8	Cottonwood	Populus deltoides	GOOD	
3191	BW	10	Black Walnut	Juglans nigra	GOOD	
3192	EE	13	Siberian Elm	Ulmus pumila	POOR	
3193	BW	25	Black Walnut	Juglans nigra	GOOD	
3194	EE	6	Siberian Elm	Ulmus pumila	POOR	X4
3195	BW	31	Black Walnut	Juglans nigra	FAIR	
3196	C	16	Catalpa	Catalpa speciosa	POOR	
3197	C	11	Catalpa	Catalpa speciosa	FAIR	
3198	WP	16	(Eastern) White Pine	Pinus strobus	FAIR	
3199	BS	8	Blue Spruce	Picea pungens	GOOD	X2
3200	MR	16	Red Mulberry	Morus rubra	FAIR	
3201	BX	11	Box elder	Acer negundo	FAIR	X2
3202	BX	8	Box elder	Acer negundo	POOR	
3203	BX	8	Box elder	Acer negundo	POOR	
3204	BX	10	Box elder	Acer negundo	FAIR	X2
3205	BX	8	Box elder	Acer negundo	GOOD	
3206	BX	13	Box elder	Acer negundo	FAIR	
3207	BX	6	Box elder	Acer negundo	FAIR	X2
3208	EE	13	Siberian Elm	Ulmus pumila	FAIR	
3209	BX	9	Box elder	Acer negundo	GOOD	
3210	BX	8	Box elder	Acer negundo	POOR	X3
3211	BX	13	Box elder	Acer negundo	FAIR	
3212	MR	8	Red Mulberry	Morus rubra	GOOD	
3213	SM	9	Silver Maple	Acer saccharinum	FAIR	
3214	BX	8	Box elder	Acer negundo	FAIR	
3215	BW	9	Black Walnut	Juglans nigra	GOOD	
3216	BW	7	Black Walnut	Juglans nigra	GOOD	
3217	CT	44	Cottonwood	Populus deltoides	GOOD	
3218	BW	7	Black Walnut	Juglans nigra	GOOD	
3219	BW	8	Black Walnut	Juglans nigra	GOOD	
3220	BW	9	Black Walnut	Juglans nigra	FAIR	
3221	BW	9	Black Walnut	Juglans nigra	FAIR	
3222	BX	16	Box elder	Acer negundo	POOR	
3223	BW	10	Black Walnut	Juglans nigra	GOOD	
3224	BW	6	Black Walnut	Juglans nigra	GOOD	
3225	BW	8	Black Walnut	Juglans nigra	GOOD	
3226	BW	8	Black Walnut	Juglans nigra	GOOD	X2
3227	BW	7	Black Walnut	Juglans nigra	GOOD	
3228	BW	10	Black Walnut	Juglans nigra	GOOD	
3229	MR	6	Red Mulberry	Morus rubra	GOOD	
3230	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3231	E	11	American Elm	Ulmus americana	GOOD	
3232	BW	7	Black Walnut	Juglans nigra	GOOD	
3233	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3234	EE	10	Siberian Elm	Ulmus pumila	GOOD	
3235	BX	7	Box elder	Acer negundo	FAIR	X2
3236	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3237	BX	9	Box elder	Acer negundo	POOR	X2
3238	MR	6	Red Mulberry	Morus rubra	GOOD	
3239	BX	6	Box elder	Acer negundo	GOOD	
3240	SM	6	Silver Maple	Acer saccharinum	GOOD	
3241	SM	9	Silver Maple	Acer saccharinum	GOOD	
3242	SM	10	Silver Maple	Acer saccharinum	GOOD	
3243	WH	10	White Willow	Salix alba	GOOD	X3
3244	WH	9	White Willow	Salix alba	GOOD	X2
3245	WH	7	White Willow	Salix alba	GOOD	X2
3246	CT	7	Cottonwood	Populus deltoides	GOOD	
3247	CT	8	Cottonwood	Populus deltoides	GOOD	
3248	CT	11	Cottonwood	Populus deltoides	GOOD	
3249	CT	7	Cottonwood	Populus deltoides	GOOD	
3250	CT	8	Cottonwood	Populus deltoides	GOOD	
3251	CT	9	Cottonwood	Populus deltoides	GOOD	
3252	CT	12	Cottonwood	Populus deltoides	GOOD	
3253	CT	6	Cottonwood	Populus deltoides	GOOD	
3254	CT	11	Cottonwood	Populus deltoides	GOOD	
3255	CT	11	Cottonwood	Populus deltoides	GOOD	
3256	CT	9	Cottonwood	Populus deltoides	GOOD	
3257	CT	11	Cottonwood	Populus deltoides	GOOD	
3258	CT	11	Cottonwood	Populus deltoides	GOOD	
3259	WH	9	White Willow	Salix alba	GOOD	X3
3260	WH	10	White Willow	Salix alba	GOOD	X6
3261	BX	8	Box elder	Acer negundo	POOR	X2
3262	BX	7	Box elder	Acer negundo	FAIR	
3263	BX	8	Box elder	Acer negundo	GOOD	
3264	BX	7	Box elder	Acer negundo	FAIR	
3265	BX	8	Box elder	Acer negundo	GOOD	
3266	EE	8	Siberian Elm	Ulmus pumila	POOR	
3267	BX	6	Box elder	Acer negundo	GOOD	X6
3268	BX	10	Box elder	Acer negundo	FAIR	
3269	BX	8	Box elder	Acer negundo	POOR	
3270	BX	9	Box elder	Acer negundo	FAIR	X2
3271	BX	7	Box elder	Acer negundo	GOOD	X2
3272	BX	8	Box elder	Acer negundo	POOR	
3273	BX	14	Box elder	Acer negundo	FAIR	
3274	MR	15	Red Mulberry	Morus rubra	POOR	
3275	SM	15	Silver Maple	Acer saccharinum	GOOD	X3
3276	SM	19	Silver Maple	Acer saccharinum	GOOD	
3277	BW	8	Black Walnut	Juglans nigra	GOOD	
3278	BW	11	Black Walnut	Juglans nigra	GOOD	
3279	BW	9	Black Walnut	Juglans nigra	GOOD	
3280	BX	9	Box elder	Acer negundo	POOR	
3281	BX	6	Box elder	Acer negundo	POOR	X2
3282	BX	8	Box elder	Acer negundo	FAIR	
3283	BX	7	Box elder	Acer negundo	FAIR	
3284	BX	9	Box elder	Acer negundo	FAIR	X2
3285	BX	8	Box elder	Acer negundo	FAIR	
3286	BX	10	Box elder	Acer negundo	FAIR	
3287	BX	7	Box elder	Acer negundo	FAIR	
3288	WH	32	White Willow	Salix alba	POOR	
3289	BX	6	Box elder	Acer negundo	POOR	X2
3290	BX	9	Box elder	Acer negundo	FAIR	
3291	BX	14	Box elder	Acer negundo	FAIR	
3292	BX	8	Box elder	Acer negundo	FAIR	X2
3293	BX	10	Box elder	Acer negundo	FAIR	
3294	BX	11	Box elder	Acer negundo	POOR	
3295	BX	9	Box elder	Acer negundo	FAIR	
3296	BX	10	Box elder	Acer negundo	POOR	
3297	BX	10	Box elder	Acer negundo	FAIR	X3
3298	BX	7	Box elder	Acer negundo	FAIR	
3299	BX	6	Box elder	Acer negundo	POOR	X2
3300	BX	8	Box elder	Acer negundo	POOR	
3301	BX	8	Box elder	Acer negundo	GOOD	
3302	BX	9	Box elder	Acer negundo	FAIR	X2
3303	BX	8	Box elder	Acer negundo	FAIR	
3304	BX	7	Box elder	Acer negundo	FAIR	
3305	BX	6	Box elder	Acer negundo	POOR	X4
3306	BX	16	Box elder	Acer negundo	POOR	X4
3307	BX	7	Box elder	Acer negundo	FAIR	
3308	BX	6	Box elder	Acer negundo	POOR	
3309	BX	8	Box elder	Acer negundo	FAIR	
3310	BX	7	Box elder	Acer negundo	FAIR	
3311	BX	15	Box elder	Acer negundo	FAIR	
3312	SM	11	Silver Maple	Acer saccharinum	GOOD	X2
3313	BX	14	Box elder	Acer negundo	POOR	
3314	BX	9	Box elder	Acer negundo	FAIR	
3315	BX	17	Box elder	Acer negundo	FAIR	
3316	BX	9	Box elder	Acer negundo	FAIR	
3317	WH	48	White Willow	Salix alba	POOR	
3318	BX	8	Box elder	Acer negundo	FAIR	
3319	BX	22	Box elder	Acer negundo	FAIR	
3320	BX	10	Box elder	Acer negundo	FAIR	
3321	BW	9	Black Walnut	Juglans nigra	GOOD	
3322	BX	9	Box elder	Acer negundo	GOOD	
3323	BX	12	Box elder	Acer negundo	POOR	
3324	BX	7	Box elder	Acer negundo	POOR	
3325	BX	9	Box elder	Acer negundo	FAIR	
3326	BX	10	Box elder	Acer negundo	FAIR	
3327	BX	10	Box elder	Acer negundo	FAIR	X2
3328	BX	10	Box elder	Acer negundo	FAIR	
3329	BX	12	Box elder	Acer negundo	FAIR	
3330	BX	7	Box elder	Acer negundo	FAIR	
3331	BX	7	Box elder	Acer negundo	POOR	
3332	BX	7	Box elder	Acer negundo	FAIR	
3333	BX	6	Box elder	Acer negundo	POOR	
3334	BX	17	Box elder	Acer negundo	FAIR	
3335	BX	8	Box elder	Acer negundo	FAIR	
3336	BX	7	Box elder	Acer negundo	FAIR	
3337	BX	10	Box elder	Acer negundo	FAIR	
3338	BX	7	Box elder	Acer negundo	FAIR	
3339	BX	12	Box elder	Acer negundo	FAIR	
3340	BX	10	Box elder	Acer negundo	FAIR	
3341	MR	9	Red Mulberry	Morus rubra	FAIR	
3342	BX	9	Box elder	Acer negundo	FAIR	
3343	BW	10	Black Walnut	Juglans nigra	GOOD	
3344	BW	7	Black Walnut	Juglans nigra	GOOD	
3345	EE	8	Siberian Elm	Ulmus pumila	POOR	
3346	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3347	BW	13	Black Walnut	Juglans nigra	GOOD	
3348	BX	7	Box elder	Acer negundo	FAIR	
3349	BX	13	Box elder	Acer negundo	FAIR	
3350	BX	13	Box elder	Acer negundo	FAIR	
3351	BX	7	Box elder	Acer negundo	FAIR	
3352	BX	9	Box elder	Acer negundo	FAIR	
3353	SM	13	Silver Maple	Acer saccharinum	GOOD	
3354	SM	14	Silver Maple	Acer saccharinum	GOOD	
3355	SM	7	Silver Maple	Acer saccharinum	GOOD	
3356	SM	14	Silver Maple	Acer saccharinum	GOOD	
3357	SM	12	Silver Maple	Acer saccharinum	GOOD	X2
3358	BX	7	Box elder	Acer negundo	FAIR	
3359	CT	24	Cottonwood	Populus deltoides	GOOD	
3360	SM	15	Silver Maple	Acer saccharinum	GOOD	
3361	CT	17	Cottonwood	Populus deltoides	GOOD	
3362	CT	15	Cottonwood	Populus deltoides	GOOD	
3363	SM	8	Silver Maple	Acer saccharinum	FAIR	
3364	SM	9	Silver Maple	Acer saccharinum	FAIR	
3365	SM	7	Silver Maple	Acer saccharinum	FAIR	
3366	SM	8	Silver Maple	Acer saccharinum	GOOD	
3367	CT	18	Cottonwood	Populus deltoides	GOOD	
3368	SM	10	Silver Maple	Acer saccharinum	GOOD	X3
3369	SM	9	Silver Maple	Acer saccharinum	FAIR	
3370	SM	10	Silver Maple	Acer saccharinum	GOOD	
3371	SM	6	Silver Maple	Acer saccharinum	FAIR	
3372	CT	15	Cottonwood	Populus deltoides	GOOD	
3373	CT	23	Cottonwood	Populus deltoides	GOOD	
3374	CT	18	Cottonwood	Populus deltoides	GOOD	
3375	BX	7	Box elder	Acer negundo	FAIR	
3376	BX	7	Box elder	Acer negundo	FAIR	
3377	BX	10	Box elder	Acer negundo	FAIR	
3378	BX	9	Box elder	Acer negundo	FAIR	
3379	BX	11	Box elder	Acer negundo	FAIR	X2
3380	BX	9	Box elder	Acer negundo	FAIR	X2
3381	BX	11	Box elder	Acer negundo	FAIR	
3382	BX	14	Box elder	Acer negundo	FAIR	
3383	SM	9	Silver Maple	Acer saccharinum	FAIR	X3
3384	BX	10	Box elder	Acer negundo	POOR	
3385	BX	8	Box elder	Acer negundo	FAIR	X3
3386	BX	7	Box elder	Acer negundo	FAIR	
3387	BX	9	Box elder	Acer negundo	POOR	X3
3388	BX	12	Box elder	Acer negundo	FAIR	
3389	BX	9	Box elder	Acer negundo	POOR	X2
3390	BX	9	Box elder	Acer negundo	FAIR	
3391	BX	10	Box elder	Acer negundo	FAIR	X2
3392	BX	8	Box elder	Acer negundo	FAIR	
3393	BX	7	Box elder	Acer negundo	FAIR	
3394	BX	7	Box elder	Acer negundo	FAIR	
3395	BX	6	Box elder	Acer negundo	FAIR	
3396	BX	6	Box elder	Acer negundo	FAIR	
3397	CT	13	Cottonwood	Populus deltoides	GOOD	X2
3398	CT	28	Cottonwood	Populus deltoides	GOOD	
3399	BX	9	Box elder	Acer negundo	FAIR	
3400	SM	12	Silver Maple	Acer saccharinum	FAIR	
3401	BX	9	Box elder	Acer negundo	FAIR	
3402	WH	7	White Willow	Salix alba	GOOD	
3403	CT	19	Cottonwood	Populus deltoides	GOOD	
3404	BX	7	Box elder	Acer negundo	POOR	
3405	BX	10	Box elder	Acer negundo	GOOD	
3406	CT	9	Cottonwood	Populus deltoides	GOOD	
3407	CT	15	Cottonwood	Populus deltoides	GOOD	
3408	CT	15	Cottonwood	Populus deltoides	GOOD	
3409	CT	23	Cottonwood	Populus deltoides	GOOD	
3410	BX	9	Box elder	Acer negundo	FAIR	
3411	E	13	American Elm	Ulmus americana	GOOD	
3412	BX	10	Box elder	Acer negundo	FAIR	
3413	BX	9	Box elder	Acer negundo	FAIR	
3414	BX	11	Box elder	Acer negundo	GOOD	
3415	BX	12	Box elder	Acer negundo	GOOD	
3416	PN	6	Pin Cherry	Prunus pennsylvanica	GOOD	X3
3417	BX	10	Box elder	Acer negundo	FAIR	
3418	BX	8	Box elder	Acer negundo	POOR	
3419	BX	7	Box elder	Acer negundo	POOR	
3420	BX	8	Box elder	Acer negundo	POOR	
3421	BX	13	Box elder	Acer negundo	FAIR	
3422	BX	9	Box elder	Acer negundo	POOR	
3423	BX	8	Box elder	Acer negundo	FAIR	
3424	BX	9	Box elder	Acer negundo	FAIR	
3425	BX	7	Box elder	Acer negundo	FAIR	
3426	SM	14	Silver Maple	Acer saccharinum	GOOD	X4
3427	SM	15	Silver Maple	Acer saccharinum	GOOD	X3
3428	BX	13	Box elder	Acer negundo	FAIR	
3429	BX	14	Box elder	Acer negundo	GOOD	
3430	BX	10	Box elder	Acer negundo	FAIR	X2
3431	BX	12	Box elder	Acer negundo	POOR	
3432	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3433	BX	9	Box elder	Acer negundo	GOOD	
3434	NM	7	Norway Maple	Acer platanoides	GOOD	X2
3435	HM	9	Hemlock	Tsuga canadensis	POOR	
3436	BX	23	Box elder	Acer negundo	FAIR	
3437	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3438	EE	11	Siberian Elm	Ulmus pumila	FAIR	X2
3439	BX	7	Box elder	Acer negundo	FAIR	X3
3440	BW	9	Black Walnut	Juglans nigra	GOOD	
3441	BX	8	Box elder	Acer negundo	FAIR	X2
3442	BW	10	Black Walnut	Juglans nigra	GOOD	
3443	BW	8	Black Walnut	Juglans nigra	GOOD	
3444	EE	13	Siberian Elm	Ulmus pumila	FAIR	
3445	BX	8	Box elder	Acer negundo	FAIR	
3446	BX	6	Box elder	Acer negundo	FAIR	
3447	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3448	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3449	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3450	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3451	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3452	EE	8	Siberian Elm	Ulmus pumila	POOR	
3453	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3454	BX	6	Box elder	Acer negundo	FAIR	
3455	BW	8	Black Walnut	Juglans nigra	GOOD	
3456	BX	6	Box elder	Acer negundo	FAIR	X2
3457	BW	7	Black Walnut	Juglans nigra	GOOD	
3458	BW	7	Black Walnut	Juglans nigra	GOOD	
3459	BX	9	Box elder	Acer negundo	FAIR	
3460	BX	7	Box elder	Acer negundo	FAIR	
3461	BX	9	Box elder	Acer negundo	FAIR	
3462	BX	8	Box elder	Acer negundo	FAIR	
3463	BX	8	Box elder	Acer negundo	FAIR	
3464	BX	8	Box elder	Acer negundo	FAIR	
3465	EE	26	Siberian Elm	Ulmus pumila	FAIR	
3466	BX	9	Box elder	Acer negundo	FAIR	
3467	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3468	BX	7	Box elder	Acer negundo	FAIR	
3469	EE	11	Siberian Elm	Ulmus pumila	FAIR	
3470	EE	11	Siberian Elm	Ulmus pumila	FAIR	
3471	BX	7	Box elder	Acer negundo	FAIR	
3472	BX	7	Box elder	Acer negundo	FAIR	
3473	BX	21	Box elder	Acer negundo	FAIR	
3474	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3475	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3476	BX	9	Box elder	Acer negundo	FAIR	
3477	BX	10	Box elder	Acer negundo	FAIR	
3478	BX	14	Box elder	Acer negundo	FAIR	
3479	BX	14	Box elder	Acer negundo	FAIR	
3480	BX	7	Box elder	Acer negundo	FAIR	
3481	BX	6	Box elder	Acer negundo	FAIR	
3482	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3483	E	6	American Elm	Ulmus americana	FAIR	
3484	BX	10	Box elder	Acer negundo	FAIR	
3485	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3486	EE	11	Siberian Elm	Ulmus pumila	FAIR	
3487	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3488	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3489	EE	6	Siberian Elm	Ulmus pumila	FAIR	X3
3490	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3491	BX	9	Box elder	Acer negundo	FAIR	
3492	BX	8	Box elder	Acer negundo	FAIR	
3493	BX	8	Box elder	Acer negundo	FAIR	
3494	BW	9	Black Walnut	Juglans nigra	GOOD	X2
3495	BW	9	Black Walnut	Juglans nigra	GOOD	
3496	BW	7	Black Walnut	Juglans nigra	GOOD	
3497	BW	8	Black Walnut	Juglans nigra	GOOD	
3498	CT	7	Cottonwood	Populus deltoides	FAIR	
3499	BW	6	Black Walnut	Juglans nigra	GOOD	
3500	BW	6	Black Walnut	Juglans nigra	GOOD	
3501	BW	8	Black Walnut	Juglans nigra	GOOD	
3502	BW	7	Black Walnut	Juglans nigra	GOOD	
3503	BW	12	Black Walnut	Juglans nigra	GOOD	
3504	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3505	BW	10	Black Walnut	Juglans nigra	GOOD	
3506	BW	7	Black Walnut	Juglans nigra	GOOD	
3507	BX	12	Box elder	Acer negundo	POOR	
3508	BW	8	Black Walnut	Juglans nigra	GOOD	
3509	BW	7	Black Walnut	Juglans nigra	GOOD	
3510	BW	7	Black Walnut	Juglans nigra	FAIR	
3511	BX	10	Box elder	Acer negundo	POOR	
3512	BW	29	Black Walnut	Juglans nigra	GOOD	
3513	BW	14	Black Walnut	Juglans nigra	POOR	
3514	BW	14	Black Walnut	Juglans nigra	GOOD	
3515	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3516	SM	28	Silver Maple	Acer saccharinum	GOOD	
3517	SU	19	Sugar Maple	Acer saccharum	GOOD	
3518	SM	14	Silver Maple	Acer saccharinum	POOR	X2
3519	AA	10	Tree-of-Heaven	Ailanthus Altissima	GOOD	
3520	AA	20	Tree-of-Heaven	Ailanthus Altissima	GOOD	
3521	AA	9	Tree-of-Heaven	Ailanthus Altissima	GOOD	X2
3522	AA	6	Tree-of-Heaven	Ailanthus Altissima	GOOD	
3523	AA	6	Tree-of-Heaven	Ailanthus Altissima	GOOD	X3
3524	BW	9	Black Walnut	Juglans nigra	GOOD	
3525	BX	6	Box elder	Acer negundo	FAIR	
3526	BW	6	Black Walnut	Juglans nigra	GOOD	
3527	EE	16	Siberian Elm	Ulmus pumila	FAIR	
3528	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3529	SM	6	Silver Maple	Acer saccharinum	FAIR	X3
3530	EE	17	Siberian Elm	Ulmus pumila	FAIR	
3531	BX	18	Box elder	Acer negundo	FAIR	
3532	BP	12	Bradford Pear	Pyrus calleryanna	FAIR	
3533	BP	14	Bradford Pear	Pyrus calleryanna	FAIR	
3534	BX	7	Box elder	Acer negundo	FAIR	
3535	BX	16	Box elder	Acer negundo	FAIR	
3536	BX	10	Box elder	Acer negundo	FAIR	X3
3537	BX	17	Box elder	Acer negundo	FAIR	
3538	BX	8	Box elder	Acer negundo	FAIR	
3539	SM	26	Silver Maple	Acer saccharinum	FAIR	
3540	BX	10	Box elder	Acer negundo	FAIR	
3541	WO	12	White Oak	Quercus alba	FAIR	
3542	BX	11	Box elder	Acer negundo	FAIR	
3543	BX	9	Box elder	Acer negundo	FAIR	
3544	SM	16	Silver Maple	Acer saccharinum	FAIR	
3545	BW	10	Black Walnut	Juglans nigra	GOOD	
3546	SM	16	Silver Maple	Acer saccharinum	POOR	
3547	BX	14	Box elder	Acer negundo	FAIR	
3548	BX	10	Box elder	Acer negundo	POOR	X2
3549	BX	6	Box elder	Acer negundo	FAIR	
3550	BX	16	Box elder	Acer negundo	FAIR	
3551	NM	29	Norway Maple	Acer platanoides	GOOD	
3552	MR	8	Red Mulberry	Morus rubra	FAIR	X2
3553	CT	46	Cottonwood	Populus deltoides	GOOD	
3554	WH	48	White Willow	Salix alba	FAIR	
3555	WH	48	White Willow	Salix alba	POOR	
3556	SM	42	Silver Maple	Acer saccharinum	GOOD	
3557	WH	52	White Willow	Salix alba	FAIR	
3558	SM	26	Silver Maple	Acer saccharinum	GOOD	
3559	AP	12	Domestic Apple	Malus sylvestris	FAIR	X2
3560	BX	16	Box elder	Acer negundo	POOR	
3561	BX	18	Box elder	Acer negundo	FAIR	X2
3562	BW	7	Black Walnut	Juglans nigra	GOOD	
3563	BX	24	Box elder	Acer negundo	FAIR	
3564	WH	34	White Willow	Salix alba	POOR	X2
3565	CT	35	Cottonwood	Populus deltoides	POOR	

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2015\2015141\DWG\TOPOBASE-15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE-15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\TBLK-15141.DWG

REVISIONS

NO.	BY.	CHK	DESCRIPTION	DATE

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website: www.peainc.com

NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

TREE LIST
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

S:\PROJECTS\2015\2015141 NORTH POINT - TROY SENIOR CARE - CSM\Dwg\Site Plans\C-1.1 TREE-15141.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: NA

DRAWING NUMBER:
C-1.1

LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING		PROPOSED
–OH–ELEC–	ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE	
–UG–CATV–	UNDERGROUND CABLE TV, CATV PEDESTAL	
–UG–PHONE–	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE	
–UG–ELEC–	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE	
	GAS MAIN, VALVE & GAS LINE MARKER	
	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE	
	SANITARY SEWER, CLEANOUT & MANHOLE	C.O.
	STORM SEWER, CLEANOUT & MANHOLE	C.O.
	COMBINED SEWER & MANHOLE	
Y.D.	CATCH BASIN, INLET, YARD DRAIN	Y.D.
	POST INDICATOR VALVE	
	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	
M T I	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	
?	UNIDENTIFIED STRUCTURE	
816.06	SPOT ELEVATION	671.21
670	CONTOUR LINE	671
	FENCE	
	GUARD RAIL	
	STREET LIGHT	
	SIGN	
CONC.	CONCRETE	STD DUTY / HEAVY DUTY / R.O.W. ONLY
ASPH.	ASPHALT	STD DUTY / HEAVY DUTY / DEEP STRENGTH
GRAVEL	GRAVEL SHOULDER	
	WETLAND	

Legal Description
(per Arrowhead Surveying, Topographic and Boundary Survey Job# 08–020, February 20, 2008)

Part of the Southwest 1/4 Section 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan being the North 1/2 of Lot 22 and all of Lots 23–24 of Supervisor's Plat No. 26, As recorded being more particularly described as:

Commencing at the West 1/4 of said Section; Thence S°0024'00"W 393.83 feet, along the West line of said Section 22; Thence S89°36'00"E 53.00 feet to Northwest corner of Lot 24 of Supervisor's Plat No. 26, as recorded in Liber 57 POINT OF BEGINNING;

Thence S89°33'49"E 1279.05 feet along the North line of said Lot 24; thence S00°31'09"E 325.93 feet along the East line of said Supervisor's Plat No. 26; thence N89°33'27"W 1284.28 feet along the South line of the North 1/2 of Lot 22 of said Supervisior's Plat No. 26; thence N°0024'00"E 325.75 feet along the West line of said Supervisior's Plat No. 26 and the East line of Livernois Road Right–of–way (53ft. half width) to the POINT OF BEGINNING, containing ±9.59 acres of land, subject to easements, conditions, and restrictions, if any.

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

STATE OF MICHIGAN
EMIL S. BUNEK III
ENGINEER
6201058445
LICENSED PROFESSIONAL ENGINEER

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TREE PRESERVATION PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE –DNH\Dwg\Site Plans\(C–1.2) tree–15141.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER:
C-1.2

NOT FOR CONSTRUCTION

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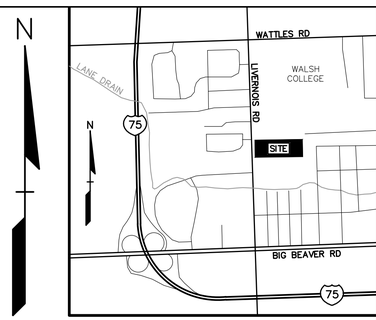
XREF: S:PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE–15141.DWG
XREF: S:PROJECTS\2015\2015141\DWG\CONSTRUCTION\TBLK–15141.DWG

GRAPHIC SCALE

−50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
OH-ELEC-W		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
UG-CATV		UNDERGROUND CABLE TV, CATV PEDESTAL
UG-PHONE		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
UG-ELEC		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
GAS		GAS MAIN, VALVE & GAS LINE MARKER
W		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
S		SANITARY SEWER, CLEANOUT & MANHOLE
ST		STORM SEWER, CLEANOUT & MANHOLE
C		COMBINED SEWER & MANHOLE
C.B.	C.B.	CATCH BASIN, INLET, YARD DRAIN
		POST INDICATOR VALVE
M T I		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
7		UNIDENTIFIED STRUCTURE
816.06	671.21	SPOT ELEVATION
670	671	CONTOUR LINE
		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT
GRAVEL		GRAVEL SHOULDER
		WETLAND

STD DUTY | HEAVY DUTY | R.O.W. ONLY

STD DUTY | HEAVY DUTY | DEEP STRENGTH

SITE DATA TABLE:

PER REVISED FINAL ZONING ORDINANCE AND ZONING MAP AS AVAILABLE ON THE CITY OF TROY WEBSITE, DATED OCTOBER 18, 2012.

EXISTING ZONING:
R–1E

SITE AREA:
SITE AREA = 9.59 ACRES

SETBACKS:	REQUIRED	PROVIDED
FRONT YARD:	50'	50'
SIDE YARD:	15'	22'
REAR YARD:	35'	869.43'

BUILDING INFORMATION:
PROPOSED BUILDING AREA = 70,013 SQ.FT.
MAXIMUM ALLOWABLE LOT COVERAGE = 30%
PROPOSED LOT COVERAGE =51,024± SQ.FT. or 12%
MAX ALLOWABLE BUILDING HEIGHT = 30'
THE PROPOSED BUILDING HEIGHT VARIES TO 35'–6" AT IT'S HIGHEST POINT.

SITE CALCULATIONS:
CONVALESCENT CENTER MINIMUM AREA OF 2,000 SF OF SITE AREA FOR EACH (1) BED + 500 SF OF OPEN SPACE
9.59 ACRES > 100x2000 SF. + 500 SF.

PARKING CALCULATIONS:

100 BEDS, 87 ROOMS.
CONVALESCENT AND NURSING FACILITIES REQUIRE THE LESSOR OF 1 SPACE PER EACH 3 BEDS OR 2 ROOMS. + 1 SPACE PER EMPLOYEE.
REQUIRED PARKING = 100/3 + 20 = 54 SPACES
PARKING PROVIDED = 117 SPACES INCLUDING 8 BARRIER FREE SPACES

Project: 20151 41 NORTH POINT - TROY SENIOR CARE
Location: Troy, MI
Date: 6/18/2015
Project No: 2015-141

25 YEAR STORM DETENTION DESIGN (OAKLAND COUNTY DESIGN METHOD)

Contributing Area (A):	9.73	AC.
Allowable Discharge (Qa)	1.95	C.F.S. (= 0.2 CFS/AC.)
Coefficient of Runoff (Cr):	0.39	

Calculation of Required Discharge/Acre

Qo = ((Qa)/(A)(Cr): 0.51

T = -25 + ((8062.5/Qo))0.5: 100.39

Storage Volume Required:

Vs = (12900(T)/(T+25)) - 40Qo(T): 8268.74

Vt = (Vs)(A)(Cr): 31377.4

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XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE–15141.DWG
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No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
EMIL S. BUNEK III
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6201058445
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PRELIMINARY SITE PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	ESB	DRW	SUR.	PEA	P.M.	DNH

S:\PROJECTS\2015\20151 41 NORTH POINT – TROY SENIOR CARE –3BKM\Dwg\Site Plans\(C–2.0) SM–15141.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: 1" = 50'

DRAWING NUMBER:
C-2.0

SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. — x 664.50

PROPOSED CONTOUR LINE — 665

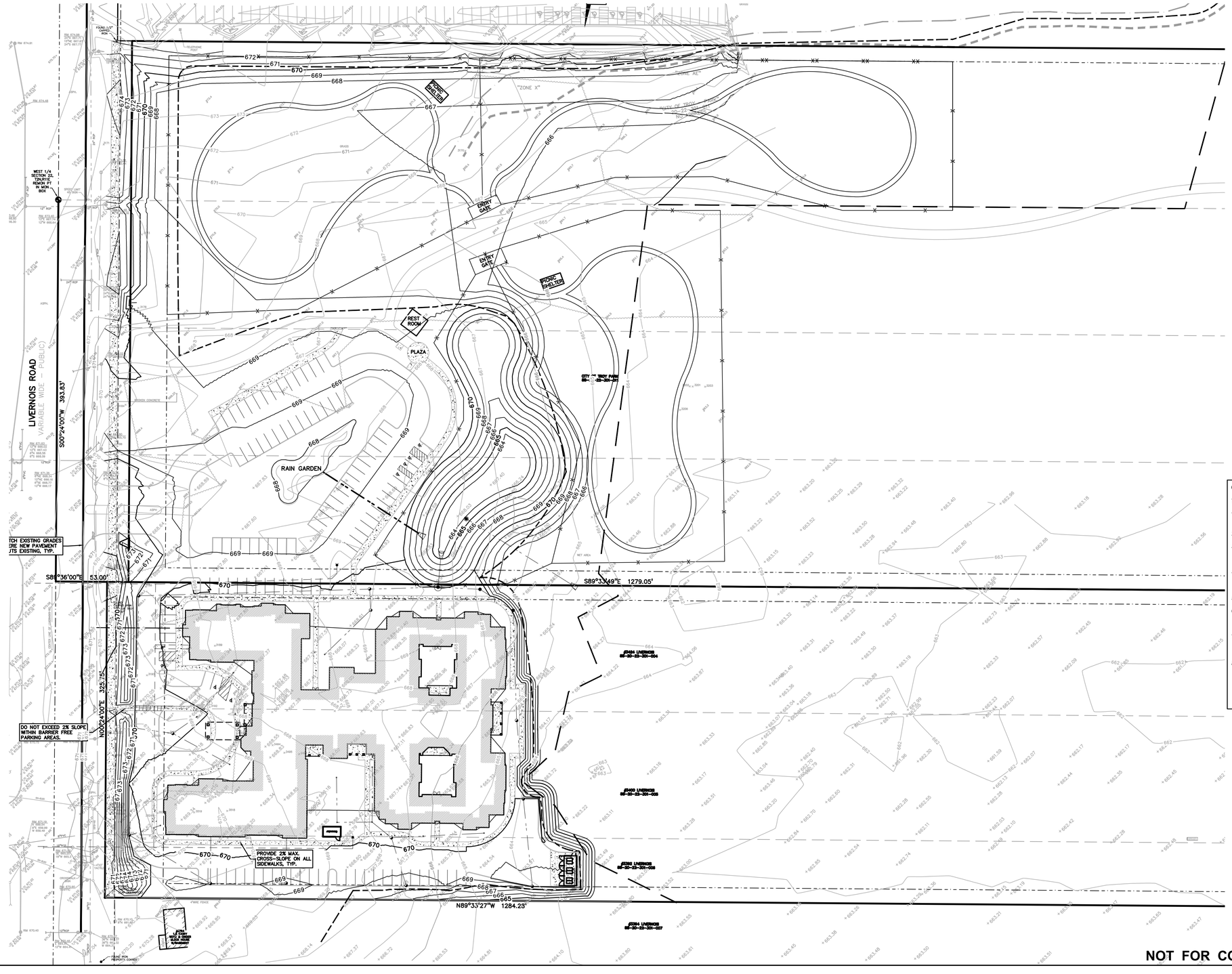
EARTHWORK BALANCING NOTE:

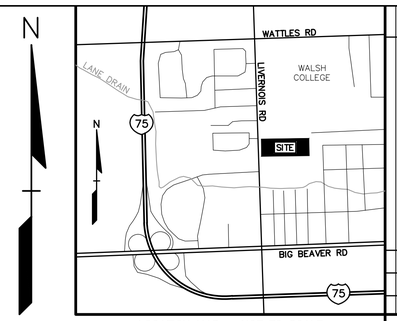
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

GRAPHIC SCALE

−50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.





LOCATION MAP – NOT TO SCALE

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- IRON SET
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- NAIL & CAP SET
- BRASS PLUG SET
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- MONUMENT SET
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EXISTING	PROPOSED
	ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
	UNDERGROUND CABLE TV, CATV PEDESTAL
	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
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	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
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816.06	SPOT ELEVATION x 671.21
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	FENCE
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CONC.	CONCRETE — STD DUTY / HEAVY DUTY / R.O.W. ONLY
ASPH.	ASPHALT — STD DUTY / HEAVY DUTY / DEEP STRENGTH
GRAVEL	GRAVEL SHOULDER
	WETLAND

GENERAL GRADING AND EARTHWORK NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CITY OF TROY AND OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE CITY PRIOR TO CONSTRUCTION.
5. SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C–6.0
6. THE DETENTION BASIN SIDE SLOPES AND ALL SLOPE EXCEEDING 1:6 MUST BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
7. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

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XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE–15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\TBLK–15141.DWG

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PRELIMINARY GRADING PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH
ESB						

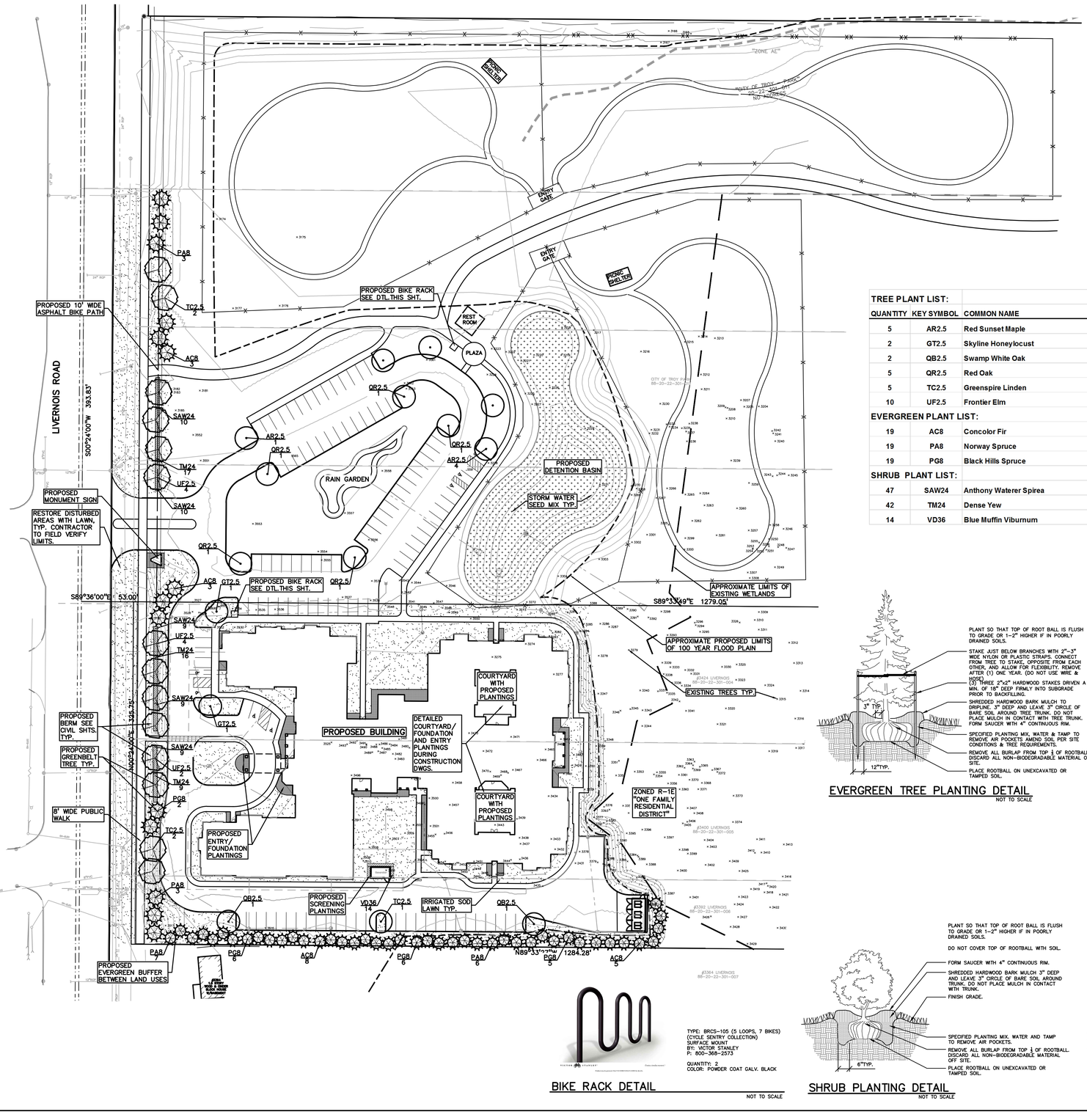
S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE – DNH\Dwg\Site Plans\[C–3.0] GRADE–15141.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: 1" = 50'

DRAWING NUMBER:
C-3.0



GRAPHIC SCALE

−50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

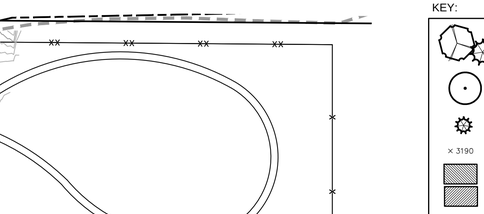
KEY:

= GREENBELT FRONTAGE TREES
= PARKING LOT TREES
= GREENBELT BUFFER TREE
× 3190 = EXISTING TREES
= SHRUB/ SCREENING HEDGE
= ENTRY/ FOUNDATION PLANTINGS SHRUBS/ PERENNIALS - NOT SITE PLAN REQUIRED
= IRRIGATED SOD LAWN
= STORMWATER SEED MIX BY: CARDNO NATIVE PLANT NURSERY 574-586-2412

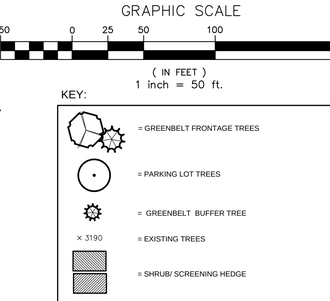
NOTE: SOD LAWN AND PLANT BEDS TO BE IRRIGATED WITH IN-GROUND SPRINKLER SYSTEM.

TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
5	AR2.5	Red Sunset Maple	*Acer rubrum 'Red Sunset'*	2.5" Cal.	B&B
2	GT2.5	Skyline Honeylocust	*Gleditsia triacanthos 'Skyline' Inermis*	2.5" Cal.	B&B
2	QB2.5	Swamp White Oak	*Quercus bicolor*	2.5" Cal.	B&B
5	QR2.5	Red Oak	*Quercus rubra*	2.5" Cal.	B&B
5	TC2.5	Greenspire Linden	*Tilia cordata 'Greenspire'*	2.5" Cal.	B&B
10	UF2.5	Frontier Elm	*Ulmus 'Frontier'*	2.5" Cal.	B&B
EVERGREEN PLANT LIST:					
19	AC8	Concolor Fir	*Abies concolor*	8' Ht.	B&B
19	PA8	Norway Spruce	*Picea abies*	8' Ht.	B&B
19	PG8	Black Hills Spruce	*Picea glauca 'Densata'*	8' Ht.	B&B
SHRUB PLANT LIST:					
47	SAW24	Anthony Waterer Spirea	*Spirea x bum. 'Anthony Waterer'*	24" Ht.	Cont.
42	TM24	Dense Yew	*Taxus x media 'Densiformis'*	24" Ht.	Cont.
14	VD36	Blue Muffin Viburnum	*Viburnum dentatum 'Christom'*	36" Ht.	Cont.



EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



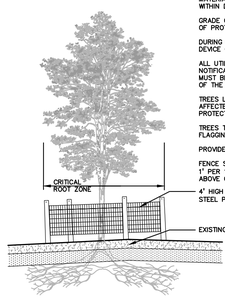
DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

TYPE: BRCS–105 (5 LOOPS, 7 BIKES)
(CYCLE SENTRY COLLECTION)
SURFACE MOUNT
BY: VICTOR STANLEY
P: 800–368–2573

QUANTITY: 2
COLOR: POWDER COAT GALV. BLACK

BIKE RACK DETAIL
NOT TO SCALE

SHRUB PLANTING DETAIL
NOT TO SCALE



TREE PROTECTION DETAIL
NOT TO SCALE

LOCATION MAP – NOT TO SCALE

LANDSCAPE CALCULATIONS:
PER CITY OF TROY ZONING ORDINANCE

GENERAL SITE LANDSCAPE
REQUIRED: 20% OF SITE AREA SHALL BE COMPRISED OF LANDSCAPE MATERIAL

9.59 AC.(417,740) SQ FT * 20% = 83,548 SQ FT

PROVIDED: 323,245 SQ FT OF SOFT–SCAPE, 77% (LAWN, PLANT BEDS AND EAST UNDISTURBED WOODLANDS)

PARKING LOT LANDSCAPE
REQUIRED: 1 TREE / 8 PARKING SPACES
3' HT BERM OR SHRUB HEDGE FOR PARKING ADJ. TO A PUBLIC ROAD

CITY PARK–80 SHARED SPACES; 80/8 = 10 TREES AND HEDGE REQ'D
SENIOR HOUSING–37 SPACES; 35/8 = 5 TREES AND HEDGE REQ'D

PROVIDED: 10 TREES & SHRUB HEDGE ALONG LIVERNOIS RD. AT CITY PARK AREA
5 TREES & SHRUB HEDGE ALONG LIVERNOIS RD. AT SENIOR HOUSING

GREENBELT FRONTAGE
REQUIRED: 1 TREE / 30 LF OF FRONTAGE

LIVERNOIS RD. = 719.6 LF FRONTAGE / 30 = 24 TREES
PROVIDED: LIVERNOIS RD.= 28 TREES

GREENBELT BUFFER BETWEEN LAND USES; SOUTH PROPERTY LINE (LIMITS OF PROJECT)
REQUIRED 1 EVERGREEN TREE / 10 LF; 430 LF/ 10 = 43 EVERGREEN TREES

PROVIDED: 43 EVERGREEN TREES

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1–800–482–7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH, SEE SPECIFICATIONS. SHREDDED PALETTE AND DIED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

STATE OF MICHIGAN
JANET EMMIS GRISCOM
LANDSCAPE ARCHITECT NO. 1502
REGISTERED LANDSCAPE ARCHITECT

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website: www.peainc.com

NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

PRELIMINARY LANDSCAPE PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	JLE	SUR.	PEA	P.M.	DNH

S:\PROJECTS\2015\2015141 NORTH POINT - TROY SENIOR CARE - STONE\DWG\15141-L-L(L-1.0) PRELIMINARY LANDSCAPE PLAN.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: 1" = 50'

DRAWING NUMBER:
L-1.0

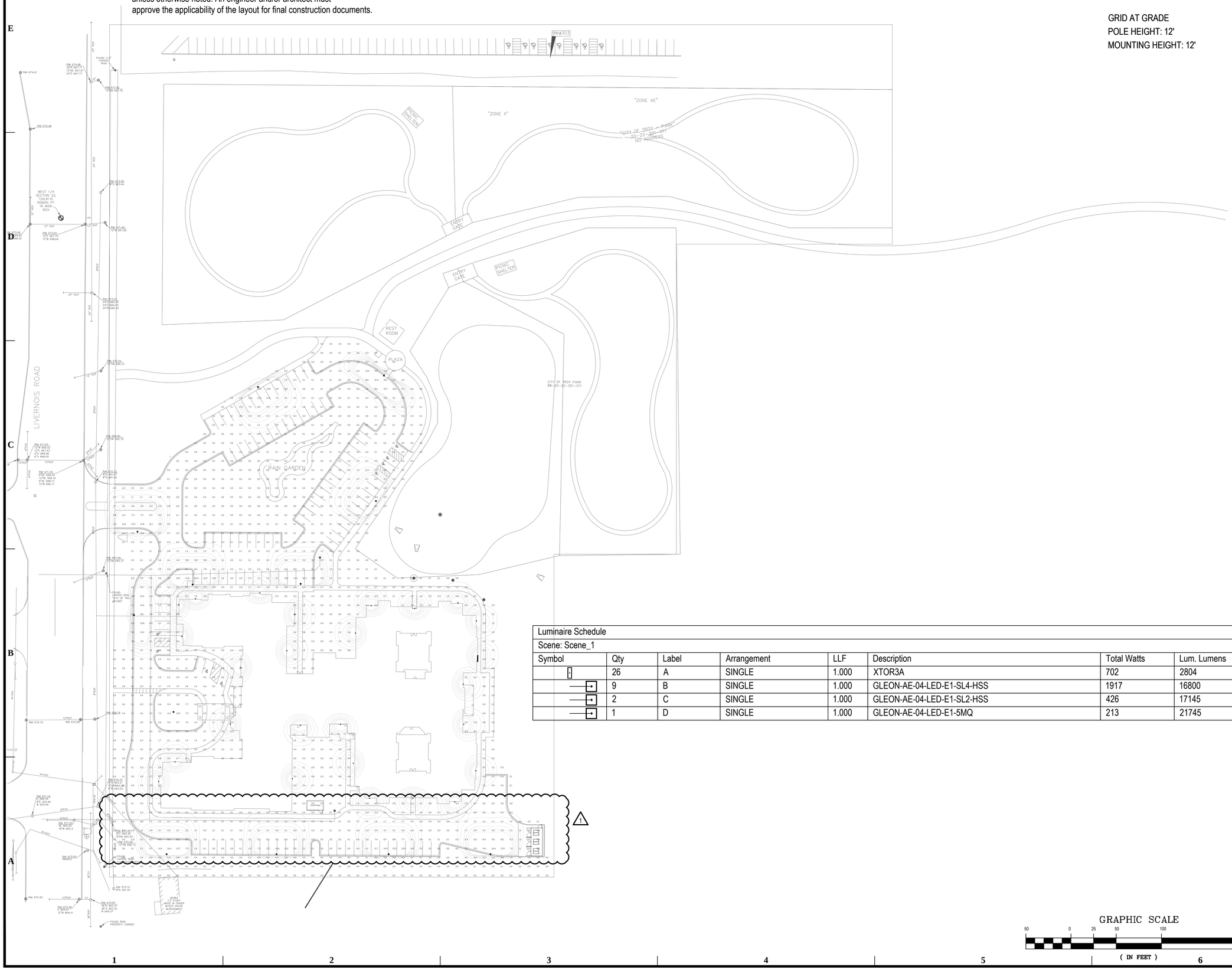
NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2015\2015141\DWG\TOPOBASE–15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE–15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\TBLK–15141.DWG

Design Control Document Only - (Not for Construction)
Recommended location and positioning is based on information provided. Illumination levels are calculated by laboratory data in accordance with IES approved methods. Performance may very due to job specific variables. Calculations do not account for the influence of obstructions unless otherwise noted. An engineer and/or architect must approve the applicability of the layout for final construction documents.

Calculation Summary							
Scene: Scene_1							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE LIGHTING_Planar	Illuminance	Fc	1.61	18.1	0.0	N.A.	N.A.

GRID AT GRADE
POLE HEIGHT: 12'
MOUNTING HEIGHT: 12'



Luminaire Schedule							
Scene: Scene_1							
Symbol	Qty	Label	Arrangement	LLF	Description	Total Watts	Lum. Lumens
	26	A	SINGLE	1.000	XTOR3A	702	2804
	9	B	SINGLE	1.000	GLEON-AE-04-LED-E1-SL4-HSS	1917	16800
	2	C	SINGLE	1.000	GLEON-AE-04-LED-E1-SL2-HSS	426	17145
	1	D	SINGLE	1.000	GLEON-AE-04-LED-E1-5MQ	213	21745

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)

pi architects
3500 Jefferson St. Suite 303
Austin, TX 78731
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F: (512) 231-1950
www.piarch.com
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PRELIMINARY
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This document is partially complete. The information contained is not necessarily coordinated or correct. This drawing is for review purposes only.

NORTHPOINT DEVELOPMENT
ASSISSTED LIVING & MEMORY CARE
TROY, MI

ISSUE:
CONCEPTUAL PLANNING

©2015

REVISIONS:
Rev 1 11/05/2015

DATE:
09/23/2015
PROJECT NUMBER:
PES-15099
SHEET TITLE:
PHOTOMETRIC

SHEET:
E0.0

BIM Server: Server2012 - BIM Server (18.0)/15012 NorthPoint Troy MI | Ver. 18.001 | Wednesday, September 16, 2015 | 3:08 PM

1 FIRST FLOOR PLAN

SCALE: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

SEAL

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TROY, MI

ASSISTED LIVING & MEMORY CARE
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB
DN.	ESB / DRW
SUR.	PEA
P.M.	DNH

ORIGINAL ISSUE DATE: 09/01/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER: SK1

1 FIRST FLOOR PLAN - WEST HALF

SCALE: 3/32" = 1'-0"

N

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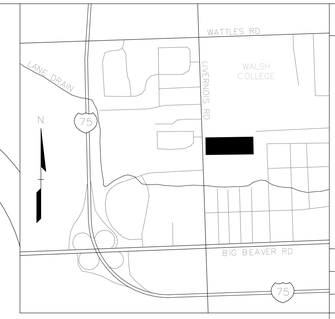

LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

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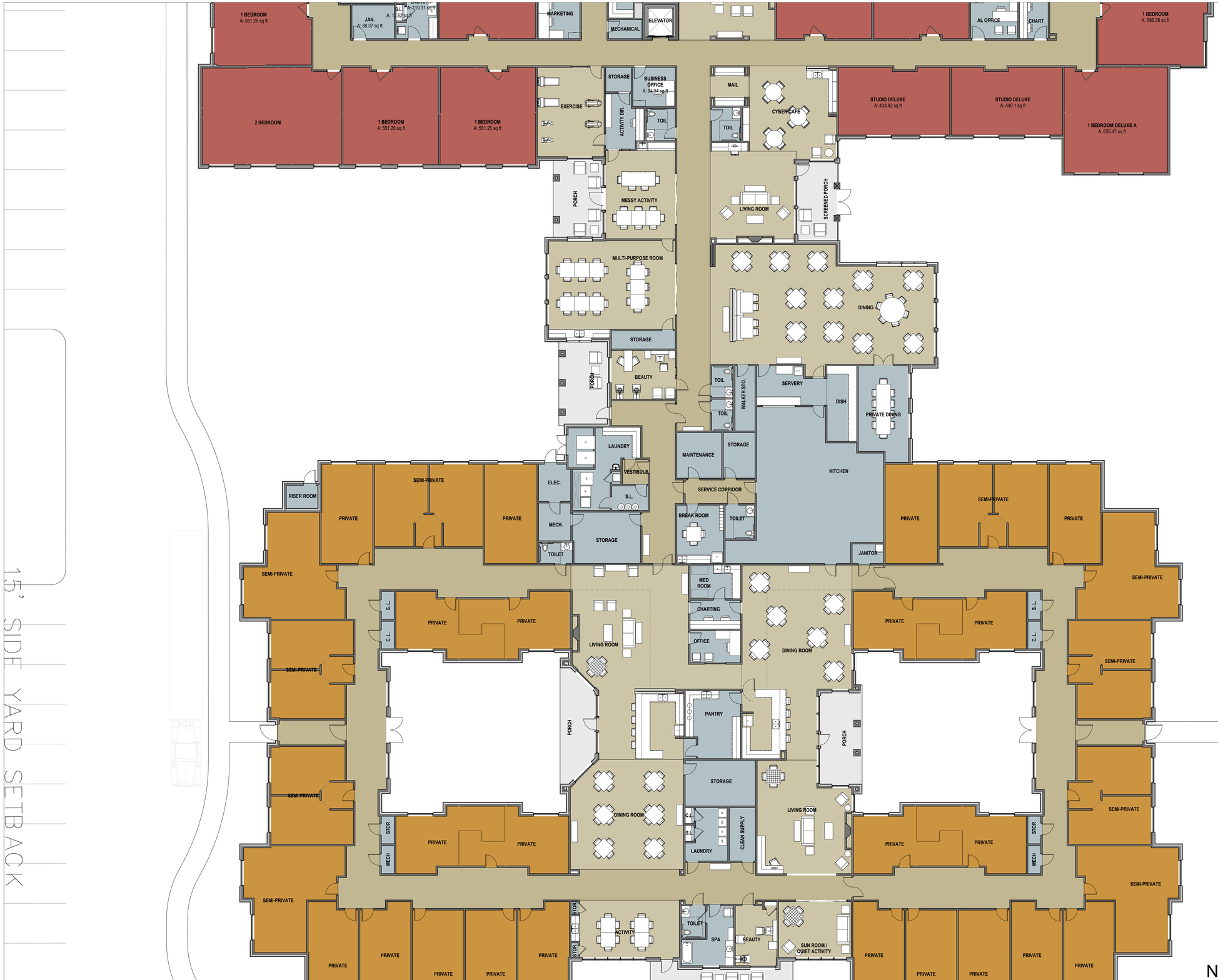
SCALE:

DRAWING NUMBER: SK2



1 FIRST FLOOR PLAN - MIDDLE SECTION

SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

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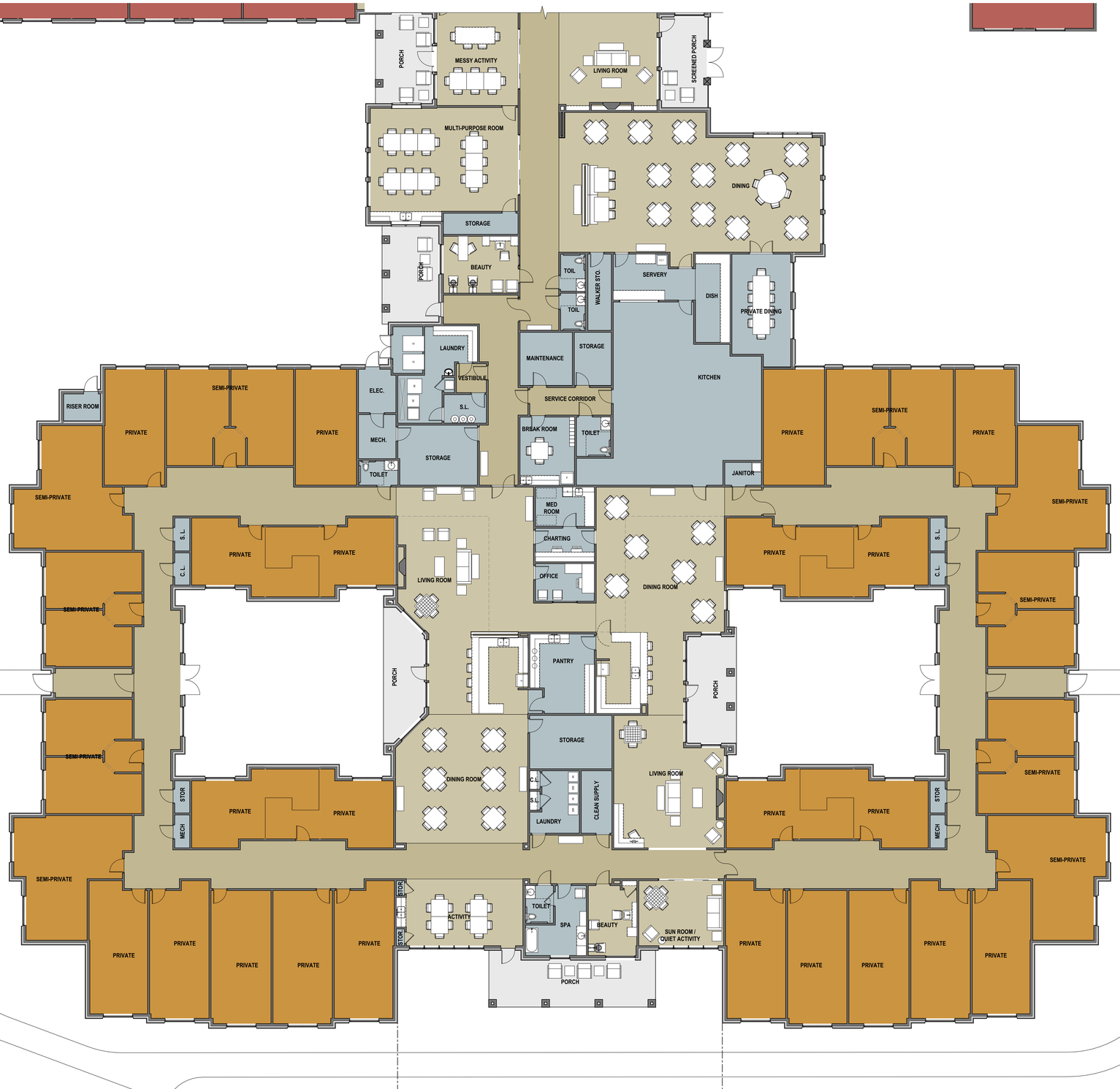
SCALE:

DRAWING NUMBER: SK3



1 FIRST FLOOR PLAN - EAST HALF

SCALE: 3/32" = 1'-0"

N

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LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

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SCALE:

DRAWING NUMBER: SK4

1 SECOND FLOOR PLAN

SCALE: 3/32" = 1'-0"

N

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LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

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PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
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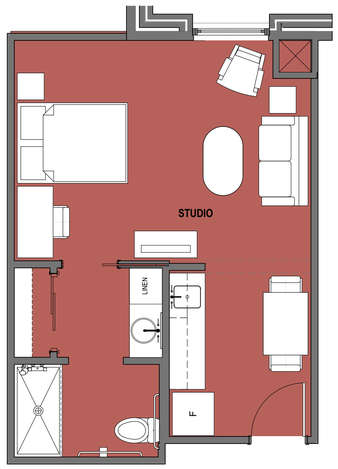
DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

ORIGINAL ISSUE DATE: 09/01/2015

PEA JOB NO. 2015-141

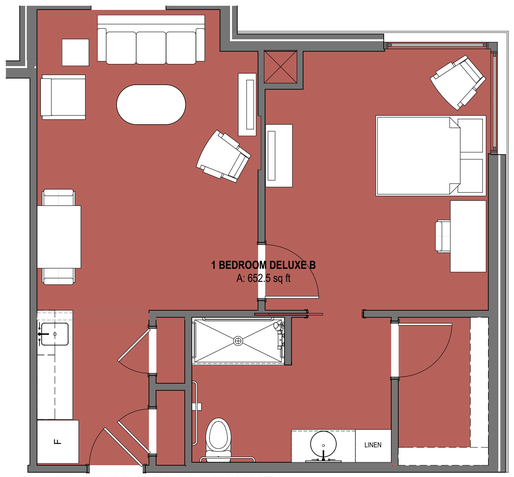
SCALE:

DRAWING NUMBER: SK5

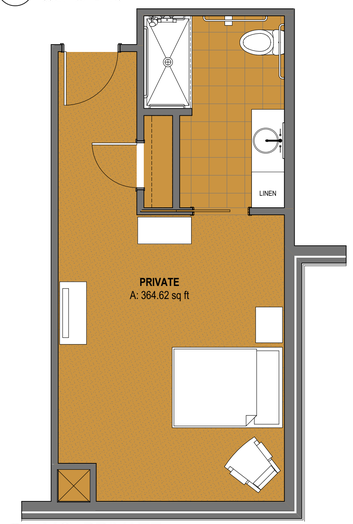


6 AL STUDIO
SCALE: 1/4" = 1'-0"

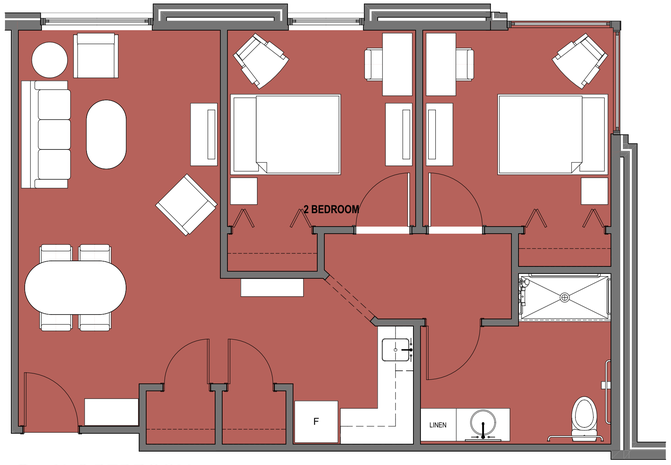
7 AL 1 BEDROOM
SCALE: 1/4" = 1'-0"



9 AL 1 BEDROOM DELUXE
SCALE: 1/4" = 1'-0"



5 MC PRIVATE
SCALE: 1/4" = 1'-0"



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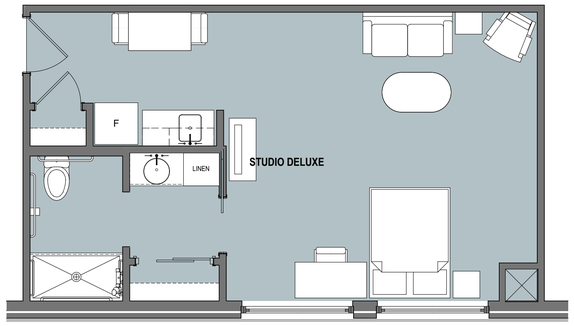

10 AL STUDIO DELUXE
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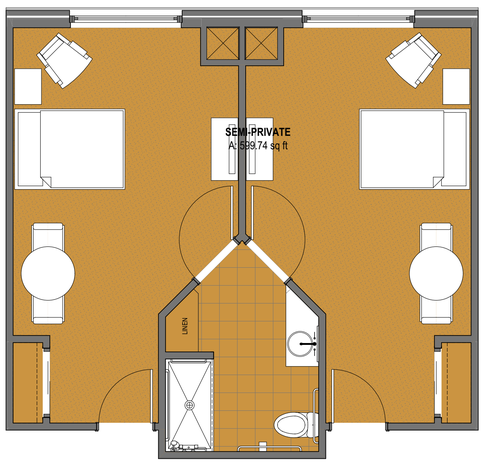

1 MC SEMI-PRIVATE
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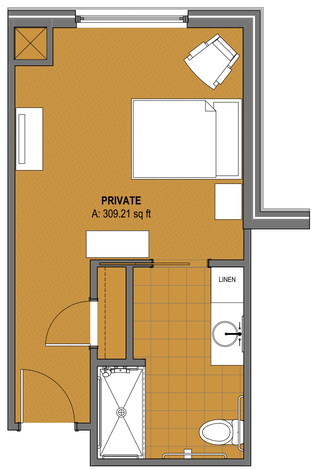

2 MC PRIVATE
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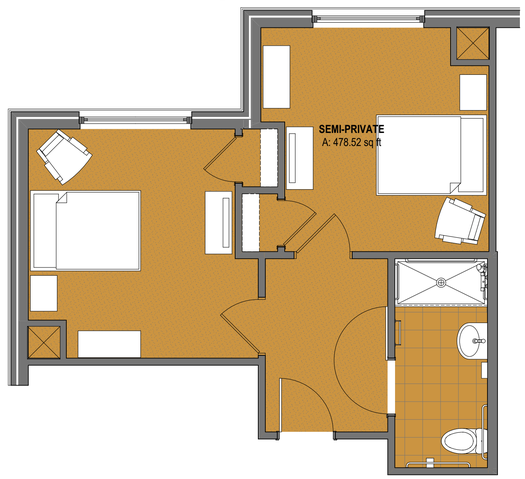

3 MC SEMI-PRIVATE
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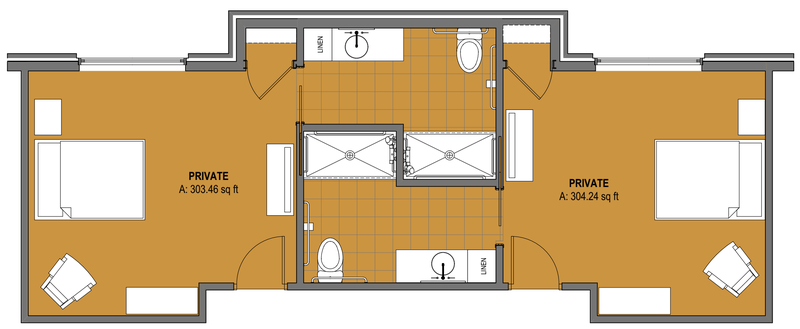

4 MC PRIVATE(S)
SCALE: 1/4" = 1'-0"

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LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

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NORTHPOINT DEVELOPMENT
TROY, MI

ASSISSTED LIVING & MEMORY CARE
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

ORIGINAL ISSUE DATE:
09/01/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER:
SK6

ELEVATION KEYED NOTES

1. ARCHITECTURAL ASPHALT SHINGLE
2. CULTURED STONE VENEER, COLOR MIX 1
3. ALUMINUM STANDING SEAM ROOF
4. HARDIE SIDING, COLOR 1
5. HARDIE SIDING WAINSCOT, COLOR 2
6. HARDIE TRIM, PAINTED
7. CULTURED STONE VENEER, COLOR MIX 2
8. METAL RAILING
9. HARDIE TRIM, FASCIA
10. CULTURED STONE VENEER HEADER
11. HARDIE TRIM HEADER
12. WOOD CORBEL, PAINTED TO MATCH
13. HARDIE PANEL, PAINTED

LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE
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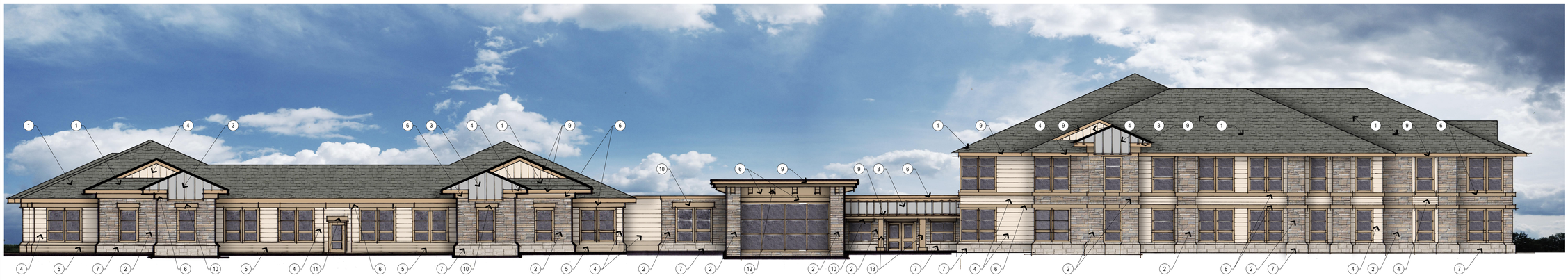
2 FRONT ELEVATION



1 SIDE ELEVATION

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ASSISSTED LIVING & MEMORY CARE
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

ORIGINAL ISSUE DATE: 09/01/2015

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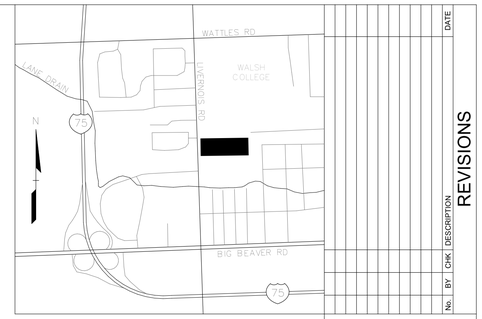
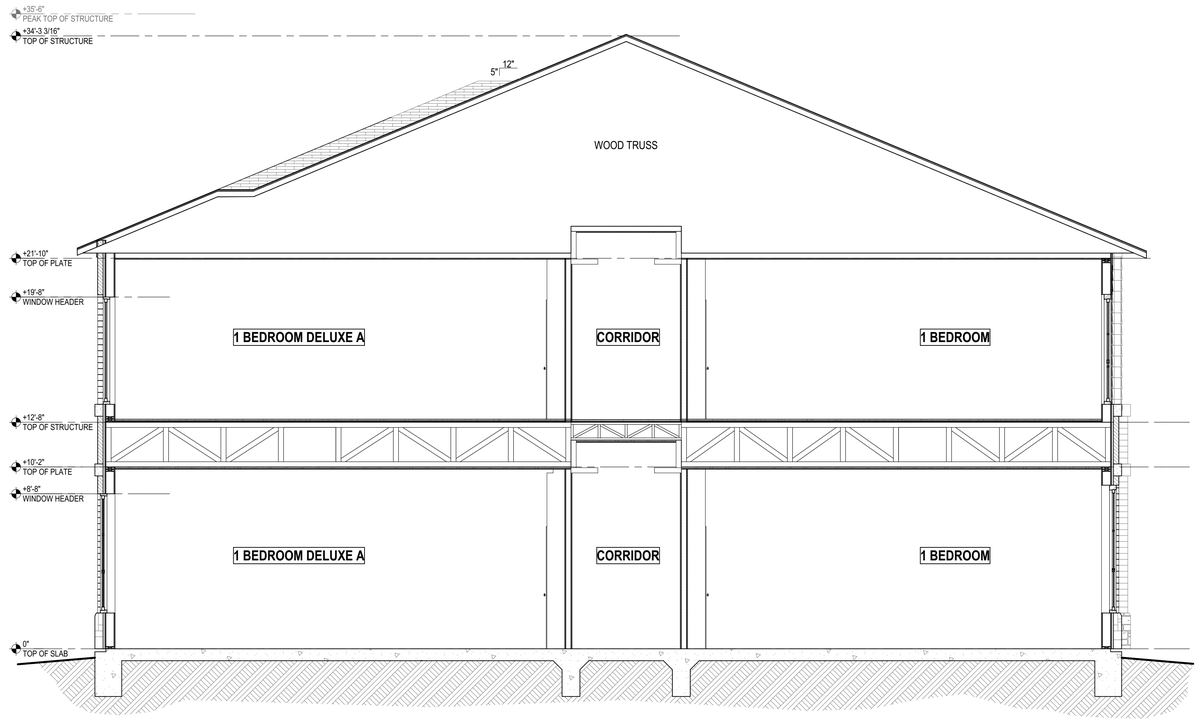
SCALE:

DRAWING NUMBER: SK7



LOCATION MAP – NOT TO SCALE



1 SECTION @ LEFT WING

SCALE: 1/4" = 1'-0"

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ASSISTED LIVING & MEMORY CARE
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DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

ORIGINAL ISSUE DATE:
09/01/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER:
SK9

PLANNED UNIT DEVELOPMENT

5. PLANNED UNIT DEVELOPMENT APPLICATION (PUD 014) – Proposed Stonecrest Planned Unit Development, East side of Livernois between Big Beaver and Wattles, Section 22, Currently Zoned R-1E (One Family Residential) District

Mr. Carlisle gave an overall review of the proposed Stonecrest Assisted Living PUD development and the approval process of a Planned Unit Development application. He reported the application meets the PUD standards. He addressed the public benefit to include improvements for the development of a City park and trailhead. Mr. Carlisle recommended the Planning Commission recommend approval of the Preliminary Site Plan with the conditions as identified in his report dated September 11, 2015.

Mark Pomerenke, Vice President of Operations for North Point Development, gave a summary of the project. He said meetings were held with City staff, homeowners' associations and property owners within a radius of 300 feet of the proposed development. Mr. Pomerenke identified revisions to the site plan to address concerns of the property owner abutting directly to the south; additional screening, preservation of two existing trees, stormwater management, light and noise pollution.

Mr. Pomerenke said the height of the building would not exceed 38 feet. He stated they would comply with all the conditions as identified in the Planning Consultant report.

PUBLIC HEARING OPENED

Joe Peterson, 118 Scottsdale, expressed opposition; not a good fit for the residential neighborhood, concerns with traffic, flooding, public notification.

Joyce Peterson, 118 Scottsdale, expressed opposition; not a good fit for the area, concerns with operations of such a facility, setback/screening from Livernois, public notification.

Duane Kristofice, 3404 Talbot, asked the applicant to acknowledge revisions to the site plan that was agreed to in their discussion.

Steve Toth, 2312 Niagara, spoke in favor.

PUBLIC HEARING CLOSED

Mr. Pomerenke offered apologies to Duane Kristofice. He said additional evergreens would be planted, no less than five trees on the southeast corner, as promised; as well, noise and light pollution would be addressed.

Resolution # PC-2015-09-058

Moved by: Sanzica
Seconded by Krent

WHEREAS, The applicant NP Senior Living Development LLC submitted an application for a Planned Unit Development (PUD), located on the east side of Livernois, between Big Beaver and Wattles in Section 22; and

WHEREAS, The site abuts a City park site which is presently undeveloped but is proposed to include a trailhead and dog park; and

WHEREAS, The applicant is proposing a partnership with the City to increase the overall development potential of the subject site while also assisting the City with developing the park site; and

WHEREAS, The applicant intends to develop a 100-bed convalescent and nursing facility with thirty-seven (37) parking spaces on the subject property, while preserving a significant portion of wetlands on the eastern half of the site; and

WHEREAS, The applicant proposes a number of improvements to the City property including site grading work, sidewalks, construction of detention basin, and construction of eighty (80) shared parking spaces to be used by visitors to the facility and City park; and

WHEREAS, The proposed revision to the PUD meets the Standards for Approval set forth in Section 11.03.

BE IT RESOLVED, That the Planning Commission recommends to City Council that Concept Development Plan Approval and Preliminary Development Plan Approval for the proposed Stonecrest Planned Unit Development, including improvements and layout for the City park property, be granted, subject to the following:

1. Height of the structure shall not exceed 38 feet.
2. All area located outside of the “limits of tree removal” be placed in a conservation easement.
3. Applicant should add bike parking to the assisted living site and city park.
4. Submit a detailed landscape plan with species and sizes indicated.
5. Screen the southern row of parking from the adjacent single-family property.
6. Break up row of 28 spaces along south side of property with landscape peninsula.
7. Indicate trash enclosure screening.
8. Submit a lighting plan including fixtures and photometrics.
9. Additional evergreens on the southeast side of the property, as promised by applicant, to be provided for screening 3404 Talbot.

Discussion on the motion on the floor.

Mr. Krent identified buildings of similar height range (Zion Church, Walsh College) noting the proposed development is not an anomaly in this area.

Vote on the motion on the floor.

Yes: All present (8)
Absent: Hutson

MOTION CARRIED

DATE: September 18, 2015

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PLANNED UNIT DEVELOPMENT APPLICATION (PUD 014) – Proposed Stonecrest Planned Unit Development, East side of Livernois between Big Beaver and Wattles, Section 22, Currently Zoned R-1E (One Family Residential) District

The applicant NP Senior Living Development LLC submitted an application for a Planned Unit Development (PUD) at the site located on the east side of Livernois. The site abuts the City park site which is presently undeveloped but is proposed to include a trailhead and dog park. The applicant is willing to enter into a partnership with the City to increase the overall development potential of the subject site while also assisting the City with developing the park site.

The Planning Commission discussed this application at the July 28, 2015 and August 25, 2015 Planning Commission Regular meetings. At the last meeting, the Planning Commission demonstrated consensus that the project was ready to be considered at a public hearing. A public hearing is scheduled for this item for the September 22, 2015 Regular meeting. The applicant seeks Concept Development Plan (CDP) and Preliminary Development Plan (PDP) approval concurrently.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the project as revised. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and the recommendations included therein.

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.
3. Minutes excerpt from July 28, 2015 and August 25, 2015 Planning Commission Regular Meeting
4. Public input

G:\PUD's\PUD 014 Stonecrest\PC Memo 09 22 2015.doc

PROPOSED RESOLUTION

Resolution # PC-2015-09-

Moved by:
Seconded by

WHEREAS, The applicant NP Senior Living Development LLC submitted an application for a Planned Unit Development (PUD), located on the east side of Livernois, between Big Beaver and Wattles in Section 22; and

WHEREAS, The site abuts a City park site which is presently undeveloped but is proposed to include a trailhead and dog park; and

WHEREAS, The applicant is proposing a partnership with the City to increase the overall development potential of the subject site while also assisting the City with developing the park site; and

WHEREAS, The applicant intends to develop a 100-bed convalescent and nursing facility with thirty-seven (37) parking spaces on the subject property, while preserving a significant portion of wetlands on the eastern half of the site; and

WHEREAS, The applicant proposes a number of improvements to the City property including site grading work, sidewalks, construction of detention basin, and construction of eighty (80) shared parking spaces to be used by visitors to the facility and City park; and

WHEREAS, The proposed revision to the PUD meets the Standards for Approval set forth in Section 11.03.

BE IT RESOLVED, That the Planning Commission recommends to City Council that Concept Development Plan Approval and Preliminary Development Plan Approval for the proposed Stonecrest Planned Unit Development, including improvements and layout for the City park property, be granted, subject to the following:

1. Clarify height of structure
2. All area located outside of the “limits of tree removal” be placed in a conservation easement
3. Applicant should add bike parking to the assisted living site and city park
4. Submit a detailed landscape plan with species and sizes indicated
5. Screen the southern row of parking from the adjacent single-family property
6. Break up row of 28 spaces along south side of property with landscape peninsula
7. Indicate trash enclosure screening
8. Submit a lighting plan including fixtures and photometrics

Yes:
No:
Absent:

MOTION CARRIED/FAILED

Stonecrest PUD 014

City of Troy Planning Department

Legend:

Aerial

- Red: Band_1
- Green: Band_2
- Blue: Band_3

533 0 267 533 Feet

Scale 1: 3,200

Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Printed: 9/2/2015

Stonecrest PUD

City of Troy Planning Department

Legend:

Form Based Zoning 2

- (PUD) Planned Unit Development
- (CF) Community Facilities District
- (EP) Environmental Protection District
- (BB) Big Beaver Road
- (MR) Maple Road
- (NN) Neighborhood Nodes (A-U)
- (CB) Community Business
- (GB) General Business
- (IB) Integrated Industrial Business District
- (O) Office Building District
- (OM) Office Mixed Use
- (P) Vehicular Parking District
- (R-1A) One Family Residential District
- (R-1B) One Family Residential District
- (R-1C) One Family Residential District
- (R-1D) One Family Residential District
- (R-1E) One Family Residential District
- (RT) One Family Attached Residential Distric
- (MF) Multi-Family Residential
- (MHP) Manufactured Housing
- (UR) Urban Residential
- (RC) Research Center District
- (PV) Planned Vehicle Sales

Aerial

- Red: Band_1
- Green: Band_2
- Blue: Band_3

667 0 333 667 Feet

Scale 1: 4,000

Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Printed: 6/29/2015

CARLISLE | WORTMAN associates, inc.
605 S. Main Street, Ste. 1
Ann Arbor, MI 48104
(734) 662-2200
(734) 662-1935 Fax

Concept and Preliminary Planned Unit Development and Preliminary Site Plan Review For City of Troy, Michigan

GENERAL INFORMATION

Applicant	Northpoint Development
Project Name:	Stonecrest
Plan Date:	September 11, 2015
Location:	East side of Livernois, north of Big Beaver Road
Zoning:	R1-E to PUD
Action Requested:	Planning Commission review and recommendation to the City Council for approval of the Concept Development Plan, Preliminary Development Plan, and Preliminary Site Plan Review.

BACKGROUND

The Planning Commission is to consider a Planned Unit Development for the construction of a new city park and senior assisted living facility. The site is located on the western side of Livernois, north of Big Beaver. The city park portion of the PUD includes an 80-space shared parking lot and development of a dog park/trailhead. The other portion of the PUD is a 70,000 square foot senior assisted living facility with a memory care residential complex. The complex includes 42 memory care beds, which are contained in 22 single-occupied rooms and 10 double-occupied rooms, and 55 assisted living care units, which include 5 types of units. The senior assisted living facility site is 9.59 acres, and includes three separate parcels. The site is currently undeveloped R1-E zoned property and encumbered with floodplain and a 4.9 acre wetland(s). The applicant will preserve the wetland as part of the development.

In part because of site limitations due to wetland(s) and floodplain, the applicant is proposing a unique partnership with the City. The applicant proposes to use the city's dog park site for stormwater management, obtaining of fill to raise their building out of the floodplain, and use for shared parking. In order to use the city property, the applicant is proposing the following benefits:

- Construction of an 80-space shared-use parking lot be located on city property;

- Construction of internal sidewalks;
- Construction of plaza and trailhead;
- Use of stormwater best management practices including rain garden;
- Construction of detention basin to be used as pond for dog park;
- Landscaping along Livernois;
- Sidewalk on Livernois; and
- $50,000 in contribution for dog park improvements including internal paths/trails.

The proposed improvements will be constructed concurrently with the senior assisted living building construction.

The procedure for review and approval of a PUD is a three-step process; however, the action can be expedited to combine the concept and preliminary PUD approval:

- The first step is an application for and approval of a Concept Development Plan and Preliminary Development Plan. The Concept Development Plan and Development Agreement are approved by the City Council following recommendation of the Planning Commission. Such action, if and when approved, shall confer upon the applicant approval of the Concept Development Plan and shall rezone the property to PUD in accordance with the terms and conditions of the Concept Development Plan approval.
- The second step of the review and approval process is application for and approval of a Preliminary Development Plan for the entire project, or for any one or more phases of the project. City Council shall have the final authority to approve and grant Preliminary Development Plan approvals, following a recommendation by the Planning Commission. The preliminary Development Plan approval includes preliminary site plan approval.

At this meeting the applicant is seeking approval of both Concept and Preliminary Planned Unit Development, and preliminary site plan approval. Please note that if the Planning Commission recommends approval on the Concept PUD, Preliminary PUD, and preliminary site plan, the matter is then forwarded to the City Council. This matter will not come back before the Planning Commission unless a future amendment is sought.

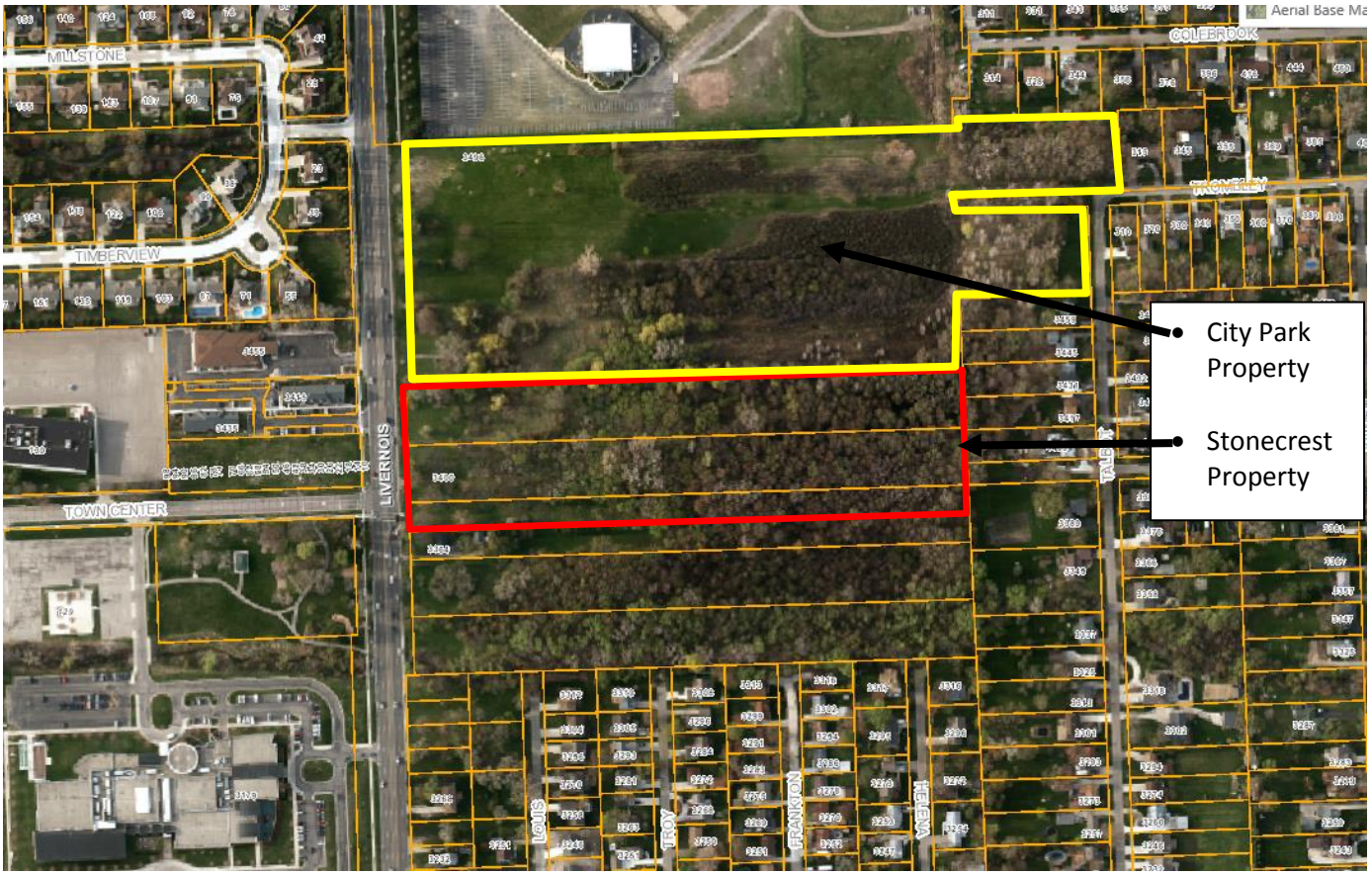
- The final step of the review and approval process is the review and approval of a Final Development Plan (final site plan) for the entire project, or for any one or more phases of the project, and the issuance of building permits. Final Development Plans for Planned Unit Developments are submitted to the Planning Department for administrative review, and the Planning Department, with the recommendation of other appropriate City Departments, has final authority for approval of such Final Development Plans.

Though we have tried to be as succinct as possible, we recognize that this review is rather lengthy. As a result we have divided it into three sections: 1). Project Summary: Master Plan and overall PUD design; 2). Site Plan Review; and 3). Standards for Approval.

PART 1: PROJECT SUMMARY

CONCEPT PLAN

Due to shared parking, shared access, and the provided public improvements, the proposed PUD includes both the city park property and the three parcels that make up the senior assisted living facility. A PUD agreement will be drafted that outlines improvements, timing, and each party's responsibility.

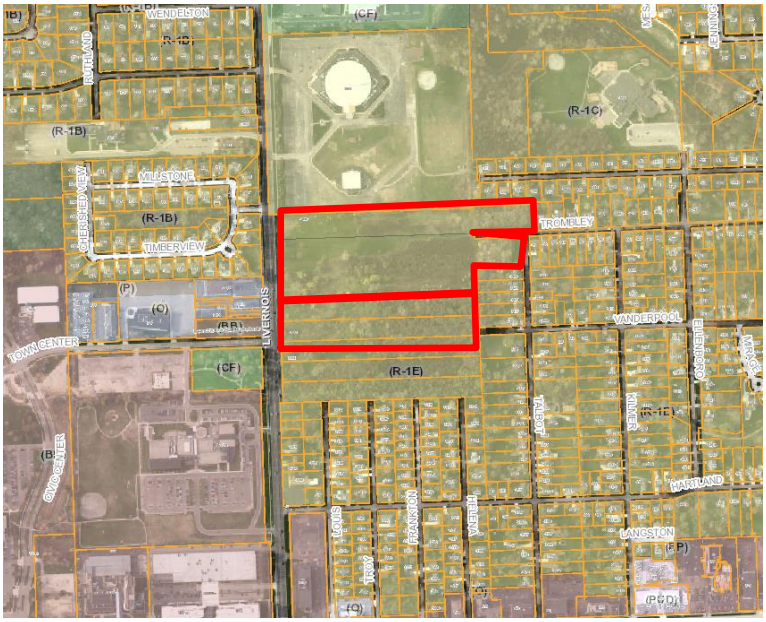


NEIGHBORING ZONING AND LAND USE

The site is bounded to the north, south, and east by single-family residential zoning. Surronding uses include the Zion Church to the north, vacant property to the south, and single-family residential to the east

Across Livernois to the west includes a mix of zoning including Community Facilty, Big Beaver, Office, and single-family residential. Uses to the immediate west include the Troy Community Center, Amber Apartment (under constriction), office, and single-family residential.

Adjacent zoning and land uses to the subject property are listed below:



	Use	Zoning
North	Zion Church	R1-E: One Family Residential District
South	Vacant	R1-E: One Family Residential District
East	Single Family Residential	R1-E: One Family Residential District
West	Community Center, Office, Apartments, single-family residential	Community Facilty, Big Beaver, Office, and single-family residential.

Items to be Addressed: *None.*

MASTER PLAN

While located in close proximity to the Big Beaver designation in the Master Plan, the site is designated as single-family residential. This category is intended to preserve the existing quality residential neighborhoods of the City while recognizing the need for other uses that support the main function of residential areas.

We note that due to the encumbrances of floodplain and a 4.9 acre wetland, the developable portion of the assisted living property is small and directly adjacent to Livernois. Due to these factors, construction of a single family neighborhood under R-1E zoning might not be feasible. However, the use as a senior assisted living is keeping character to the residential nature of this section of Rochester Road.

A tenet of the Master Plan is the protection of residential neighborhood. The combination of the proposed use, the size and scale of the building, and other proposed site improvements adequately protect the single-family properties in the adjacent area to the east and south. Furthermore, the use of the city property for a city park provide a social and recreational focus for the neighborhood and a public service to the Troy community as a whole.

Furthermore, the subject property is encumbered with floodplain, wetlands, and tree stands. The back two-thirds of the site, indicated as outside of the "limits of tree removal" will be preserved through a conservation easement. The preservation of the natural features including regulated wetland(s) and tree stands is consistent with the Master Plan.

The proposed rezoning to PUD is consistent with the Master Plan.

Items to be Addressed: *None*

PART 2: SITE PLAN REVIEW

The R1-E Zoning Districts permits senior assisted living as a Special Use. However, the applicant is seeking approval of a PUD due to the proposed partnership with the City and a PUD will allow building/development flexibility to better organize site development.

The purpose of a Planned Unit Development is to permit flexibility in design and use that will result in a higher quality development and a better overall project than would be accomplished under conventional zoning. However, when considering a PUD, it is important to note the flexibility from the zoning ordinance that the applicant is seeking. In our preliminary review, we note two areas that the applicant is seeking relief:

a. Height: For Senior Living facilities, the MF, Multiple-family District height regulations apply. The maximum building height in the MF District when adjacent to single-family residential is 25 feet. Sheet C-2.0 states that the maximum height is 44-feet at its highest point; however the submitted elevations show a height of 35'6" to the roof peak. The applicant should clarify the height.
b. 50-foot greenbelt: A 50-foot greenbelt buffer shall be provided adjacent to any land zoned or used for residential purposes. Such greenbelt shall be maintained as landscaped open space and shall not include any buildings, parking, or drive-aisles. The building and parking encroach into the 50-foot greenbelt along the northern property line and the parking and drive-aisles encroach into the 50-foot greenbelt along the southern property.

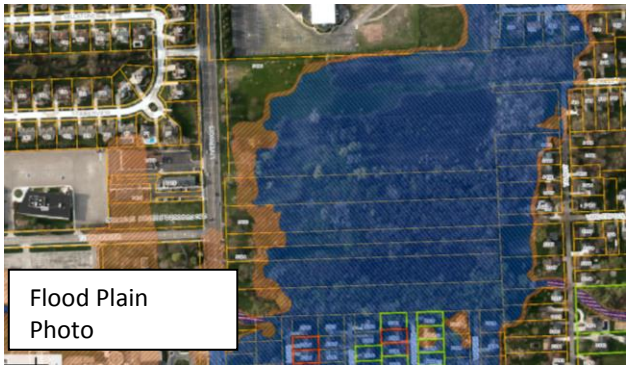
We raise these issues not out of concern but rather for informational purposes. Again, the purpose of a Planned Unit Development is to allow flexibility in design and use to create a better designed development.

NATURAL RESOURCES

The subject property is currently unimproved and is encumbered with flood plain, wetlands, and floodplain.

<u>Floodplain:</u>

As can be seen in the aerial photo to the right, most of the site is located within the floodplain. The applicant proposes to build upon the front quarter of the site. A small portion of the back end of their building will be built within the flood plain.



Flood Plain Photo

As a result they will be cutting and filling using the city park property. The final amount of cut and fill will be determined as part of final engineering.

Wetlands:

As can be seen in the aerial photo to the right, the back half of the site is encumbered with a regulated wetland. The applicant is not building within the wetland and does not require any MDEQ approval.

Wetlands Photo

Woodlands:

The applicant has provided a tree survey. A majority of the trees on the site are elder, maple, cottonwood, walnut, and elm. The applicant has provided a tree preservation plan that shows that the limits of grading are limited to the front third of the site. The trees outside of the limits of grading will not be touched and should be able to be preserved.

Conservation Easement:

The applicant indicates that the back two-thirds of the site, indicated on Sheet C-1.2 as "limits of tree removal" will be preserved. In order to ensure this area remains undeveloped in its natural state for perpetuity we recommend that the applicant place it in a conservation easement.

Items to be Addressed: *All area located outside of the "limits of tree removal" be placed in a conservation easement.*

PARKING

As set forth by the zoning code, senior assisted living is required to provide the following parking:

	Required	Provided
Senior Assisted Living = 1 space for each 0.65 dwelling units; plus 1 space for each employee on the largest typical shift.	36 for units and 10 for employees = 46 spaces	37 on site and 80 shared parking spaces
Memory Care= 1 space per 3 beds; plus 1 space for each employee on the largest typical shift.	14 for units and 10 for employees = 24 spaces	
Barrier Free Accessible	2	6
Bicycle Parking	2	0
Loading	1	1

By code, the applicant is required to provide 70 parking spaces; however, the applicant notes that they need approximately 45-50 total spaces. City analysis of the proposed dog park determined that sixty (60) spaces are necessary to accommodate the anticipated average daily use of the dog park. The total parking provided is 117 spaces.

The applicant has reconfigured parking to put more parking closer to the front of the building. There are nine (9) spaces adjacent to the drop off area and fourteen (14) spaces adjacent to the north side of the building.

The city park parking lot has been designed to allow for future expansion if necessary.

Items to be Addressed: *Applicant should add bike parking to the senior assisted living site and city park.*

TRAFFIC

The proposed use of the property as a dog park and senior assisted living facility does not warrant a traffic study.

Items to be Addressed: *None*

SITE ACCESS, and CIRCULATION

Shared access to both sites will be provided on the City park site. The applicant will require an access easement to gain access to their site through the city park site. Engineering has preliminary reviewed access and finds it acceptable. The City will work with applicant to provide necessary cross access easement.

Items to be Addressed: *None.*

PEDESTRIAN CIRCULATION

The applicant is proposing a significant benefit via pedestrian enhancements along Livernois. The applicant is building an 8-foot wide sidewalk along the assisted living site and the city park site. The assisted living facility has a direct pedestrian connection to the Livernois sidewalk. The city park is improved with internal sidewalks and trail to the Livernois sidewalk.

Items to be Addressed: None

ESSENTIAL SERVICES

Preliminary grading and utilities have been shown. The City Engineer notes that this area is well served by water and sewer, and can serve the proposed development.

Items to be Addressed: *None*

LANDSCAPING

The applicant has provided a landscape plan. The plan is preliminary and does not include species and sizes. The applicant should submit a detailed landscape plan with species and sizes indicated.

Greenbelt and Street Trees
A twenty (20) foot wide greenbelt has been provided along Livernois Road. The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way. As required by ordinance the applicant has provided sixteen (16) trees along Livernois Road.

Minimum landscaped area:
The site plan must provide 20 percent of overall landscaped area. The landscape plan greatly exceeds the 20% overall site landscaping requirement.

Parking lot landscaping:
Section 13.02.C establishes the requirements for parking lot landscaping. Based on 117 parking spaces provided, 15 parking lot trees are required. The plan includes 15 trees adjacent to the parking spaces.

Along the south side of the property, the applicant provides a row of 28 spaces with no landscape break. The applicant should add a landscape peninsula to this row to break up the parking.

Screening:
The applicant has not screened the southern parking lot from the adjacent single-family property as required.

Trash Enclosure Screening:
The applicant has not submitted screening details for the trash enclosure. The ordinance requires material that are consistent with the primary building material. Because it is adjacent to a single-family residential property the trash enclosure should include a both material (wood/masonry) screening and a dense landscape screen.

***Items to be Addressed**: 1). Submit a detailed landscape plan with species and sizes indicated; 2). Screen the southern row of parking from the adjacent single-family property. 3). Break up row of 28 spaces along south side of property with landscape peninsula; and 4). Indicate trash enclosure screening.*

LIGHTING

The applicant has not submitted a photometric plan or lighting fixture cut sheet.

***Items to be Addressed:** Applicant shall submit a lighting plan including fixtures and photometrics.*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided. The only significant design change since the last Planning Commission review was the use of cultured stone rather than brick as shown before. The applicant has been asked to provide a colored rendering at the meeting.

In addition, as required for Preliminary PUD approval the applicant needs to submit samples, swatches, or manufacturer's specification sheets of the predominant proposed exterior materials and colors of all buildings and permanent structures, including walls and fences.

Items to be Addressed: *1). Provide colored rendering at the Planning Commission meeting; and 2). Submit samples, swatches, or manufacturer's specification sheets of the predominant proposed exterior materials and colors of all buildings and permanent structures, including walls and fences.*

PART 3: STANDARDS

PUD STANDARDS

The PUD standards are found in 11.03 of the Zoning Ordinance are found in Article 11. Many of the standards are addressed in our memo, however a summary of our comments in regards to the standards include:

Section 11.03.B. The applicant shall demonstrate that through the use of the PUD option, the development will accomplish a sufficient number of the following objectives, as are reasonably applicable to the site, providing:

1. ***A mixture of land uses that would otherwise not be permitted without the use of the PUD provided that other objectives of this Article are also met.***

Due to shared parking, shared access, and the required public improvements, the proposed PUD includes both the city park property and the three parcels that make up the senior living facility. The unique private partnership between the city and senior living facility is possible through a PUD.

2. ***A public improvement or public facility (e.g. recreational, transportation, safety and security) which will enhance, add to or replace those provided by public entities, thereby furthering the public health, safety and welfare.***

The applicant is proposing the following benefits:

- Construction of an 80-space shared-use parking lot be located on city property;
- Construction of internal sidewalks;
- Construction of plaza and trailhead;
- Use of stormwater best management practices including rain garden;
- Construction of detention basin to be used as pond for dog park;
- Landscaping along Livernois;
- Sidewalk on Livernois; and
- $50,000 in contribution for dog park improvements including internal paths/trails.

These significant public benefits are achievable through the PUD process. Through the public benefits the city will be able to develop the city park and trailhead. The construction of the city property for a city park provide a social and recreational focus for the neighborhood and a public service to the Troy community as a whole.

3. A recognizable and material benefit to the ultimate users of the project and to the community, where such benefit would otherwise be infeasible or unlikely to be achieved absent these regulations.

The aforementioned public benefits would not be achievable without a PUD.

4. Long-term protection and preservation of natural resources, natural features, and historic and cultural resources, of a significant quantity and/or quality in need of protection or preservation, and which would otherwise be unfeasible or unlikely to be achieved absent these regulations.

The subject property is currently unimproved and is encumbered with floodplain, wetlands, and tree stands. The back two-thirds of the site, indicated as outside of the "limits of tree removal" will be preserved through a conservation easement. The preservation of the natural features including regulated wetland(s) and tree stands is achievable through the PUD process.

5. A compatible mixture of open space, landscaped areas, and/or pedestrian amenities.

As aforementioned, the applicant is proposing a significant amount of natural feature protection amenities. The overall land preserve greatly exceeds the minimum 20% open space requirement.

6. Appropriate land use transitions between the PUD and surrounding properties.

The use as a senior assisted living is keeping character to the residential nature of this section of Rochester Road. A tenet of the Master Plan is the protection of residential neighborhood. The combination of the proposed use, the size and scale of the building, and other proposed site improvements adequately protects single-family properties in the adjacent area to the east and south. The adjacent single-family properties to the east is sheltered by over 800-feet of protected tree stands and wetlands.

7. Design features and techniques, such as green building and low impact design, which will promote and encourage energy conservation and sustainable development.

The applicant is preserving natural features and using best management practices at the dog park.

8. Innovative and creative site and building designs, solutions and materials.

The applicant has shown innovative and creative site and building design that presents a consistent street frontage, maintains the residential character of Livernois, and preserves natural resources.

9. The desirable qualities of a dynamic urban environment that is compact, designed to human scale, and exhibits contextual integration of buildings and city spaces.

The applicant maintains the residential character of Livernois.

10. ***The PUD will reasonably mitigate impacts to the transportation system and enhance non-motorized facilities and amenities.***

The development of a trail head on the city property provides an enhanced non-motorized amenities.

11. ***For the appropriate assembly, use, redevelopment, replacement and/ or improvement of existing sites that are occupied by obsolete uses and/or structures.***

The existing site is vacant and underutilized. The proposed development will greatly improve the existing site and provide a significant community benefit in the form of a park and trailhead. We note that due to the encumbrances of floodplain and a 4.9 acre wetland, the useable portion of the assisted living property is small and directly adjacent to Livernois. Due to these factors, construction of a single-family neighborhood under R-1E zoning might not be feasible.

12. ***A complementary variety of housing types that is in harmony with adjacent uses.***

The proposed assisted living facility will provide a necessary residential use in close proximity to existing single-family neighborhoods. The location on Livernois will provide a transition to the single-family neighborhood to the east.

13. ***A reduction of the impact of a non-conformity or removal of an obsolete building or structure.***

Not applicable; however, as noted the site is vacant and underulitized. The proposed development will greatly improve the existing site and provide a significant community benefit in the form of a park and trailhead.

14. ***A development consistent with and meeting the intent of this Article, which will promote the intent of the Master Plan or the intent of any applicable corridor or sub-area plans. If conditions have changed since the Plan, or any applicable corridor or sub-area plans were adopted, the uses shall be consistent with recent development trends in the area.***

While located in close proximity to the Big Beaver designation in the Master Plan, the site is designated as single-family residential. This category is intended to preserve the existing quality residential neighborhoods of the City while recognizing the need for other uses that support the main function of residential areas.

We note that due to the encumbrances of floodplain and a 4.9 acre wetland, the useable portion of the assisted living property is small and directly adjacent to Livernois. Due to these factors, construction of a single family neighborhood under R-1E zoning might not be feasible. However, the use as a senior assisted living is keeping character to the residential nature of this section of Rochester Road.

A tenet of the Master Plan is the protection of residential neighborhood. The combination of the proposed use, the size and scale of the building, and other site proposed improvements, adequately protects single-family properties in the adjacent area to the east and south. Furthermore, the use of the city property for a city park provide a social and recreational focus for the neighborhood and a public service to the Troy community as a whole.

Furthermore, the subject property is encumbered with floodplain, wetlands, and tree stands. The back two-thirds of the site, indicated as outside of the "limits of tree removal" will be preserved through a conservation easement. The preservation of the natural features including regulated wetland(s) and tree stands is consistent with the Master Plan.

The proposed rezoning to PUD is consistent with the Master Plan.

15. ***Includes all necessary information and specifications with respect to structures, heights, setbacks, density, parking, circulation, landscaping, amenities and other design and layout features, exhibiting a due regard for the relationship of the development to the surrounding properties and uses thereon, as well as to the relationship between the various elements within the proposed Planned Unit Development. In determining whether these relationships have been appropriately addressed, consideration shall be given to the following:***

    a. ***The bulk, placement, and materials of construction of the proposed structures and other site improvements.***
    b. ***The location and screening of vehicular circulation and parking areas in relation to surrounding properties and the other elements of the development.***
    c. ***The location and screening of outdoor storage, loading areas, outdoor activity or work areas, and mechanical equipment.***
    d. ***The hours of operation of the proposed uses.***
    e. ***The location, amount, type and intensity of landscaping, and other site amenities.***

The proposed development is complementary and greatly enhances the surrounding area. The applicant has taken the appropriate measures to mitigate any potential negative impacts upon the adjacent single-family residential neighborhood.

16. ***Parking shall be provided in order to properly serve the total range of uses within the Planned Unit Development. The sharing of parking among the various muses within a Planned Unit Development may be permitted. The applicant shall provide justification to the satisfaction of the City that the shared parking proposed is sufficient for the development and will not impair the functioning of the development, and will not have a negative effect on traffic flow within the development and/or on properties adjacent to the development.***

By code, the applicant is required to provide 70 parking spaces; however, the applicant notes that they need approximately 45-50 total spaces. City analysis of the proposed dog park determined that sixty (60) spaces are necessary to accommodate the anticipated average daily use of the dog park. The total parking provided is 117 spaces.

17. ***Innovative methods of stormwater management that enhance water quality shall be considered in the design of the stormwater system.***

The applicant is preserving natural features and using best management practices at the dog park.

18. ***The proposed Planned Unit Development shall be in compliance with all applicable Federal, State and local laws and ordinances, and shall coordinate with existing public facilities.***

The proposal complies with all federal, state and local laws and coordinates with existing public facilities.

SUMMARY OF FINDINGS

We provide two parts to our recommendation, first with regard to the Planned Unit Development as reviewed under Section 11.03 and secondly in regards to the site plan.

Planned Unit Development Concept and Preliminary Plan

We find that the proposed development meets the PUD standards as outlined in Section 11.03. The applicant is proposing a unique partnership with the city. The city is obtaining a significant public benefit in the form of necessary improvements to develop the city park and trailhead as envisioned. These significant public benefits are achievable through the PUD process. The construction of the city property for a city park provide a social and recreational focus for the neighborhood and a public service to the Troy community as a whole.

The use as a senior assisted living is keeping character to the residential nature of this section of Rochester Road. The combination of the proposed use, the size and scale of the building, and other site proposed improvements, adequately protects single-family properties in the adjacent area to the east and south. The project will benefit Livernois and the City of Troy.

Site Plan

We recommend that the Planning Commission recommend approval of the preliminary site plan with the following items addressed prior to City Council consideration:

1) *Clarify height of structure*
2) *All area located outside of the "limits of tree removal" be placed in a conservation easement*
3) *Applicant should add bike parking to the assisted living site and city park*
4) *Submit a detailed landscape plan with species and sizes indicated*
5) *Screen the southern row of parking from the adjacent single-family property*
6) *Break up row of 28 spaces along south side of property with landscape peninsula*
7) *Indicate trash enclosure screening*
8) *Submit a lighting plan including fixtures and photometrics*

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

11. PLANNED UNIT DEVELOPMENT APPLICATION (PUD 014) – Proposed Stonecrest Planned Unit Development, East side of Livernois between Big Beaver and Wattles, Section 22, Currently Zoned R-1E (One Family Residential) District

Mr. Hutson asked to be recused from discussion on this item because of his business relationship with Thomas Sawyer, the attorney representing the applicant.

The Board accepted Mr. Hutson's request to be recused. Mr. Hutson exited the meeting.

Mr. Carlisle reviewed the proposed Planned Unit Development application. He addressed the applicant's intent to partner with the City in an effort to increase the development potential of the site and assist the City with developing the City's dog park and trailhead.

There was discussion on:
- Concept of the development; partnership.
- Building design, layout.
  - Flip building, parking, detention 180 degrees
  - Single story near road; drop off at rear entrance
  - Reduce scale of building and hard pavement along road
  - Existing green visually appealing on right-of-way
  - Exclusivity of building; create privacy in front
- Dog park stand-alone vs partnership project.
- Conceptual dog park plans, overlay.
- Stormwater management; detention as feature.
- Property in floodplain; undevelopable, unbuildable.
- Shared parking.
- Access point.

Mark Pomerenke, Vice President of Development of North Point Development, introduced Thomas Sawyer of Hutson, Sawyer, Rupp & Schroeder law firm and David Hunter of Professional Engineering Associates. Mr. Pomerenke addressed:
- Company profile.
- Assisted living services.
- Building design, elevation; not a cookie-cutter development.
- Proposed improvements, amenities.
- $50,000 assistance for dog park, trailhead, other improvements.
- Detention basin as amenity.
- Approximately $12 million development.
- Traffic; lowest traffic-generated use.
- Desire to have building visibility from street.

Chair Edmunds opened the floor for public comment. There was no one present; the floor was closed for public comment.

PLANNED UNIT DEVELOPMENT

8. PLANNED UNIT DEVELOPMENT APPLICATION (PUD 014) – Proposed Stonecrest Planned Unit Development, East side of Livernois between Big Beaver and Wattles, Section 22, Currently Zoned R-1E (One Family Residential) District

Mr. Savidant gave an explanation of a Planned Unit Development application and its approval process.

Mr. Carlisle noted a PUD application ties together the proposed rezoning and site plan as a complete package for consideration by the Planning Commission and City Council.

Mr. Carlisle addressed the revisions to the conceptual Preliminary Site Plan since last reviewed by the Board at their July 28, 2015 meeting:

- Relocation of shared access on City property.
- Reconfiguration of parking spaces; additional spaces closer to the building front.
- Increased landscape buffer for City dog park parking lot; greater screening from Livernois, includes rain garden.
- Increased size of shared detention basin.
- Addition of plaza and 10 foot path to serve as a trailhead.

Mr. Carlisle said the City dog park layout is conceptual and the orientation of the dog park in relation to the assisted living facility is flexible and a product both parties are working on. Mr. Carlisle reviewed the overall community benefits that are being offered by the applicant.

Present were Mark Pomerenke, Vice President of Development of North Point Development, Thomas Sawyer of Hutson, Sawyer, Rupp & Schroeder law firm and David Hunter of Professional Engineering Associates.

Mr. Pomerenke announced a meeting was held with homeowners in the Westwood Park and Troy Meadows subdivisions to discuss the proposed development and address questions and concerns. He addressed the Planning Commission comments relating to the massing and orientation of the building. Mr. Pomerenke stated a change in the building orientation and site layout would adversely affect the interior design of the building and functionality of the assisted care facility.

Mr. Pomerenke displayed a colored site plan. He addressed revisions to the site plan as follows:

- Floor layout (neighborhoods), level of security for memory care.
- Access; alignment with office buildings across the street, median, wayfinding.
- Stormwater detention basin; water feature.
- Plaza at trailhead; connecting sidewalk to trails.
- Parking; screening, spaces in future if needed, shared as relates employee parking.
- Building set back; building height lowered.
- Dumpster relocated off Livernois.
- Elevation; brick vs stone facade.
- Ambulatory runs; estimates five per month.
- Cost estimate of City improvements; $606,233, inclusive of $50,000 for dog park improvements.

There was discussion on:

- Building height.
- Grading, slope of property.
- Stormwater management; rain garden.
- Existing trees.
- Snow removal.
- Tax value, tax analysis.

Chair Edmunds opened the floor for public comment.

Duane Kristofice, 3404 Talbot, voiced opposition to the proposed development. He addressed concerns with size/height of building, parking, preservation of existing trees, property value and light and noise pollution.

Steve Toth, 2312 Niagara, voiced support of the proposed development in relation to the City dog park and its proximity to the central hub of the City. He said the development would be a good anchor and add quality and value to the dog park.

Chair Edmunds closed the floor for public comment.

It was the consensus of the Planning Commission to schedule a public hearing for the application.

Kathy Czarnecki

From: Brent Savidant
Sent: Tuesday, August 11, 2015 8:20 AM
To: Planning
Subject: FW: Stonecrest nursing home
Attachments: To Troy Planning Commission stonecrest nursing home.docx

From: jandjandabbey@aol.com [mailto:jandjandabbey@aol.com]
Sent: Monday, August 10, 2015 3:44 PM
To: Brent Savidant <SavidantB@troymi.gov>
Subject: Stonecrest nursing home

To Mr Savidant

We have attached a letter outlining our concerns about the Stonecrest nursing home proposed on Livernois between Wattles and Big Beaver. Were not sure when the planning commission will review/discuss their proposal, but we would like to be there to express our concerns.

Sincerely

Joyce and Joe Peterson
118 Scottsdale Dr
Troy,Mi 48084

To Troy Planning Commission 8/8/2015

We recently learned about the proposal from Stonecrest to build a nursing home with a memory wing along Livernois, south of Wattles in an area currently zone residential. We live across the street from the proposed nursing home in the Troy Meadows subdivision. We are strongly opposed to allowing this nursing home in this location for the following reasons.

Nursing homes do not add value to the nearby homes, but detract. Open space (current status) or single family homes (current zoning) add value, nursing homes detract. Who wants to live near a nursing home? Is this company going to reimburse nearby home owners for their loss in home values.

The Livernois corridor north of Big Beaver per the master plan is mostly residential and zoned accordingly. As a result, this corridor is fairly quiet and traffic patterns are much lower than most of areas of Troy. This is one of the reasons we purchased our home in this area. This facility, will add traffic to Livernois, approximately 100 cars at each rush hour. Also, we currently experience little ambulance traffic, this will significantly add to that noise source.

Our subdivision is starting to experience flooding problems. Our creek overflowed three times in the last two years and the streets flooded this year for the first time. Building near the flood plain with a massive facility such as proposed would further exacerbate this problem.

It seems that a lot of work has gone into their proposal, both from Stonecrest and Troy city officials, but without any feedback from nearby homeowners. Last winter, a similar proposal for a nursing home only several hundred yards from this location, attracted a standing room only crowd that were mostly against their proposal. I believed that that proposal died due to all of the negative issues associated with a nursing home along Livernois.

Thanks for listening to our concerns and hopefully find a different location for this nursing home in Troy, not in a residential area.

Sincerely

Joyce and Joe Peterson

118 Scottsdale

Troy, mi

Kathy Czarnecki

From: dblack7701@wowway.com
Sent: Thursday, September 17, 2015 5:14 PM
To: Planning
Subject: 9-17-15 Rezone concerns for Stonecrest PUD

Planning Department -

I am writing on behalf of my Father - William B. Black and myself - Debra A. Black in regard to the rezone request of the parcels north of our property to be rezoned to PUD 14 for Stonecrest Planned Unit Development. We reside at 3364 Livernois - parcel 88-20-22-301-007.

My brother was able to attend the meeting on September 8th that NorthPoint Development held at the Troy Community Center to explain the project they are pursuing for the PUD. Since this proposed project will directly impact us we do have some concerns that we would like addressed.

At the NorthPoint Development meeting Mr. Mark Pomerenke and Mr. Jed Momot explained the layout of this project. I have listed our concerns based on the initial layout they described.

The parking accommodations for the employees of this facility would be at the south end of the complex which puts the parking lot next to our property. I believe they will request a variance to bring the parking lot closer to the property line than the standard allowance. This would not allow much of a barrier between the properties. The north rooms of our house are bedrooms. We are concerned with privacy, lighting, noise and pollution.
We would like to request that they keep the standard distance required from the property line and even with that put up a proper barrier (with correct water drainage) and be responsible for maintenance.

There will be a drive from the employee parking lot that runs along the south side of the complex; this will be along the north side of our property. There will be traffic in and out of this area (probably day or night so another reason for a proper barrier). The garbage dumpsters will be kept at this end of the complex. We are concerned about the smell, pollution and the noise.
We would like to request the dumpsters be placed behind or at the north end of the complex.

There will also be a generator at the south end of the complex. This generator will need to switch on and off periodically to maintain the proper running condition required.
We are concerned about noise.
We would like to request the generator be placed in the back of the complex.

The NorthPoint representatives did advise that they would work with us on the barrier and if a privacy fence was required that may be a workable solution. They also advised they would take another look at the layout to see if the garbage dumpsters and generator could be moved. We have not been contacted by NorthPoint Development since the September 8th meeting.

We have the notice for the Planning Commission meeting on September 22nd and we will be attending the meeting. We hope to hear more of an in depth discussion regarding the concerns listed. We have lived in Troy a very long time and we hope that NorthPoint Development is aware of the "good neighbor" policy this city has.

Sincerely,

William B. Black
Debra A. Black

Planned Unit Development – Concept Development (CDP) Submittal

Project: Stonecrest / Trailhead
Date: June 24, 2015
Revised September 2, 2015

City of Troy, Planning Department
City of Troy, 500 W. Big Beaver Rd Troy, Michigan 48084

September 2, 2015

City Council & Planning Commission
City of Troy
500 W. Big Beaver Rd
Troy, MI 48084

RE: Application for Approval of a Planned Unit Development Concept Development Plan (CDP)

Dear Members of the City Council and the Planned Commission:

This letter is being submitted on behalf of NP Senior Living Development, LLC; owner of the Property on Livernois Road in Troy, Michigan as its PUD Concept Development Plan (CDP) in compliance with Section 11.06(C) of the City's Zoning Ordinance.

This PUD Application is made to request that the Property be approved as a Planned Unit Development pursuant to Article of the Ordinance for the purpose of developing and operating a senior housing development as further described in this Application in compliance with Section 11.06 of the Ordinance this letter shall serve as the narrative to the Application.

We have sought the input from the neighborhoods adjoining the project and considered their thoughts and opinions in our revised design considerations.

We would like to compliment the City's Planning Department for allowing our project the opportunity to be reviewed as a PUD project. The process has been streamlined, organized, and efficient and the staff members are truly a pleasure to work with. Lastly, we would like to thank the Planning Commission for taking the time to re- review the PUD submittal and provide input, we invite the opportunity for further dialogue and ultimately we look forward to working together to develop this project into a successful and award winning project for the City of Troy.

Sincerely,

Mark Pomerenke
NP Senior Living Development, LLC

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1. Development Concept:

NP Senior Living Development, LLC proposes to build an Assisted Living Facility with a Memory Care component in Troy, MI near the intersection of Livernois Rd and Town Center Drive. Our market studies indicate that there is demand and capacity in Oakland County and more specifically the City of Troy for an assisted living and memory care facility. It is our goal to meet that demand with a high-quality living environment designed to maximize the independence and comfort of our residents, and to provide "best in class" services in that environment.

The Memory Care component will provide care for individuals with Alzheimer's disease and related dementias in a care setting that is less restrictive than a Skilled Nursing Facility. The Memory Care unit is designed and will be operated in a manner that will help to keep individuals as active as possible in a secure and specially-designed setting, and to provide care that recognizes their individual needs and preferences. The Memory Care Component will comprise 42 beds, which are contained in 22 single-occupied units and 10 double-occupied units. The Memory Care portion of the building is one-story and is split into 2 "neighborhoods" connected with common dining and living spaces and each having a separate interior courtyard to provide secure greenspace to the residents. The average length of stay for Memory Care residents is 12-24 months.

The project will include 55 units providing Assisted Living care, which contain 5 types of units including studios, studio deluxe, one bedroom, one bedroom deluxe, and two bedroom units. Generally units are single occupied, and we would generally expect 3 of the 6 total 2 bedroom units to be double occupied, often times this could be a healthy spouse of a resident requiring the assisted living care and services. The Assisted Living portion will be two-story and will include resident amenity spaces and administrative offices. The facility will also have ample outdoor green space available for resident use, and many planned activities to keep the community active. The average length of stay for the Assisted Living residents is 18-24 months.

Residency at Stonecrest will be offered on a monthly rental basis with no buy-in fees and will provide the following amenities:

- Private and shared apartments in a variety of configurations with individual thermostat control of heating & air conditioning, large windows for natural light, small kitchenettes and accessible bathrooms.
- Gracious dining room with outdoor seating for breakfast, lunch & dinner served restaurant-style every day.
- Private dining room for family and guest use
- 24 hour security, care team availability and emergency response system.
- Café / Bistro with coffee, juices, snacks and entertainment/activities for residents, families and guests.
- Wellness center an exercise room with senior friendly exercise equipment and space for chair exercises such as chair yoga, etc.
- Beauty salon with massage room.
- Theater.
- Art studio & indoor gardening room.
- Library / card room with computers and internet for resident use to include engaging programs for brain fitness, etc.
- Activity room with residential kitchen for activities, resident and family use.
- Outdoor green space for resident, family and guest use.
- Planned group outings.

- Regularly scheduled social, spiritual, recreational and educational events within the community.
- Art programs and music therapy for memory care residents.
- Regularly scheduled housekeeping.
- Complimentary wifi.
- Scheduled transportation for facility residents to local amenities such as the Somerset mall, library, and museums

The building will be constructed in a residential character with similar building materials to the surrounding neighborhood including brick, stone, and cementious "hardi board" siding, and a pitched roof with architectural asphalt shingle, with some standing seem elements to add interest to the roof profile and b*reak up the building. The 2 story component of the building will face Livernois Road. The floor to floor heig*ht is 11' and the pitched roof will make the total height of the building 38' above grade at its highest point, which is a requested deviation from the current zoning district regulations.

PUD Justification:

The Existing Zoning on the Property is R1-E, which is a residential zoning district. The proposed use of Senior Assisted Living is permitted under this district, but requires special approval. The proposed project will have architecture complimentary to the surrounding residential uses, and will improve upon the quality of the residential neighborhood by offering an additional high quality housing option for the aging members of Troy's population, that will allow them to stay in the area and live an environment that provides the assistance they need. Furthermore, the project fits in with the surrounding uses by offering substantial buffers between the building and the residential neighborhoods to the South and East, will provide a public benefit to all surrounding uses by providing infrastructure for a City Park to the site to the North, and will have little to no impact on the civic uses, office and residential neighborhoods to the west.

2. Density:

The proposed development consists of the memory care component of 42 beds, 22 single occupied units and 10 double occupied units. The assisted living care consists of 55 units. The parcel is 9.59 acres in size.

3. Road System

The project will have one entry points from Livernois Road. The entrance is shared with the proposed Trailhead Park Facility owned by the City of Troy. The roadways on-site will remain private, are designed for the most efficient flow of traffic and access to the building. For the safey of occupants, visitors and staff there will be extensive network of walkways and footpaths. Sidewalk walkways will be designed to be wide enough to accommodate residents who may need the assistance of a walker, wheelchair, or similar type of device. The walkways will include seating areas, site/water features and other amenities. The proposed development will be designed to integrate its pathways into the City Trailhead Facility.

4. Utilities

The Project will connect to the City's existing water, sewer and storm water systems. The design of the site will include storm water detention meeting all the city's requirements. The proposed plan contemplates the construction of parking, utility, storm water, and trail infrastructure for a city park on the site north and directly adjacent to the proposed property. This infrastructure will be constructed by the private development for the benefit of the city to lessen the impact of the project by providing a public benefit, and coordinating the engineering and construction on both sites.

5. Open Space/Common Areas.

The Natural Resources on the site will consist of over 5 Acres of woodlands and wetlands; the development of this site will not disturb and shall preserve the onsite delineated wetlands. Furthermore, the site green space will exceed 75% of the total project area, and will serve to expand the total community greenspace for the adjacent city park

6. Uses.

The parcel is being specifically developed for senior living uses.

7. Development Guidelines.

The attached site plan sets forth the setbacks, building heights, and size of the building to be constructed for the project and includes the paving, parking, drive lanes, lighting, landscaping, green space and common areas. In addition to city requirements, Applicant will limit site lighting to 12' tall poles and all exterior lighting should be down recessed lighting as to avoid light pollution on neighboring property.

8. Parking and Traffic.

The Assisted Living facility is ultimately a low traffic generating use. The parking demand for the project is roughly 45-50 spaces. These spaces are used for visitor and employee parking, and it is unusual for residents to have vehicles on site and in instances where residences do have a car, it is not normally used. Regular use of parking consists of about 5-10 spaces for normal visiting traffic and 20 spaces for employee parking, the remaining 20 stalls are typically provided for additional parking for community events and outreach activities or holidays such as Mother's Day. The proposed plan provides 37 stalls on site to provide normal dedicated parking, and will construct an additional 80 shared stalls on the city park that the facility could access for the overflow visitor traffic. In this regard, the proposed development is providing 72 additional parking spaces for the benefit of the city park that are not needed for the senior living facility. Sharing these resources, helps keep total paving down and maintain the site's green space and natural resources. In order to reduce impact on neighbors, the applicant will prohibit deliveries and trash service between the hours of 10pm and 8am.

9. Landscaping.

The landscaping for the Project will be installed and maintained in a first class manner. The Applicant intends for the landscaping to play an important role in in the Project and the lives of the residents. The landscaping is designed to encourage the residents to spend time outdoors by being viable, interesting and inviting and to encourage the use of a network of sidewalks for exercise and recreation. Please see the attached landscape plan. In consideration for the neighbor to the South,

the Applicant has relocated 5 parking stalls to allow for enough room to create a berm and add evergreen landscaping between the project and the neighbor's home.

10. Natural Resources and Features.

As noted the project will keep the five acres on the east side of the project undeveloped. This will keep the majority of the sites woodlands and all of wetland area unimpacted with any development. The existing flood plain will be filled on the development site and compensating cut will be performed on the City Trailhead facility property

11. Phasing Information.

The project will be completed in one phase.

12. Public Service and Facilities.

The project will utilize the City's water and sewer facilities. The current infrastructure is designed to accommodate a use with this density.

The project impact on municipal services, specifically ambulance, fire and police are managed by best practices and care and the project developer and operator are very open to developing an appropriate and low impact response protocol for the facility that is acceptable to the City and surrounding neighbors. Ambulance runs for facilities are historically 1 per week in ISL operated facilities. Police and fire runs are not anticipated beyond normal demands from the project census. Our building will be fully sprinkled and designed for higher levels of safety and egress than a typical residential building as the buildings are built to institutional type occupancy.

Use of 911 in Assisted Living:

- While there are no studies or statistics to quantify the use of emergency response in Assisted Living, there is some anecdotal evidence that suggests being proactive has a measureable impact on the use of emergency services. Specifically one study indicates seniors living alone are the majority of 911 calls. When Paramedics initiated weekly visits to these same seniors, the number of calls was reduced by 32%. Given that assisted living has on site care staff available with access to a licensed nurse 24/7, it would be safe to extrapolate the same, or likely better results.
- Assisted living staff members are not only trained to handle the day to day situations that arise, they are also extensively trained in emergency response. While in many cases they are not licensed medical professionals, they are trained to recognize, evaluate and intervene when a change of condition is determined.
- Generally speaking, an assisted living community with 150 residents will utilize emergency response an average of 5 times a month. In addition a recent CBS News Hour explored the use of emergency response in assisted living. It was determined that falls were the number one reason 911 is called. While clearly we as an industry are not able to "prevent" all falls, what we can do is to properly train our staff on fall risks and fall reduction. If we are able to do this, we are able to further reduce those numbers.

- Long gone is the term “aging in place”. The purpose of Assisted Living is to allow and assist our seniors to “live in place”. It is about quality of life while meeting the needs and demands of the seniors of today and tomorrow. Through active, ongoing and thorough training we as an industry have shown our commitment and resolve to provide the highest possible level of care while understanding we are working with an aging population. That said, now more than ever our seniors are healthier, more active and far more engaged in their own healthcare outcomes. It is because of this we as an industry are able to be more proactive in reducing the use of emergency services.

13. Historical Resources and Structures.

There are no known historic resources located on the property.

14. Site Topography.

Please see the attached topographic survey that sets forth the property’s topography grades and elevations.

15. Signage.

Applicant intends on installing a single ground monument sign at the NW corner of the site, setback 10 feet from the public right of way and will maintain a 25 foot clear vision area. The location of the monument sign is located on site plan. Internally, the project will include signage to accurately and efficiently identify the building access points, wayfinding through the shared parking lot, handicap parking and facilities, and other related services offered.

16. Amenities

See section 1

CONCEPTUAL SITE PLANS FOR

STONECREST

PART OF THE SW 1/4 OF SECTION 22, T.2N., R.11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

LOCATION MAP – NOT TO SCALE

DEVELOPER:

NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
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PHONE: (816) 888–7391

ARCHITECT:

PI ARCHITECTS
3500 JEFFERSON ST. SUITE 303
AUSTIN, TX 78731
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PHONE: (512) 231–1910

CIVIL ENGINEER/LANDSCAPE ARCHITECT:

PROFESSIONAL ENGINEERING ASSOCIATES, INC.
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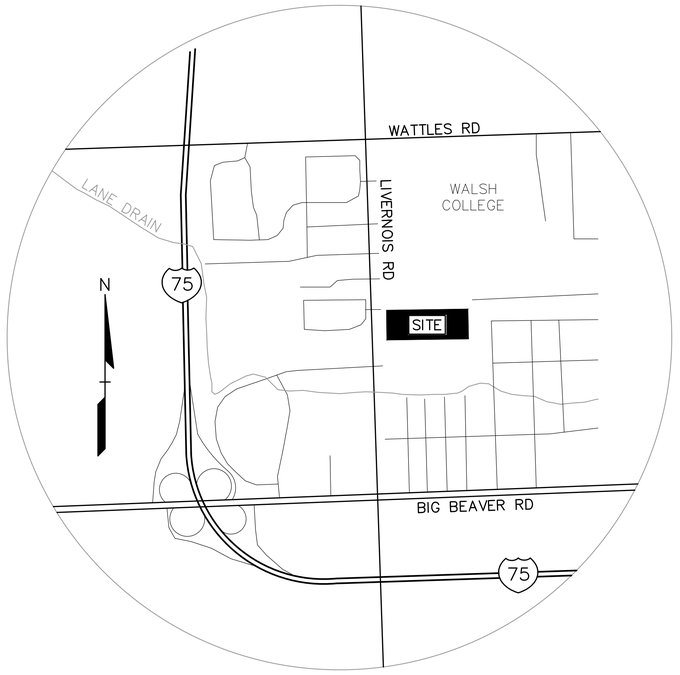
TROY, MI 48083
PHONE: (248) 689–9090
FAX: (248) 689–1044
CONTACT: EMIL S. BUNEK III, PE
JANET EVANS, R.L.A.



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS:

C–0.0	COVER SHEET
C–1.0	TOPOGRAPHIC SURVEY
C–1.1	TREE LIST
C–1.2	TREE PRESERVATION PLAN
C–2.0	PRELIMINARY SITE PLAN
C–3.0	PRELIMINARY GRADING PLAN
L–1.0	PRELIMINARY LANDSCAPE PLAN

ARCHITECTURAL PLANS

SK1	FIRST FLOOR PLAN
SK2	FIRST FLOOR PLAN – WEST HALF
SK3	FIRST FLOOR PLAN – MIDDLE SECTION
SK4	FIRST FLOOR PLAN – EAST HALF
SK5	FIRST FLOOR PLAN – SECOND FLOOR PLAN
SK6	ROOM DETAILS
SK7	ELEVATION PLAN
SK9	SECTION @ LEFT WING

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EMIL S. BUNEK III
ENGINEER
6201058445
LICENSED PROFESSIONAL ENGINEER

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NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

COVER SHEET
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

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ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: AS NOTED

DRAWING NUMBER:
C-0.0

WEST 1/4
SECTION 22,
T2N,R11E

S89°36'00"E 53.00'

S00°24'00"W
393.83'

LOT 26

LOT 25

S89°33'49"E 1279.05'

SUPERVISORS PLAT NO. 25

LOT 24

LOT 23

LOT 22

WEST LINE
SECTION 22

S00°24'00"W
325.75'

S00°31'09"E
325.93'

N89°33'27"W 1284.28'

SOUTHWEST
CORNER
SECTION 22
T2N, R11E

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

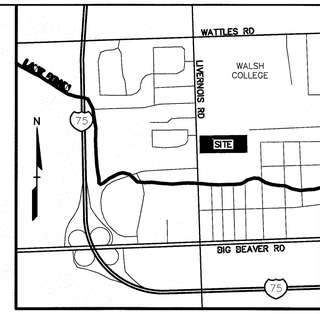
Legal Description
(per Arrowhead Surveying, Topographic and Boundary Survey Job# 08-020, February 20, 2008)

Part of the Southwest 1/4 Section 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan being the North 1/2 of Lot 22 and all of Lots 23-24 of Supervisor's Plat No. 25, As recorded being more particularly described as:

Commencing at the West 1/4 of said Section; Thence S°0024'00"W 393.83 feet, along the West line of said Section 22; Thence S89°36'00"E 53.00 feet to Northwest corner of Lot 24 of Supervisor's Plat No. 25, as recorded in Liber 57 POINT OF BEGINNING;

Thence S89°33'49"E 1279.05 feet along the North line of said Lot 24; thence S00°31'09"E 325.93 feet along the East line of said Supervisor's Plat No. 25; thence N89°33'27"W 1284.28 feet along the South line of the North 1/2 of Lot 22 of said Supervisor's Plat No. 25; thence N°0024'00"E 325.75 feet along the West line of said Supervisor's Plat No. 25 and the East line of Livernois Road Right-of-way (53ft. half width) to the POINT OF BEGINNING, containing ±9.59 acres of land, subject to easements, conditions, and restrictions, if any.

N

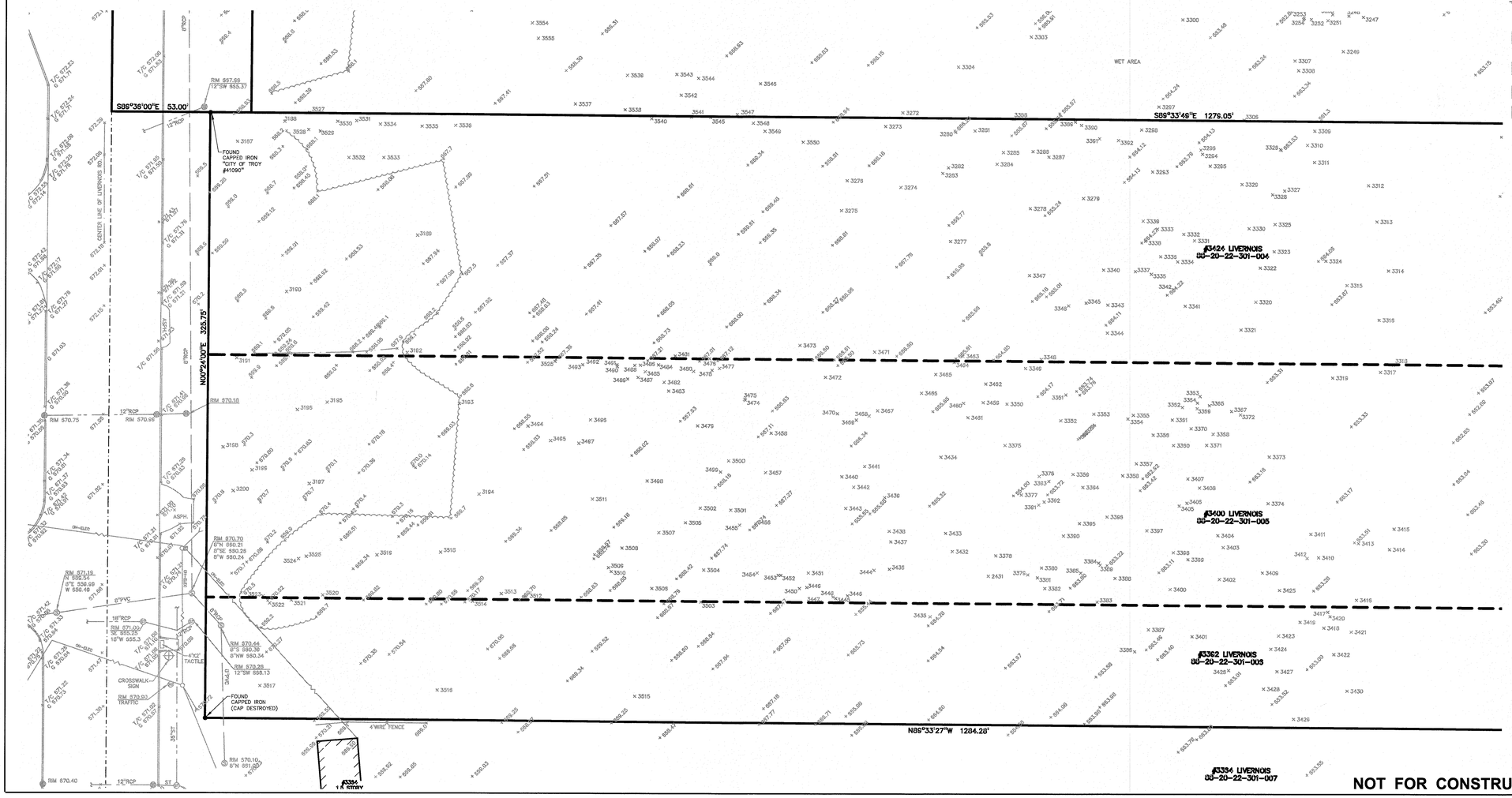


LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING		PROPOSED
-OH-ELEC-	ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE	
-UG-CATV-	UNDERGROUND CABLE TV, CATV PEDESTAL	
-UG-PHONE-	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE	
-UG-ELEC-	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE	
	GAS MAIN, VALVE & GAS LINE MARKER	
	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE	
	SANITARY SEWER, CLEANOUT & MANHOLE	
	STORM SEWER, CLEANOUT & MANHOLE	
	COMBINED SEWER & MANHOLE	
C.B.	CATCH BASIN, INLET, YARD DRAIN	
	POST INDICATOR VALVE	
	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	
M T E	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	
?	UNIDENTIFIED STRUCTURE	
816.06	SPOT ELEVATION	
570	CONTOUR LINE	
	FENCE	
	GUARD RAIL	
	STREET LIGHT	
	SIGN	
CONC.	CONCRETE	
ASPH.	ASPHALT	
GRAVEL	GRAVEL SHOULDER	
	WETLAND	



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No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

STATE OF MICHIGAN
TODD A. SHAY
LICENSED PROFESSIONAL SURVEYOR
No. 41111
PROFESSIONAL SURVEYOR

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NORTHPOINT DEVELOPMENT
PART OF THE NW 1/4 OF SECTION 22, T.2N., R.11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

S:\PROJECTS\2015\2015141 WORK FRONT - TROY SENIOR CARE - CBW\Dwg\15141-TopoBase.dwg

ORIGINAL ISSUE DATE:
JUNE 18, 2015

PEA JOB NO. 2015-141

SCALE: 1"=30'

DRAWING NUMBER:
C-1.0

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT
3165	BX	7	Box elder	Acer negundo	GOOD	X3
3166	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3167	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3168	BX	8	Box elder	Acer negundo	GOOD	
3169	E	12	American Elm	Ulmus americana	FAIR	
3170	SM	31	Silver Maple	Acer saccharinum	POOR	
3171	EE	8	Siberian Elm	Ulmus pumila	GOOD	
3172	WH	12	White Willow	Salix alba	POOR	
3173	NS	19	Norway Spruce	Picea Abies	FAIR	
3174	NS	7	Norway Spruce	Picea Abies	FAIR	
3175	C	15	Catalpa	Catalpa speciosa	GOOD	
3176	C	31	Catalpa	Catalpa speciosa	GOOD	
3177	BX	6	Box elder	Acer negundo	GOOD	
3178	BS	15	Blue Spruce	Picea pungens	GOOD	
3179	SM	22	Silver Maple	Acer saccharinum	FAIR	
3180	SM	18	Silver Maple	Acer saccharinum	GOOD	
3181	BW	10	Black Walnut	Juglans nigra	GOOD	
3182	BX	7	Box elder	Acer negundo	POOR	X2
3183	BW	7	Black Walnut	Juglans nigra	FAIR	
3184	BP	15	Bradford Pear	Pyrus calleryanna	POOR	
3185	BP	14	Bradford Pear	Pyrus calleryanna	POOR	
3186	BP	7	Bradford Pear	Pyrus calleryanna	POOR	
3187	BX	14	Box elder	Acer negundo	POOR	X2
3188	EE	16	Siberian Elm	Ulmus pumila	FAIR	X2
3189	AP	15	Domestic Apple	Malus sylvestris	POOR	
3190	CT	8	Cottonwood	Populus deltoides	GOOD	
3191	BW	10	Black Walnut	Juglans nigra	GOOD	
3192	EE	13	Siberian Elm	Ulmus pumila	POOR	
3193	BW	25	Black Walnut	Juglans nigra	GOOD	
3194	EE	6	Siberian Elm	Ulmus pumila	POOR	X4
3195	BW	31	Black Walnut	Juglans nigra	FAIR	
3196	C	16	Catalpa	Catalpa speciosa	POOR	
3197	C	11	Catalpa	Catalpa speciosa	FAIR	
3198	WP	16	(Eastern) White Pine	Pinus strobus	FAIR	
3199	BS	8	Blue Spruce	Picea pungens	GOOD	X2
3200	MR	16	Red Mulberry	Morus rubra	FAIR	
3201	BX	11	Box elder	Acer negundo	FAIR	X2
3202	BX	8	Box elder	Acer negundo	POOR	
3203	BX	8	Box elder	Acer negundo	POOR	
3204	BX	10	Box elder	Acer negundo	FAIR	X2
3205	BX	8	Box elder	Acer negundo	GOOD	
3206	BX	13	Box elder	Acer negundo	FAIR	
3207	BX	6	Box elder	Acer negundo	FAIR	X2
3208	EE	13	Siberian Elm	Ulmus pumila	FAIR	
3209	BX	9	Box elder	Acer negundo	GOOD	
3210	BX	8	Box elder	Acer negundo	POOR	X3
3211	BX	13	Box elder	Acer negundo	FAIR	
3212	MR	8	Red Mulberry	Morus rubra	GOOD	
3213	SM	9	Silver Maple	Acer saccharinum	FAIR	
3214	BX	8	Box elder	Acer negundo	FAIR	
3215	BW	9	Black Walnut	Juglans nigra	GOOD	
3216	BW	7	Black Walnut	Juglans nigra	GOOD	
3217	CT	44	Cottonwood	Populus deltoides	GOOD	
3218	BW	7	Black Walnut	Juglans nigra	GOOD	
3219	BW	8	Black Walnut	Juglans nigra	GOOD	
3220	BW	9	Black Walnut	Juglans nigra	FAIR	
3221	BW	9	Black Walnut	Juglans nigra	FAIR	
3222	BX	16	Box elder	Acer negundo	POOR	
3223	BW	10	Black Walnut	Juglans nigra	GOOD	
3224	BW	6	Black Walnut	Juglans nigra	GOOD	
3225	BW	8	Black Walnut	Juglans nigra	GOOD	
3226	BW	8	Black Walnut	Juglans nigra	GOOD	X2
3227	BW	7	Black Walnut	Juglans nigra	GOOD	
3228	BW	10	Black Walnut	Juglans nigra	GOOD	
3229	MR	6	Red Mulberry	Morus rubra	GOOD	
3230	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3231	E	11	American Elm	Ulmus americana	GOOD	
3232	BW	7	Black Walnut	Juglans nigra	GOOD	
3233	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3234	EE	10	Siberian Elm	Ulmus pumila	GOOD	
3235	BX	7	Box elder	Acer negundo	FAIR	X2
3236	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3237	BX	9	Box elder	Acer negundo	POOR	X2
3238	MR	6	Red Mulberry	Morus rubra	GOOD	
3239	BX	6	Box elder	Acer negundo	GOOD	
3240	SM	6	Silver Maple	Acer saccharinum	GOOD	
3241	SM	9	Silver Maple	Acer saccharinum	GOOD	
3242	SM	10	Silver Maple	Acer saccharinum	GOOD	
3243	WH	10	White Willow	Salix alba	GOOD	X3
3244	WH	9	White Willow	Salix alba	GOOD	X2
3245	WH	7	White Willow	Salix alba	GOOD	X2
3246	CT	7	Cottonwood	Populus deltoides	GOOD	
3247	CT	8	Cottonwood	Populus deltoides	GOOD	
3248	CT	11	Cottonwood	Populus deltoides	GOOD	
3249	CT	7	Cottonwood	Populus deltoides	GOOD	
3250	CT	8	Cottonwood	Populus deltoides	GOOD	
3251	CT	9	Cottonwood	Populus deltoides	GOOD	
3252	CT	12	Cottonwood	Populus deltoides	GOOD	
3253	CT	6	Cottonwood	Populus deltoides	GOOD	
3254	CT	11	Cottonwood	Populus deltoides	GOOD	
3255	CT	11	Cottonwood	Populus deltoides	GOOD	
3256	CT	9	Cottonwood	Populus deltoides	GOOD	
3257	CT	11	Cottonwood	Populus deltoides	GOOD	
3258	CT	11	Cottonwood	Populus deltoides	GOOD	
3259	WH	9	White Willow	Salix alba	GOOD	X3
3260	WH	10	White Willow	Salix alba	GOOD	X6
3261	BX	8	Box elder	Acer negundo	POOR	X2
3262	BX	7	Box elder	Acer negundo	FAIR	
3263	BX	8	Box elder	Acer negundo	GOOD	
3264	BX	7	Box elder	Acer negundo	FAIR	
3265	BX	8	Box elder	Acer negundo	GOOD	
3266	EE	8	Siberian Elm	Ulmus pumila	POOR	
3267	BX	6	Box elder	Acer negundo	GOOD	X6
3268	BX	10	Box elder	Acer negundo	FAIR	
3269	BX	8	Box elder	Acer negundo	POOR	
3270	BX	9	Box elder	Acer negundo	FAIR	X2
3271	BX	7	Box elder	Acer negundo	GOOD	X2
3272	BX	8	Box elder	Acer negundo	POOR	
3273	BX	14	Box elder	Acer negundo	FAIR	
3274	MR	15	Red Mulberry	Morus rubra	POOR	
3275	SM	15	Silver Maple	Acer saccharinum	GOOD	X3
3276	SM	19	Silver Maple	Acer saccharinum	GOOD	
3277	BW	8	Black Walnut	Juglans nigra	GOOD	
3278	BW	11	Black Walnut	Juglans nigra	GOOD	
3279	BW	9	Black Walnut	Juglans nigra	GOOD	
3280	BX	9	Box elder	Acer negundo	POOR	
3281	BX	6	Box elder	Acer negundo	POOR	X2
3282	BX	8	Box elder	Acer negundo	FAIR	
3283	BX	7	Box elder	Acer negundo	FAIR	
3284	BX	9	Box elder	Acer negundo	FAIR	X2
3285	BX	8	Box elder	Acer negundo	FAIR	
3286	BX	10	Box elder	Acer negundo	FAIR	
3287	BX	7	Box elder	Acer negundo	FAIR	
3288	WH	32	White Willow	Salix alba	POOR	
3289	BX	6	Box elder	Acer negundo	POOR	X2
3290	BX	9	Box elder	Acer negundo	FAIR	
3291	BX	14	Box elder	Acer negundo	FAIR	
3292	BX	8	Box elder	Acer negundo	FAIR	X2
3293	BX	10	Box elder	Acer negundo	FAIR	
3294	BX	11	Box elder	Acer negundo	POOR	
3295	BX	9	Box elder	Acer negundo	FAIR	
3296	BX	10	Box elder	Acer negundo	POOR	
3297	BX	10	Box elder	Acer negundo	FAIR	X3
3298	BX	7	Box elder	Acer negundo	FAIR	
3299	BX	6	Box elder	Acer negundo	POOR	X2
3300	BX	8	Box elder	Acer negundo	POOR	
3301	BX	8	Box elder	Acer negundo	GOOD	
3302	BX	9	Box elder	Acer negundo	FAIR	X2
3303	BX	8	Box elder	Acer negundo	FAIR	
3304	BX	7	Box elder	Acer negundo	FAIR	
3305	BX	6	Box elder	Acer negundo	POOR	X4
3306	BX	16	Box elder	Acer negundo	POOR	X4
3307	BX	7	Box elder	Acer negundo	FAIR	
3308	BX	6	Box elder	Acer negundo	POOR	
3309	BX	8	Box elder	Acer negundo	FAIR	
3310	BX	7	Box elder	Acer negundo	FAIR	
3311	BX	15	Box elder	Acer negundo	FAIR	
3312	SM	11	Silver Maple	Acer saccharinum	GOOD	X2
3313	BX	14	Box elder	Acer negundo	POOR	
3314	BX	9	Box elder	Acer negundo	FAIR	
3315	BX	17	Box elder	Acer negundo	FAIR	
3316	BX	9	Box elder	Acer negundo	FAIR	
3317	WH	48	White Willow	Salix alba	POOR	
3318	BX	8	Box elder	Acer negundo	FAIR	
3319	BX	22	Box elder	Acer negundo	FAIR	
3320	BX	10	Box elder	Acer negundo	FAIR	
3321	BW	9	Black Walnut	Juglans nigra	GOOD	
3322	BX	9	Box elder	Acer negundo	GOOD	
3323	BX	12	Box elder	Acer negundo	POOR	
3324	BX	7	Box elder	Acer negundo	POOR	
3325	BX	9	Box elder	Acer negundo	FAIR	
3326	BX	10	Box elder	Acer negundo	FAIR	
3327	BX	10	Box elder	Acer negundo	FAIR	X2
3328	BX	10	Box elder	Acer negundo	FAIR	
3329	BX	12	Box elder	Acer negundo	FAIR	
3330	BX	7	Box elder	Acer negundo	FAIR	
3331	BX	7	Box elder	Acer negundo	POOR	
3332	BX	7	Box elder	Acer negundo	FAIR	
3333	BX	6	Box elder	Acer negundo	POOR	
3334	BX	17	Box elder	Acer negundo	FAIR	
3335	BX	8	Box elder	Acer negundo	FAIR	
3336	BX	7	Box elder	Acer negundo	FAIR	
3337	BX	10	Box elder	Acer negundo	FAIR	
3338	BX	7	Box elder	Acer negundo	FAIR	
3339	BX	12	Box elder	Acer negundo	FAIR	
3340	BX	10	Box elder	Acer negundo	FAIR	
3341	MR	9	Red Mulberry	Morus rubra	FAIR	
3342	BX	9	Box elder	Acer negundo	FAIR	
3343	BW	10	Black Walnut	Juglans nigra	GOOD	
3344	BW	7	Black Walnut	Juglans nigra	GOOD	
3345	EE	8	Siberian Elm	Ulmus pumila	POOR	
3346	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3347	BW	13	Black Walnut	Juglans nigra	GOOD	
3348	BX	7	Box elder	Acer negundo	FAIR	
3349	BX	13	Box elder	Acer negundo	FAIR	
3350	BX	13	Box elder	Acer negundo	FAIR	
3351	BX	7	Box elder	Acer negundo	FAIR	
3352	BX	9	Box elder	Acer negundo	FAIR	
3353	SM	13	Silver Maple	Acer saccharinum	GOOD	
3354	SM	14	Silver Maple	Acer saccharinum	GOOD	
3355	SM	7	Silver Maple	Acer saccharinum	GOOD	
3356	SM	14	Silver Maple	Acer saccharinum	GOOD	
3357	SM	12	Silver Maple	Acer saccharinum	GOOD	X2
3358	BX	7	Box elder	Acer negundo	FAIR	
3359	CT	24	Cottonwood	Populus deltoides	GOOD	
3360	SM	15	Silver Maple	Acer saccharinum	GOOD	
3361	CT	17	Cottonwood	Populus deltoides	GOOD	
3362	CT	15	Cottonwood	Populus deltoides	GOOD	
3363	SM	8	Silver Maple	Acer saccharinum	FAIR	
3364	SM	9	Silver Maple	Acer saccharinum	FAIR	
3365	SM	7	Silver Maple	Acer saccharinum	FAIR	
3366	SM	8	Silver Maple	Acer saccharinum	GOOD	
3367	CT	18	Cottonwood	Populus deltoides	GOOD	
3368	SM	10	Silver Maple	Acer saccharinum	GOOD	X3
3369	SM	9	Silver Maple	Acer saccharinum	FAIR	
3370	SM	10	Silver Maple	Acer saccharinum	GOOD	
3371	SM	6	Silver Maple	Acer saccharinum	FAIR	
3372	CT	15	Cottonwood	Populus deltoides	GOOD	
3373	CT	23	Cottonwood	Populus deltoides	GOOD	
3374	CT	18	Cottonwood	Populus deltoides	GOOD	
3375	BX	7	Box elder	Acer negundo	FAIR	
3376	BX	7	Box elder	Acer negundo	FAIR	
3377	BX	10	Box elder	Acer negundo	FAIR	
3378	BX	9	Box elder	Acer negundo	FAIR	
3379	BX	11	Box elder	Acer negundo	FAIR	X2
3380	BX	9	Box elder	Acer negundo	FAIR	X2
3381	BX	11	Box elder	Acer negundo	FAIR	
3382	BX	14	Box elder	Acer negundo	FAIR	
3383	SM	9	Silver Maple	Acer saccharinum	FAIR	X3
3384	BX	10	Box elder	Acer negundo	POOR	
3385	BX	8	Box elder	Acer negundo	FAIR	X3
3386	BX	7	Box elder	Acer negundo	FAIR	
3387	BX	9	Box elder	Acer negundo	POOR	X3
3388	BX	12	Box elder	Acer negundo	FAIR	
3389	BX	9	Box elder	Acer negundo	POOR	X2
3390	BX	9	Box elder	Acer negundo	FAIR	
3391	BX	10	Box elder	Acer negundo	FAIR	X2
3392	BX	8	Box elder	Acer negundo	FAIR	
3393	BX	7	Box elder	Acer negundo	FAIR	
3394	BX	7	Box elder	Acer negundo	FAIR	
3395	BX	6	Box elder	Acer negundo	FAIR	
3396	BX	6	Box elder	Acer negundo	FAIR	
3397	CT	13	Cottonwood	Populus deltoides	GOOD	X2
3398	CT	28	Cottonwood	Populus deltoides	GOOD	
3399	BX	9	Box elder	Acer negundo	FAIR	
3400	SM	12	Silver Maple	Acer saccharinum	FAIR	
3401	BX	9	Box elder	Acer negundo	FAIR	
3402	WH	7	White Willow	Salix alba	GOOD	
3403	CT	19	Cottonwood	Populus deltoides	GOOD	
3404	BX	7	Box elder	Acer negundo	POOR	
3405	BX	10	Box elder	Acer negundo	GOOD	
3406	CT	9	Cottonwood	Populus deltoides	GOOD	
3407	CT	15	Cottonwood	Populus deltoides	GOOD	
3408	CT	15	Cottonwood	Populus deltoides	GOOD	
3409	CT	23	Cottonwood	Populus deltoides	GOOD	
3410	BX	9	Box elder	Acer negundo	FAIR	
3411	E	13	American Elm	Ulmus americana	GOOD	
3412	BX	10	Box elder	Acer negundo	FAIR	
3413	BX	9	Box elder	Acer negundo	FAIR	
3414	BX	11	Box elder	Acer negundo	GOOD	
3415	BX	12	Box elder	Acer negundo	GOOD	
3416	PN	6	Pin Cherry	Prunus pennsylvanica	GOOD	X3
3417	BX	10	Box elder	Acer negundo	FAIR	
3418	BX	8	Box elder	Acer negundo	POOR	
3419	BX	7	Box elder	Acer negundo	POOR	
3420	BX	8	Box elder	Acer negundo	POOR	
3421	BX	13	Box elder	Acer negundo	FAIR	
3422	BX	9	Box elder	Acer negundo	POOR	
3423	BX	8	Box elder	Acer negundo	FAIR	
3424	BX	9	Box elder	Acer negundo	FAIR	
3425	BX	7	Box elder	Acer negundo	FAIR	
3426	SM	14	Silver Maple	Acer saccharinum	GOOD	X4
3427	SM	15	Silver Maple	Acer saccharinum	GOOD	X3
3428	BX	13	Box elder	Acer negundo	FAIR	
3429	BX	14	Box elder	Acer negundo	GOOD	
3430	BX	10	Box elder	Acer negundo	FAIR	X2
3431	BX	12	Box elder	Acer negundo	POOR	
3432	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3433	BX	9	Box elder	Acer negundo	GOOD	
3434	NM	7	Norway Maple	Acer platanoides	GOOD	X2
3435	HM	9	Hemlock	Tsuga canadensis	POOR	
3436	BX	23	Box elder	Acer negundo	FAIR	
3437	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3438	EE	11	Siberian Elm	Ulmus pumila	FAIR	X2
3439	BX	7	Box elder	Acer negundo	FAIR	X3
3440	BW	9	Black Walnut	Juglans nigra	GOOD	
3441	BX	8	Box elder	Acer negundo	FAIR	X2
3442	BW	10	Black Walnut	Juglans nigra	GOOD	
3443	BW	8	Black Walnut	Juglans nigra	GOOD	
3444	EE	13	Siberian Elm	Ulmus pumila	FAIR	
3445	BX	8	Box elder	Acer negundo	FAIR	
3446	BX	6	Box elder	Acer negundo	FAIR	
3447	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3448	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3449	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3450	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3451	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3452	EE	8	Siberian Elm	Ulmus pumila	POOR	
3453	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3454	BX	6	Box elder	Acer negundo	FAIR	
3455	BW	8	Black Walnut	Juglans nigra	GOOD	
3456	BX	6	Box elder	Acer negundo	FAIR	X2
3457	BW	7	Black Walnut	Juglans nigra	GOOD	
3458	BW	7	Black Walnut	Juglans nigra	GOOD	
3459	BX	9	Box elder	Acer negundo	FAIR	
3460	BX	7	Box elder	Acer negundo	FAIR	
3461	BX	9	Box elder	Acer negundo	FAIR	
3462	BX	8	Box elder	Acer negundo	FAIR	
3463	BX	8	Box elder	Acer negundo	FAIR	
3464	BX	8	Box elder	Acer negundo	FAIR	
3465	EE	26	Siberian Elm	Ulmus pumila	FAIR	
3466	BX	9	Box elder	Acer negundo	FAIR	
3524	BW	9	Black Walnut	Juglans nigra	GOOD	
3525	BX	6	Box elder	Acer negundo	FAIR	
3526	BW	6	Black Walnut	Juglans nigra	GOOD	
3527	EE	16	Siberian Elm	Ulmus pumila	FAIR	
3528	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3529	SM	8	Silver Maple	Acer saccharinum	FAIR	X3
3530	EE	17	Siberian Elm	Ulmus pumila	FAIR	
3531	BX	16	Box elder	Acer negundo	FAIR	
3532	BP	12	Bradford Pear	Pyrus calleryanna	FAIR	
3533	BP	14	Bradford Pear	Pyrus calleryanna	FAIR	
3534	BX	7	Box elder	Acer negundo	FAIR	
3535	BX	16	Box elder	Acer negundo	FAIR	
3536	BX	10	Box elder	Acer negundo	FAIR	X3
3537	BX	17	Box elder	Acer negundo	FAIR	
3538	BX	8	Box elder	Acer negundo	FAIR	
3539	SM	26	Silver Maple	Acer saccharinum	FAIR	
3540	BX	10	Box elder	Acer negundo	FAIR	
3541	WO	12	White Oak	Quercus alba	FAIR	
3542	BX	11	Box elder	Acer negundo	FAIR	
3543	BX	9	Box elder	Acer negundo	FAIR	
3544	SM	16	Silver Maple	Acer saccharinum	FAIR	
3545	BW	10	Black Walnut	Juglans nigra	GOOD	
3546	SM	16	Silver Maple	Acer saccharinum	POOR	
3547	BX	14	Box elder	Acer negundo	FAIR	
3548	BX	10	Box elder	Acer negundo	POOR	X2
3549	BX	6	Box elder	Acer negundo	FAIR	
3550	BX	16	Box elder	Acer negundo	FAIR	
3551	NM	29	Norway Maple	Acer platanoides	GOOD	
3552	MR	8	Red Mulberry	Morus rubra	FAIR	X2
3553	CT	46	Cottonwood	Populus deltoides	GOOD	
3554	WH	48	White Willow	Salix alba	FAIR	
3555	WH	48	White Willow	Salix alba	POOR	
3556	SM	42	Silver Maple	Acer saccharinum	GOOD	
3557	WH	52	White Willow	Salix alba	FAIR	
3558	SM	26	Silver Maple	Acer saccharinum	GOOD	
3559	AP	12	Domestic Apple	Malus sylvestris	FAIR	X2
3560	BX	16	Box elder	Acer negundo	POOR	
3561	BX	18	Box elder	Acer negundo	FAIR	X2
3562	BW	7	Black Walnut	Juglans nigra	GOOD	
3563	BX	24	Box elder	Acer negundo	FAIR	
3564	WH	34	White Willow	Salix alba	POOR	X2
3565	CT	35	Cottonwood	Populus deltoides	POOR	

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REVISIONS

No.	BY	CHK	DESCRIPTION	DATE

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NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

TREE LIST
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

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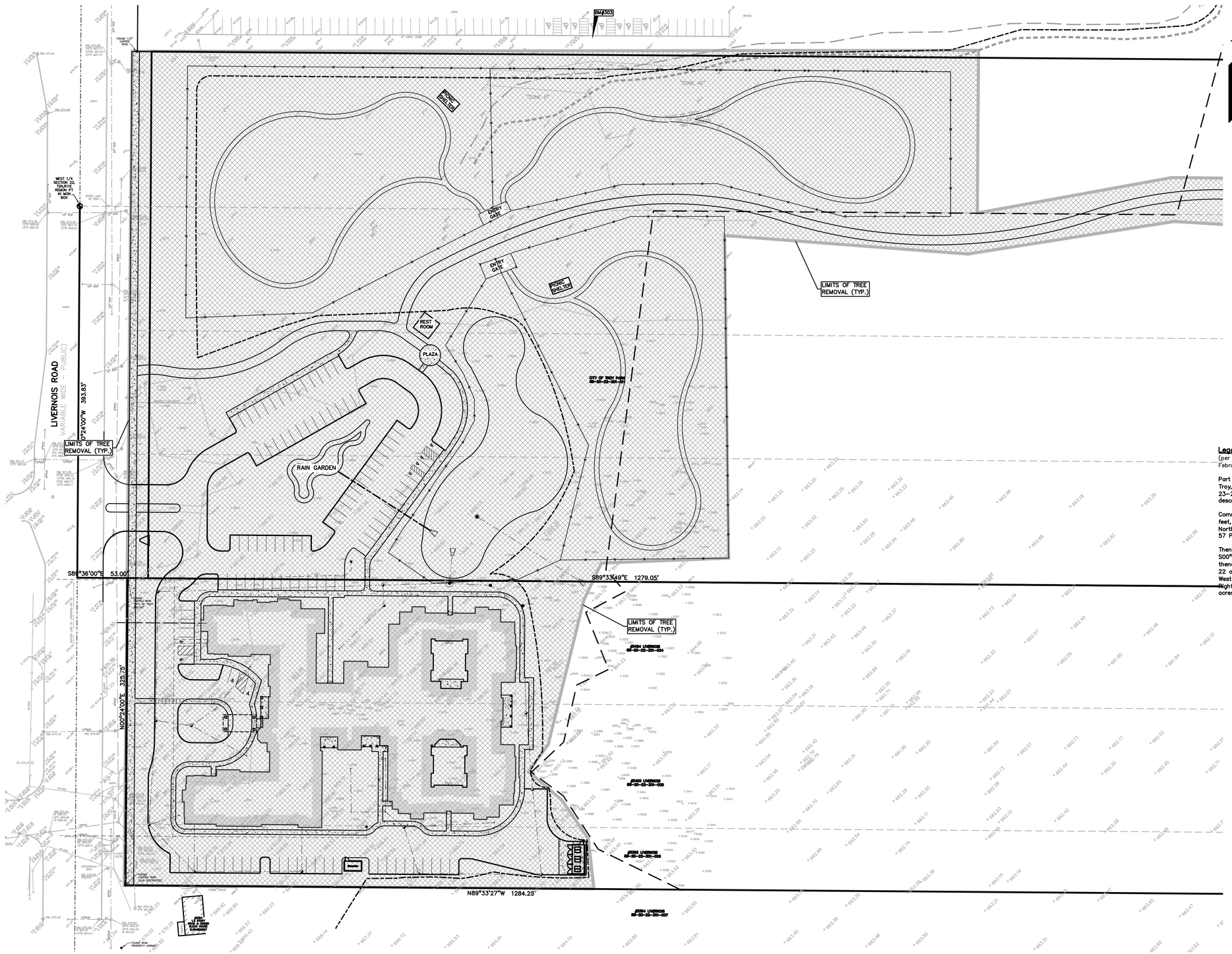

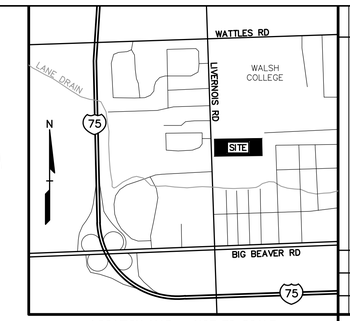

LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
–OH–ELEC–		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
–UG–CATV–		UNDERGROUND CABLE TV, CATV PEDESTAL
–UG–PHONE–		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
–UG–ELEC–		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
–GAS–		GAS MAIN, VALVE & GAS LINE MARKER
		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
		SANITARY SEWER, CLEANOUT & MANHOLE
		STORM SEWER, CLEANOUT & MANHOLE
		COMBINED SEWER & MANHOLE
		CATCH BASIN, INLET, YARD DRAIN
		POST INDICATOR VALVE
		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
M T I		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
?		UNIDENTIFIED STRUCTURE
816.06	671.21	SPOT ELEVATION
670	671	CONTOUR LINE
		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT
GRAVEL		GRAVEL SHOULDER
		WETLAND

STD DUTY | HEAVY DUTY | R.O.W. ONLY

STD DUTY | HEAVY DUTY | DEEP STRENGTH

Legal Description
(per Arrowhead Surveying, Topographic and Boundary Survey Job# 08–020, February 20, 2008)

Part of the Southwest 1/4 Section 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan being the North 1/2 of Lot 22 and all of Lots 23–24 of Supervisor's Plat No. 26, As recorded being more particularly described as:

Commencing at the West 1/4 of said Section; Thence S°0024'00"W 393.83 feet, along the West line of said Section 22; Thence S89°36'00"E 53.00 feet to Northwest corner of Lot 24 of Supervisor's Plat No. 26, as recorded in Liber 57 POINT OF BEGINNING;

Thence S89°33'49"E 1279.05 feet along the North line of said Lot 24; thence S00°31'09"E 325.93 feet along the East line of said Supervisor's Plat No. 26; thence N89°33'27"W 1284.28 feet along the South line of the North 1/2 of Lot 22 of said Supervisor's Plat No. 26; thence N°0024'00"E 325.75 feet along the West line of said Supervisor's Plat No. 26 and the East line of Livernois Road Right–of–way (53ft. half width) to the POINT OF BEGINNING, containing ±9.59 acres of land, subject to easements, conditions, and restrictions, if any.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2015\2015141\DWG\TOPOBASE–15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE–15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\TBLK–15141.DWG

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
EMIL S. BUNEK III
ENGINEER
6201058445
LICENSED PROFESSIONAL ENGINEER

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website: www.peainc.com

NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

TREE PRESERVATION PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE – DNH\Dwg\Site Plans\[C–1.2] tree–15141.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

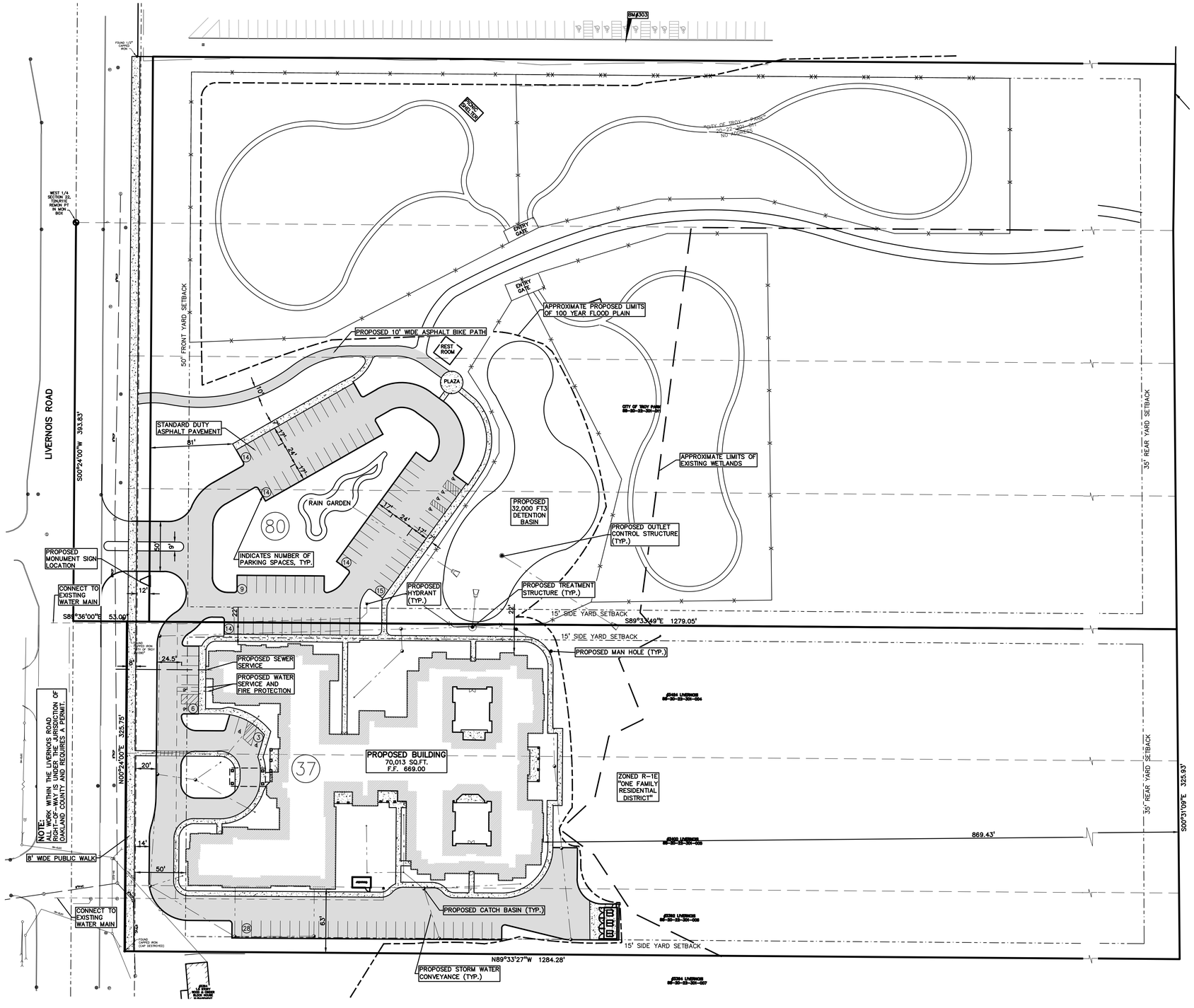
SCALE:

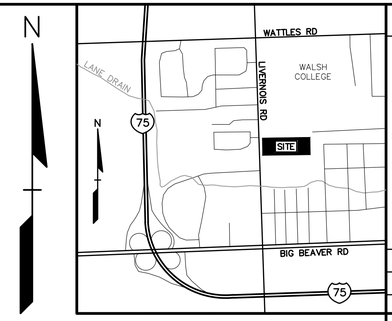
DRAWING NUMBER:
C-1.2

GRAPHIC SCALE

−50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.





LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
−OH−ELEC−		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
−UG−CATV−		UNDERGROUND CABLE TV, CATV PEDESTAL
−UG−PHONE−		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
−UG−ELEC−		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
		GAS MAIN, VALVE & GAS LINE MARKER
		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
		SANITARY SEWER, CLEANOUT & MANHOLE
		STORM SEWER, CLEANOUT & MANHOLE
		COMBINED SEWER & MANHOLE
		CATCH BASIN, INLET, YARD DRAIN
		POST INDICATOR VALVE
		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
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GRAVEL		GRAVEL SHOULDER
		WETLAND

STD DUTY | HEAVY DUTY | R.O.W. ONLY

STD DUTY | HEAVY DUTY | DEEP STRENGTH

SITE DATA TABLE:

PER REVISED FINAL ZONING ORDINANCE AND ZONING MAP AS AVAILABLE ON THE CITY OF TROY WEBSITE, DATED OCTOBER 18, 2012.

EXISTING ZONING:
R-1E

SITE AREA:
SITE AREA = 9.59 ACRES

SETBACKS:	REQUIRED	PROVIDED
FRONT YARD:	50'	50'
SIDE YARD:	15'	22'
REAR YARD:	35'	869.43'

BUILDING INFORMATION:
PROPOSED BUILDING AREA = 70,013 SQ.FT.
MAXIMUM ALLOWABLE LOT COVERAGE = 30%
PROPOSED LOT COVERAGE =51,024± SQ.FT. or 12%
MAX ALLOWABLE BUILDING HEIGHT = 30'
THE PROPOSED BUILDING HEIGHT VARIES TO 44' AT IT'S HIGHEST POINT.

SITE CALCULATIONS:
CONVALESCENT CENTER MINIMUM AREA OF 2,000 SF OF SITE AREA FOR EACH (1) BED + 500 SF OF OPEN SPACE
9.59 ACRES > 100x2000 SF. + 500 SF.

PARKING CALCULATIONS:

100 BEDS, 87 ROOMS.
CONVALESCENT AND NURSING FACILITIES REQUIRE THE LESSOR OF 1 SPACE PER EACH 3 BEDS OR 2 ROOMS, + 1 SPACE PER EMPLOYEE.
REQUIRED PARKING = 100/3 + 20 = 54 SPACES
PARKING PROVIDED = 117 SPACES INCLUDING 8 BARRIER FREE SPACES

Project: 2015141 NORTH POINT - TROY SENIOR CARE
Location: Troy, MI
Date: 6/18/2015
Project No: 2015-141

25 YEAR STORM DETENTION DESIGN (OAKLAND COUNTY DESIGN METHOD)

Contributing Area (A):	9.73	AC.
Allowable Discharge (Qa)	1.95	C.F.S. (= 0.2 CFS/AC.)
Coefficient of Runoff (Cr):	0.39	

Calculation of Required Discharge/Acre

Qo = ((Qa)/(A)(Cr): 0.51

T = -25 + ((8062.5/Qo))0.5: 100.39

Storage Volume Required:

Vs = (12900(T)/(T+25)) - 40Qo(T): 8268.74

Vt = (Vs)(A)(Cr): 31377.4

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XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE-15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\TBUK-15141.DWG

REVISIONS

No.	BY	CHK	DESCRIPTION	DATE

STATE OF MICHIGAN
EMIL S. BUNEK III
ENGINEER
6201058445
LICENSED PROFESSIONAL ENGINEER

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PRELIMINARY SITE PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	CHK	APP.
ESB	ESB/DRW	SUR.	PEA

P.M. DNH

S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE – DNH\Dwg\Site Plans\(C-2.0) SM-15141.dwg

ORIGINAL ISSUE DATE: SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: 1" = 50'

DRAWING NUMBER:
C-2.0

SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. — X 664.50

PROPOSED CONTOUR LINE — 665

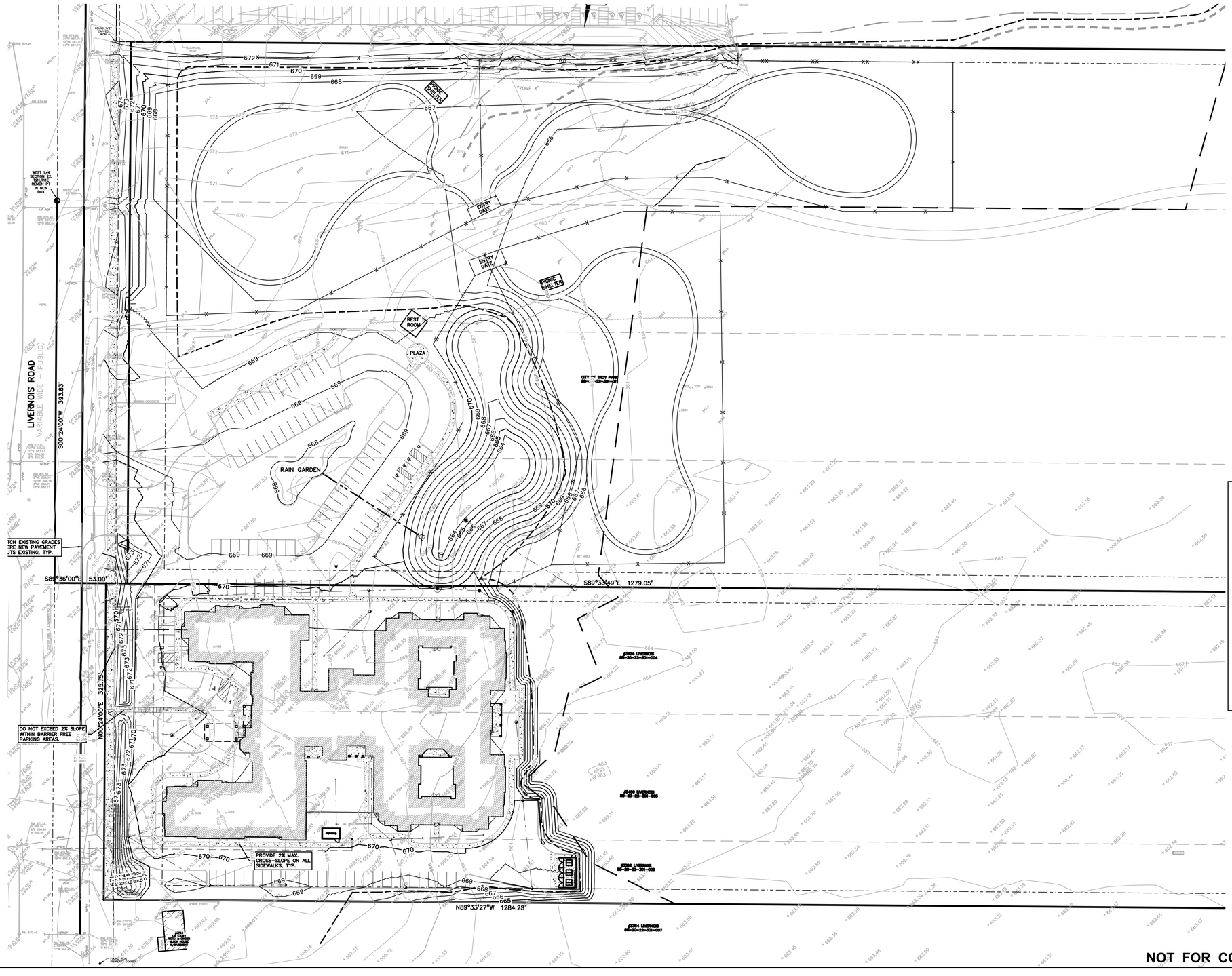
EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

GRAPHIC SCALE

−50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



GENERAL GRADING AND EARTHWORK NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CITY OF TROY AND OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE CITY PRIOR TO CONSTRUCTION.
5. SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C–6.0
6. THE DETENTION BASIN SIDE SLOPES AND ALL SLOPE EXCEEDING 1:6 MUST BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
7. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

NOT FOR CONSTRUCTION

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XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE–15141.DWG
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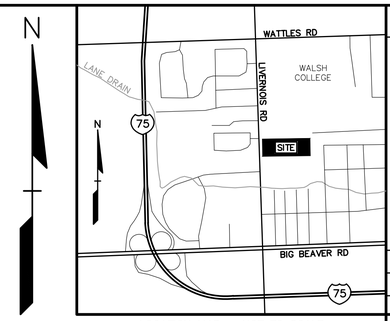

LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
−OH−ELEC−		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
−UG−CATV−		UNDERGROUND CABLE TV, CATV PEDESTAL
−UG−PHONE−		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
−UG−ELEC−		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
−GAS−		GAS MAIN, VALVE & GAS LINE MARKER
−W−		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
−S−		SANITARY SEWER, CLEANOUT & MANHOLE
−ST−		STORM SEWER, CLEANOUT & MANHOLE
		COMBINED SEWER & MANHOLE
	Y.D.	CATCH BASIN, INLET, YARD DRAIN
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		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
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No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

STATE OF MICHIGAN
EMIL S. BUNEK III
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PRELIMINARY GRADING PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

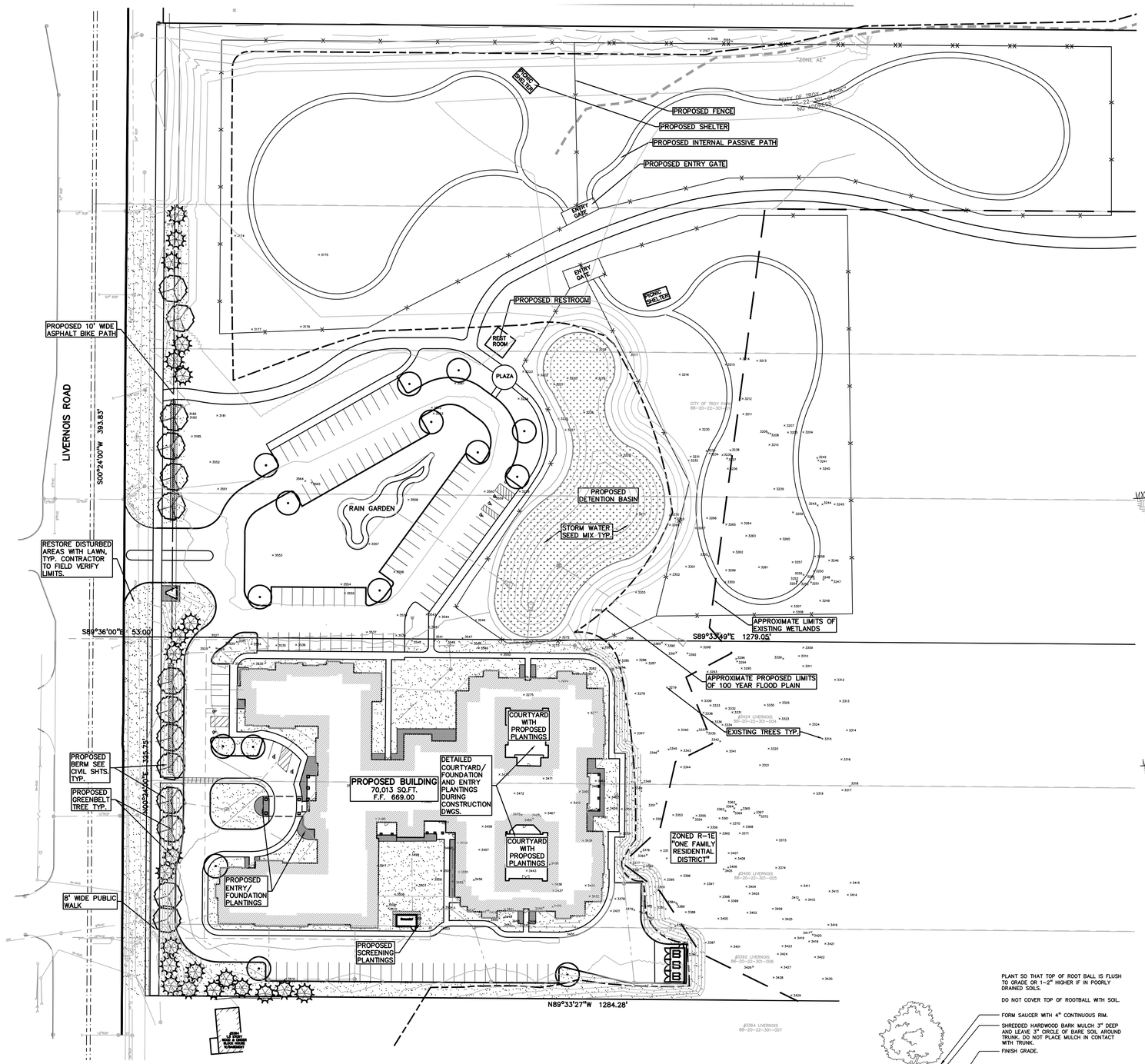
S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE –DNH\Dwg\Site Prizes\(C–3.0) GRADE–15141.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: 1" = 50'

DRAWING NUMBER:
C-3.0



GRAPHIC SCALE

−50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

KEY:

- = GREENBELT TREES
- P = PARKING LOT TREES
- 3190 = EXISTING TREES
- = SHRUB/ SCREENING HEDGE
- = ENTRY/ FOUNDATION PLANTINGS SHRUBS/ PERENNIALS
- = IRRIGATED SOD LAWN
- = STORMWATER SEED MIX BY: CARDNO NATIVE PLANT NURSERY 574-586-2412

NOTE: SOD LAWN AND PLANT BEDS TO BE IRRIGATED WITH IN-GROUND SPRINKLER SYSTEM.

LOCATION MAP – NOT TO SCALE

LANDSCAPE CALCULATIONS:
PER CITY OF TROY ZONING ORDINANCE

GENERAL SITE LANDSCAPE
REQUIRED: 20% OF SITE AREA SHALL BE COMPRISED OF LANDSCAPE MATERIAL

9.59 AC.(417,740) SQ FT * 20% = 83,548 SQ FT

PROVIDED: 323,245 SQ FT OF SOFT-SCAPE (LAWN, PLANT BEDS AND EAST UNDISTURBED WOODLANDS)

PARKING LOT LANDSCAPE
REQUIRED: 1 TREE / 8 PARKING SPACES
3' HT BERM OR SHRUB HEDGE FOR PARKING ADJ. TO A PUBLIC ROAD

CITY PARK–80 SHARED SPACES; 80/8 = 10 TREES AND HEDGE REQ'D
SENIOR HOUSING–37 SPACES; 35/8 = 5 TREES AND HEDGE REQ'D

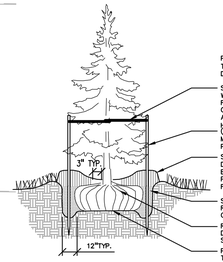
PROVIDED: 10 TREES & SHRUB HEDGE ALONG LIVERNOIS RD. AT CITY PARK AREA
5 TREES & SHRUB HEDGE ALONG LIVERNOIS RD. AT SENIOR HOUSING

GREENBELT
REQUIRED: 1 TREE / 30 LF OF FRONTAGE

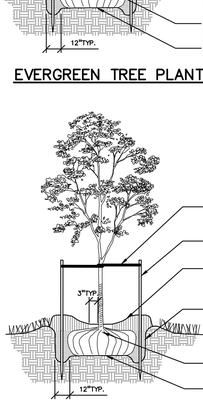
LIVERNOIS RD. = 719.6 LF FRONTAGE / 30 = 24 TREES
PROVIDED: LIVERNOIS RD.= 30 TREES

ADDITIONAL GREENBELT
AS REQUESTED BY CITY, ALONG SOUTH PROPERTY LINE TO BUFFER SW EXISTING HOUSE

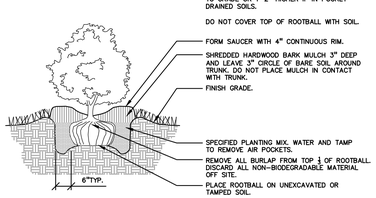
PROVIDED: 6 EVERGREEN TREES



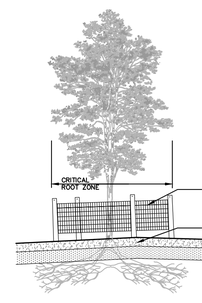
EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE



TREE PROTECTION DETAIL
NOT TO SCALE

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1–800–482–7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH, SEE SPECIFICATIONS. SHREDDED PALETTE AND DIED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2015\2015141\DWG\TOPOBASE-15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\CBASE-15141.DWG
XREF: S:\PROJECTS\2015\2015141\DWG\CONSTRUCTION\TBLK-15141.DWG

REVISIONS

No.	BY	CHK	DESCRIPTION	DATE

STATE OF MICHIGAN
JANET ENNIS GRISCOM
LANDSCAPE ARCHITECT
NO. 1320
REGISTERED LANDSCAPE ARCHITECT

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NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

PRELIMINARY LANDSCAPE PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	ESB / DRW	SUR.	P.M.
ESB			PEA	DNH

S:\PROJECTS\2015\2015141 NORTH POINT - TROY SENIOR CARE - STONE\DWG\15141-LVL-1-10 PRELIMINARY LANDSCAPE PLAN.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: 1" = 50'

DRAWING NUMBER:
L-1.0

1 FIRST FLOOR PLAN

SCALE: 1/16" = 1'-0"

LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

SEAL

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09/01/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER:
SK1

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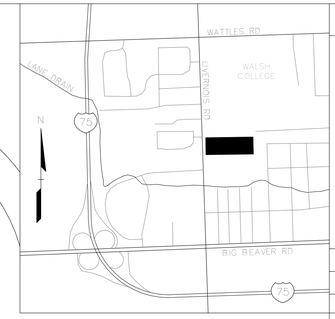

LOCATION MAP – NOT TO SCALE

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SCALE:

DRAWING NUMBER: SK2

1 FIRST FLOOR PLAN - WEST HALF
SCALE: 3/32" = 1'-0"

N

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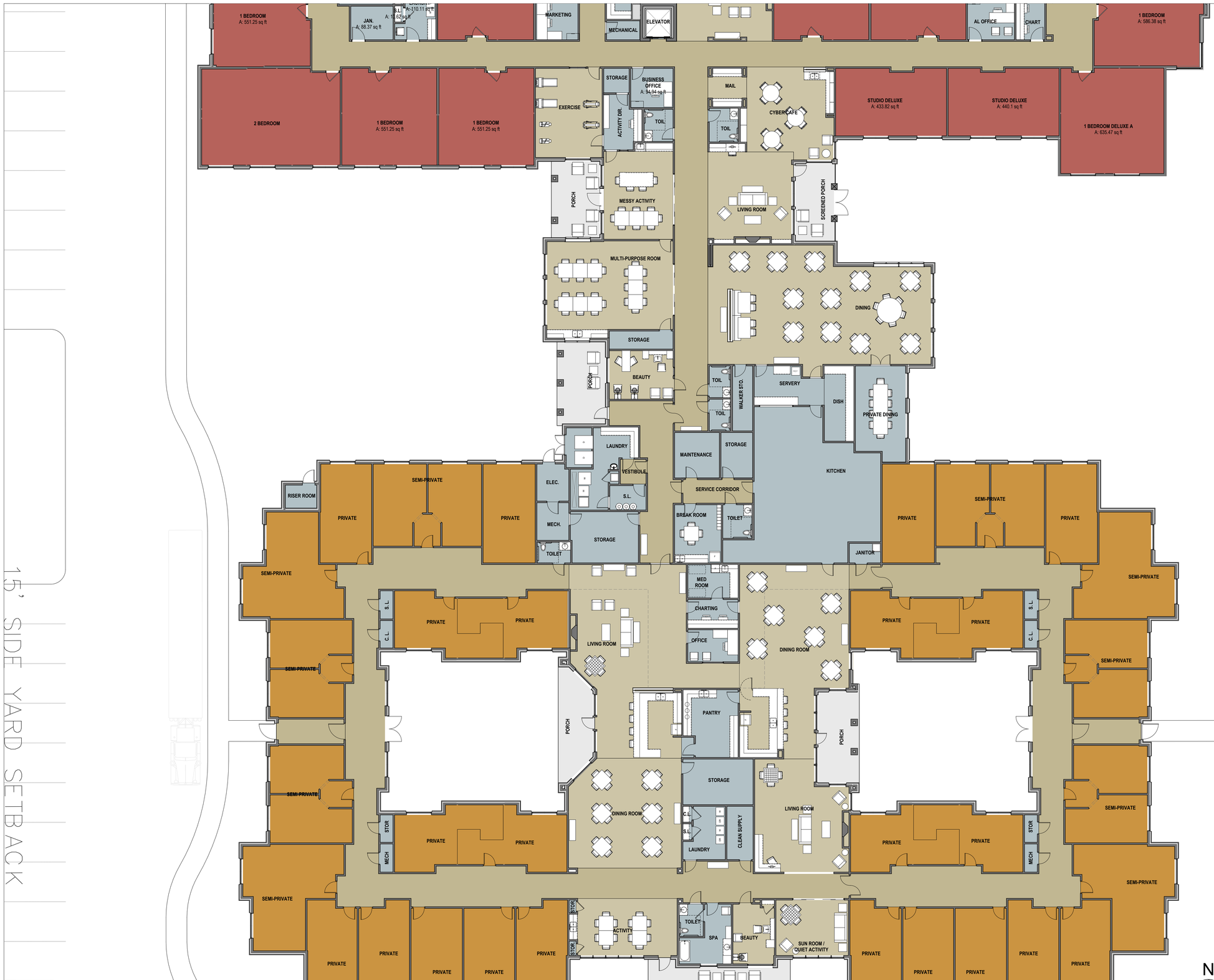

1 FIRST FLOOR PLAN - MIDDLE SECTION

SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

LOCATION MAP – NOT TO SCALE

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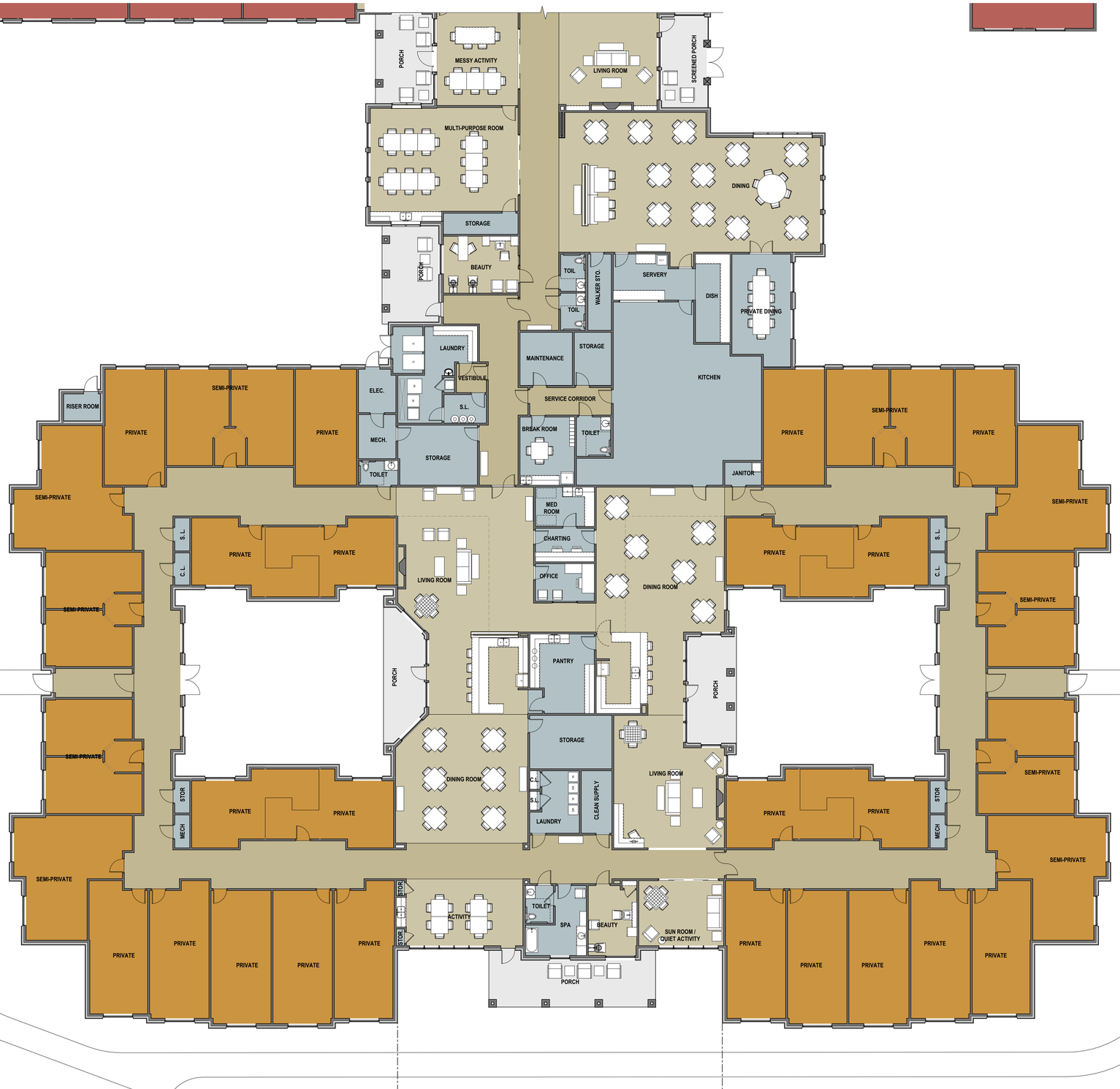
SCALE:

DRAWING NUMBER: SK3



1 FIRST FLOOR PLAN - EAST HALF

SCALE: 3/32" = 1'-0"

N

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LOCATION MAP – NOT TO SCALE

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SCALE:

DRAWING NUMBER: SK4

1 SECOND FLOOR PLAN

SCALE: 3/32" = 1'-0"

N

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LOCATION MAP – NOT TO SCALE

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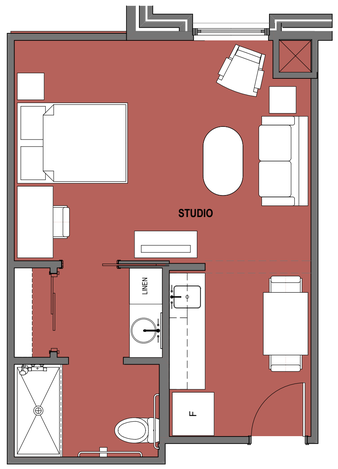
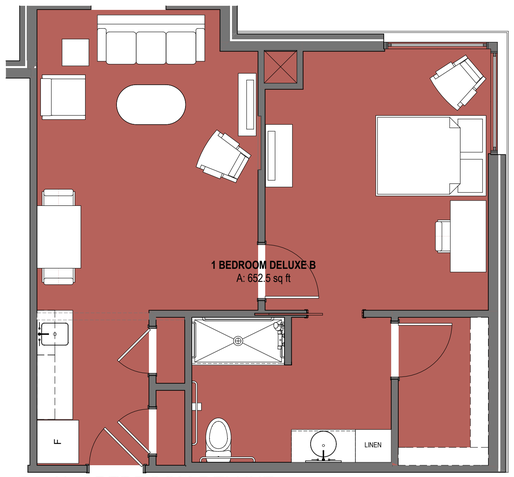
SCALE:

DRAWING NUMBER: SK5

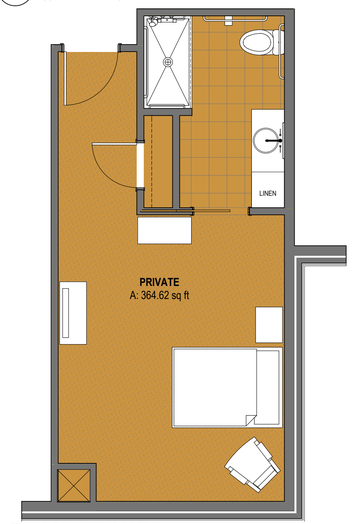


6 AL STUDIO
SCALE: 1/4" = 1'-0"

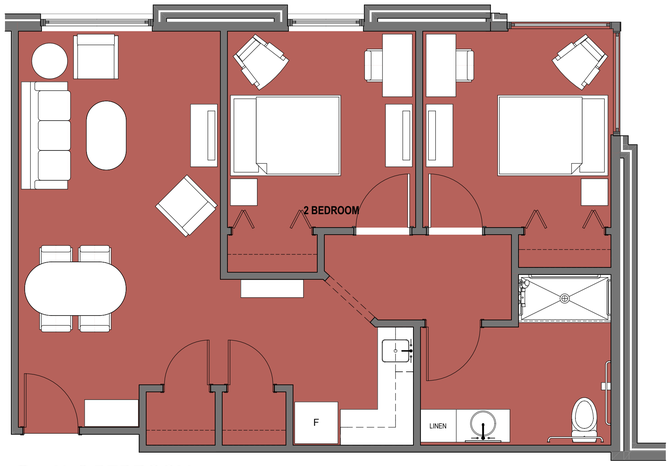
7 AL 1 BEDROOM
SCALE: 1/4" = 1'-0"



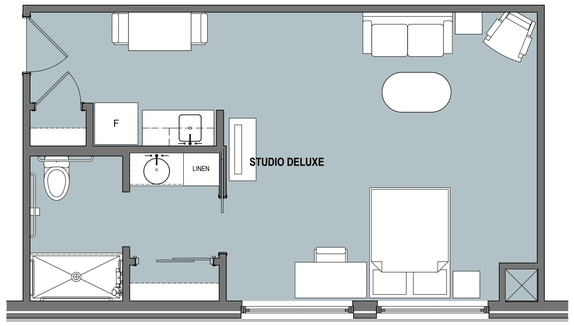
9 AL 1 BEDROOM DELUXE
SCALE: 1/4" = 1'-0"



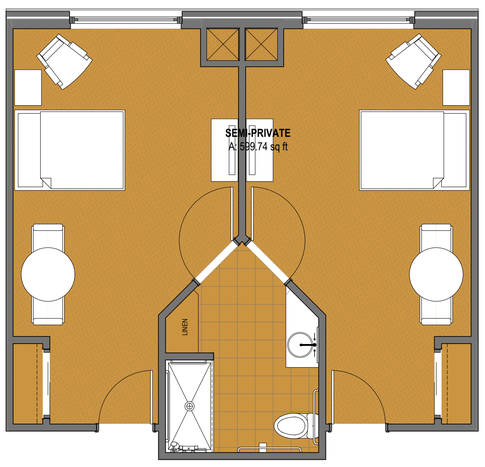
5 MC PRIVATE
SCALE: 1/4" = 1'-0"



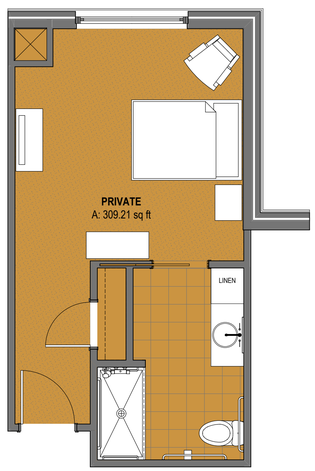
8 AL 2 BEDROOM
SCALE: 1/4" = 1'-0"



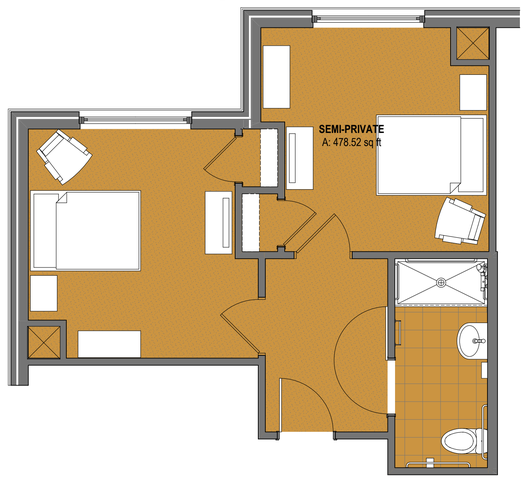
10 AL STUDIO DELUXE
SCALE: 1/4" = 1'-0"



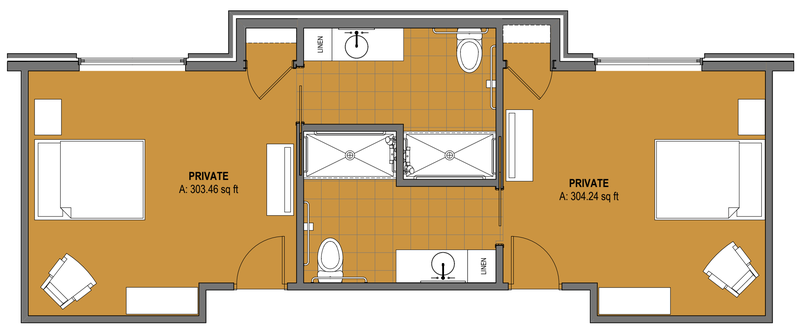
1 MC SEMI-PRIVATE
SCALE: 1/4" = 1'-0"



2 MC PRIVATE
SCALE: 1/4" = 1'-0"



3 MC SEMI-PRIVATE
SCALE: 1/4" = 1'-0"



4 MC PRIVATE(S)
SCALE: 1/4" = 1'-0"

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LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

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ORIGINAL ISSUE DATE: 09/01/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER: SK6

ELEVATION KEYED NOTES

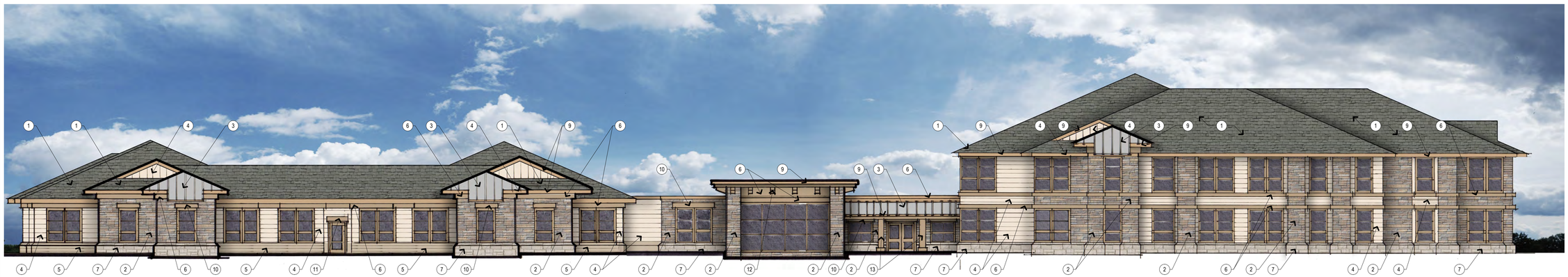
1. ARCHITECTURAL ASPHALT SHINGLE
2. CULTURED STONE VENEER, COLOR MIX 1
3. ALUMINUM STANDING SEAM ROOF
4. HARDIE SIDING, COLOR 1
5. HARDIE SIDING WAINSCOT, COLOR 2
6. HARDIE TRIM, PAINTED
7. CULTURED STONE VENEER, COLOR MIX 2
8. METAL RAILING
9. HARDIE TRIM, FASCIA
10. CULTURED STONE VENEER HEADER
11. HARDIE TRIM HEADER
12. WOOD CORBEL, PAINTED TO MATCH
13. HARDIE PANEL, PAINTED

LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

2 FRONT ELEVATION



1 SIDE ELEVATION

NOT FOR CONSTRUCTION

SEAL

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NORTHPOINT DEVELOPMENT
TROY, MI

ASSISSTED LIVING & MEMORY CARE
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

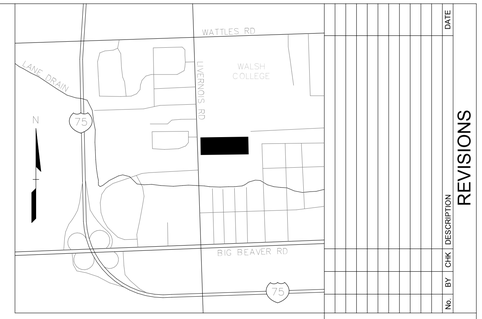
DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

ORIGINAL ISSUE DATE: 09/01/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER: SK7



LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

SEAL

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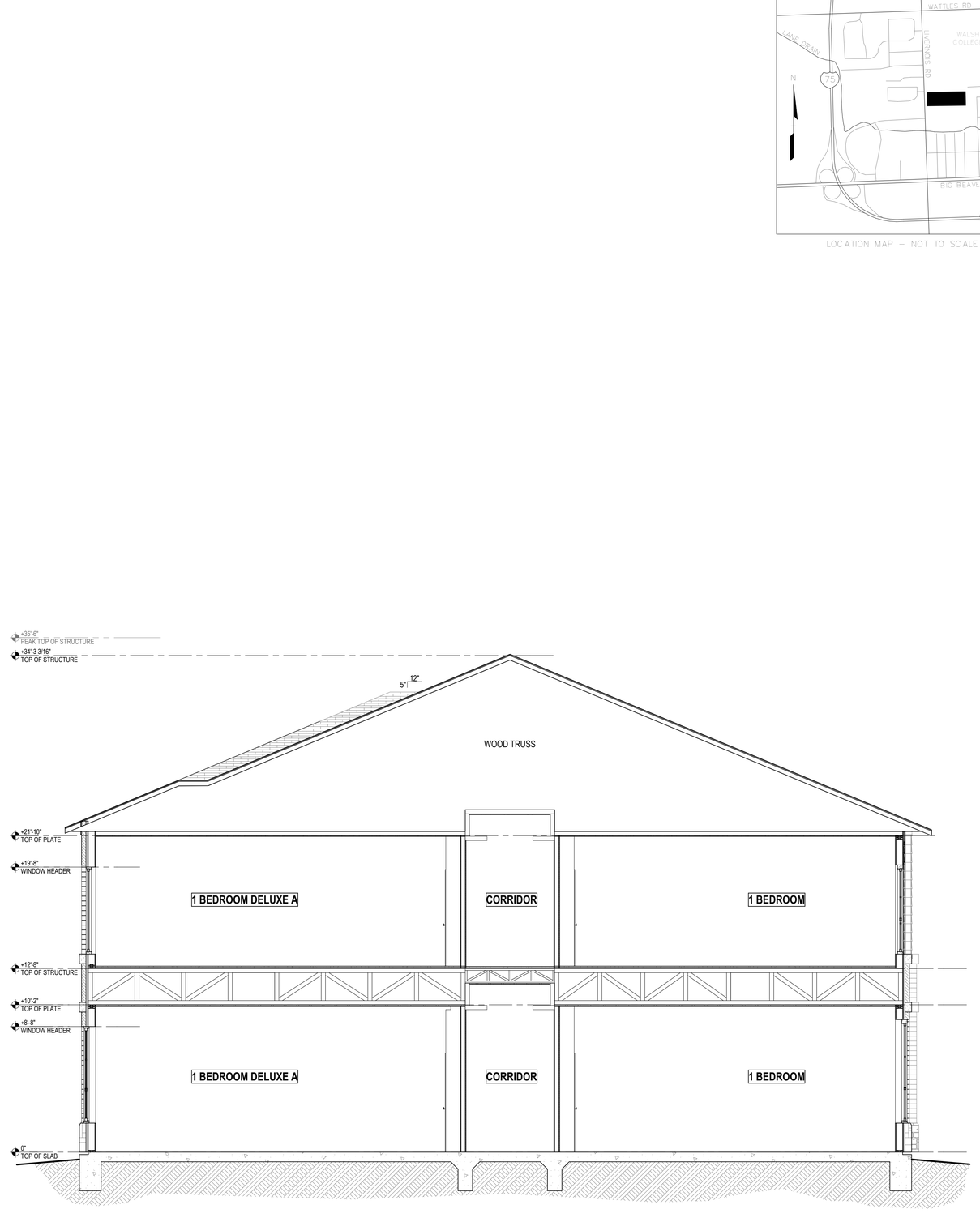


1 SECTION @ LEFT WING
SCALE: 1/4" = 1'-0"

NOT FOR CONSTRUCTION

NORTHPOINT DEVELOPMENT
TROY, MI

ASSISTED LIVING & MEMORY CARE
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

ORIGINAL ISSUE DATE:
09/01/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER:
SK9

Kathy Czarnecki

From: dblack7701@wowway.com
Sent: Thursday, September 17, 2015 5:14 PM
To: Planning
Subject: 9-17-15 Rezone concerns for Stonecrest PUD

Planning Department -

I am writing on behalf of my Father - William B. Black and myself - Debra A. Black in regard to the rezone request of the parcels north of our property to be rezoned to PUD 14 for Stonecrest Planned Unit Development. We reside at 3364 Livernois - parcel 88-20-22-301-007.

My brother was able to attend the meeting on September 8th that NorthPoint Development held at the Troy Community Center to explain the project they are pursuing for the PUD. Since this proposed project will directly impact us we do have some concerns that we would like addressed.

At the NorthPoint Development meeting Mr. Mark Pomerenke and Mr. Jed Momot explained the layout of this project. I have listed our concerns based on the initial layout they described.

The parking accommodations for the employees of this facility would be at the south end of the complex which puts the parking lot next to our property. I believe they will request a variance to bring the parking lot closer to the property line than the standard allowance. This would not allow much of a barrier between the properties. The north rooms of our house are bedrooms. We are concerned with privacy, lighting, noise and pollution.
We would like to request that they keep the standard distance required from the property line and even with that put up a proper barrier (with correct water drainage) and be responsible for maintenance.

There will be a drive from the employee parking lot that runs along the south side of the complex; this will be along the north side of our property. There will be traffic in and out of this area (probably day or night so another reason for a proper barrier). The garbage dumpsters will be kept at this end of the complex. We are concerned about the smell, pollution and the noise.
We would like to request the dumpsters be placed behind or at the north end of the complex.

There will also be a generator at the south end of the complex. This generator will need to switch on and off periodically to maintain the proper running condition required.
We are concerned about noise.
We would like to request the generator be placed in the back of the complex.

The NorthPoint representatives did advise that they would work with us on the barrier and if a privacy fence was required that may be a workable solution. They also advised they would take another look at the layout to see if the garbage dumpsters and generator could be moved. We have not been contacted by NorthPoint Development since the September 8th meeting.

Kathy Czarnecki

From: Brent Savidant
Sent: Tuesday, August 11, 2015 8:20 AM
To: Planning
Subject: FW: Stonecrest nursing home
Attachments: To Troy Planning Commission stonecrest nursing home.docx

From: jandjandabbey@aol.com [mailto:jandjandabbey@aol.com]
Sent: Monday, August 10, 2015 3:44 PM
To: Brent Savidant <SavidantB@troymi.gov>
Subject: Stonecrest nursing home

To Mr Savidant

We have attached a letter outlining our concerns about the Stonecrest nursing home proposed on Livernois between Wattles and Big Beaver. Were not sure when the planning commission will review/discuss their proposal, but we would like to be there to express our concerns.

Sincerely

Joyce and Joe Peterson
118 Scottsdale Dr
Troy,Mi 48084

To Troy Planning Commission 8/8/2015

We recently learned about the proposal from Stonecrest to build a nursing home with a memory wing along Livernois, south of Wattles in an area currently zone residential. We live across the street from the proposed nursing home in the Troy Meadows subdivision. We are strongly opposed to allowing this nursing home in this location for the following reasons.

Nursing homes do not add value to the nearby homes, but detract. Open space (current status) or single family homes (current zoning) add value, nursing homes detract. Who wants to live near a nursing home? Is this company going to reimburse nearby home owners for their loss in home values.

The Livernois corridor north of Big Beaver per the master plan is mostly residential and zoned accordingly. As a result, this corridor is fairly quiet and traffic patterns are much lower than most of areas of Troy. This is one of the reasons we purchased our home in this area. This facility, will add traffic to Livernois, approximately 100 cars at each rush hour. Also, we currently experience little ambulance traffic, this will significantly add to that noise source.

Our subdivision is starting to experience flooding problems. Our creek overflowed three times in the last two years and the streets flooded this year for the first time. Building near the flood plain with a massive facility such as proposed would further exacerbate this problem.

It seems that a lot of work has gone into their proposal, both from Stonecrest and Troy city officials, but without any feedback from nearby homeowners. Last winter, a similar proposal for a nursing home only several hundred yards from this location, attracted a standing room only crowd that were mostly against their proposal. I believed that that proposal died due to all of the negative issues associated with a nursing home along Livernois.

Thanks for listening to our concerns and hopefully find a different location for this nursing home in Troy, not in a residential area.

Sincerely

Joyce and Joe Peterson

118 Scottsdale

Troy, mi

We have the notice for the Planning Commission meeting on September 22nd and we will be attending the meeting. We hope to hear more of an in depth discussion regarding the concerns listed. We have lived in Troy a very long time and we hope that NorthPoint Development is aware of the "good neighbor" policy this city has.

Sincerely,

William B. Black
Debra A. Black

STONECREST SENIOR LIVING AND MEMORYCARE RESIDENCES AND JOINT CITY PARK DEVELOPMENT

STATE OF MICHIGAN

COUNTY OF OAKLAND

CITY OF TROY

DEVELOPMENT AGREEMENT FOR STONECREST SENIOR LIVING AND MEMORY CARE RESIDENCES AND JOINTLY DEVELOPED CITY PARK PLANNED UNIT DEVELOPMENT

This Development Agreement ("Agreement") dated _____, 2015, is entered into by and between NP TROY, LLC, whose address is 5015 NW Canal Street, Suite 200, Riverside, Missouri 64150 ("Developer") and the CITY OF TROY, a Michigan municipal corporation having its principal offices at 500 West Big Beaver Road, Troy, Michigan 48084 ("City").

Recitals

A. Developer is the Purchaser of certain real property located in the City of Troy, Oakland County, Michigan containing approximately 9.59 acres, located on the east side of Livernois Road, between Big Beaver Road and Wattles Road, across from Town Center Drive, which real property is more particularly described and depicted in **Exhibit B** hereto (the "Developer Property").

B. The Developer Property is located immediately to the south of property owned by the City consisting of approximately 18.73 acres on which the City intends to develop a City Park, jointly with Developer, which real property owned by the City is more particularly described and depicted in **Exhibit A** hereto (the "City Park Property").

C. The Developer filed an Application for concurrent approval of a Concept Development Plan and a Preliminary Development Plan for a new PUD in order to develop assisted living residences with a memory care component consisting of residential related uses on approximately the westerly +/- 3.655 acres of the Developer Property (hereinafter the "Assisted Living and Memory Care Residences"), which real property is more particularly described and depicted on the attached **Exhibit C** which shows the full Developer Property of +/- 9.585 acres, less the Conservation Area of +/- 5.93 acres. The remaining +/- 5.93 acre portion of the Developer Property legally described and depicted on **Exhibit C** is to be retained as an undeveloped natural site in perpetuity by means of a conservation easement which limits

and restricts the easterly +/- 5.93 acre portion of the Developer Property as undeveloped land (the "Undeveloped and Naturally Preserved Site Area"). It is intended that the terms of the conservation easement will be negotiated by the parties and, when fully signed by the Parties, will be attached as a separate Exhibit to this Agreement. The Assisted Living and Memory Care Residences and the Undeveloped and Naturally Preserved Area, together with the jointly developed City Park as described in this Agreement as to Developer's obligations and agreement relating to the City Park are collectively referred to as the "Project" or the "Stonecrest Senior Living and Memory Care Residences and Jointly Developed City Park PUD".

D. As part of the Jointly Developed City Park portion of this PUD, it is intended that the Developer and the City will mutually enter into a series of easements and/or easement maintenance agreements in perpetuity located on specifically designated portions of Developer's Property and the City Park Property, which will provide for several different specified uses by the Parties and development of portions of the City Park Property at the expense and cost of Developer as more fully set forth in this Paragraph D and detailed further in this Agreement and in other specific Exhibits to be attached to this Agreement, and located on the City Park Property.

(1) There will be an Entrance Drive and Cross-Access Driveway Easement Agreement from Livernois Road extending to the Developer Property north property line and also located on the City Park Property starting from the east edge of Livernois Road and extending further onto the City Park Property and to the Developer Property to the south. The form and substance of such "Entrance Drive and Cross-Access Easement" is hereby approved and attached hereto without the legal descriptions, surveys or other exhibits, and the fully executed Entrance Drive and Cross-Access Easement with legal descriptions, surveys and other exhibits will be submitted before final site plan approval and held by the City for recording after final engineering is approved by the City. The Developer will pay all costs and expenses of constructing of this Entrance Drive and Cross-Access Easement and the cost of landscaping the area to high quality standards as more fully set forth in Preliminary Landscape Plan dated September 2, 2015, attached as **Exhibit C-1.0** hereto.

(2) In addition, Developer will construct, at its sole cost and expense, an access parking lot area and related improvements located on the City Park Property and mutually serving both the Developer Property and the City Park Property, which is primarily intended for use as part of the City Park, but Developer will have the right to mutually use that parking area in perpetuity as incidental overflow parking to the Developer Property. The form and substance of the Easement for Parking Lot and for Joint Parking Facilities is hereby approved and attached hereto without the legal descriptions, surveys or other exhibits and the fully executed Easement for Parking Lot and for Joint Parking Facilities with legal description, survey and other exhibits will be submitted before final site plan approval and held by the City for recording after engineering is approved by the City. All parking, stormwater retention/detention and disposal, and landscaping relating to the parking area on City Park Property will be installed by Developer, at its cost, as approved by the City requirements in accordance with the Preliminary Development Plan attached as Exhibit D.

(3) As part of the development of the City Park on City Park Property and the development of the Developer Property for its approved uses, there will be need for a stormwater retention/detention pond and water feature to be mutually used by the parties in perpetuity and located on the City Park Property, which stormwater retention/detention pond and water feature will serve both the City Park Property and Developer Property. The form and substance of the Easement for Water Detention/Retention and for Joint Detention/Retention Facilities on the City Park Property is hereby approved and attached hereto without the legal descriptions, surveys or other exhibits and the fully executed Easement for Water Detention/Retention and for Joint Detention/Retention Facilities with legal description, survey and other exhibits will be submitted before final site plan approval and held by the City for recording after engineering is approved by the City. Developer will pay all costs of installing that retention/detention pond and water feature and will be responsible to remove the soil required to install the retention/detention pond and water feature either to the Developer Property as additional fill on Developer Property or by removal from and/or relocation upon the Developer Property and/or City Park Property as agreed to in writing with the City. The Easement for Water Detention/Retention and or Joint Detention/Retention Facilities will be constructed to City specifications and will contain landscaping and other amenities to make it an attractive water feature on City Park Property with a fountain and electrical service provided by Developer as approved by the City requirements in substantial accordance with the Preliminary Development Plan attached hereto as **Exhibit D**.

(4) The City hereby grants to Developer, its agents, employees, contractors and suppliers, a clear and adequate Temporary Grading, Slope, Land Balancing, Excavation, Soil Removal, Construction, Landscaping and Installation Easement approved in form and substance and attached hereto providing access and temporary use of the City Park Property to install, repair and maintain the Developer improvements to the City Park Property as required by this Agreement and as approved by the City requirements in substantial accordance with the Preliminary Development Plan attached hereto as **Exhibit D.**

(5) As part of this Agreement, the City hereby approves in form and substance a Monument Sign Easement Agreement to be located on the City Park Property attached hereto without the legal descriptions, surveys or other exhibits and the fully executed Monument Sign Easement Agreement with legal description, survey and other exhibits will be submitted before final site plan approval and held by the City for recording after engineering is approved by the City. Developer may install and maintain, at Developer's cost, a sign identifying Developer's name, address, location and access to its senior living and memory care residences on the Developer Property as approved by the City requirements in substantial accordance with the Preliminary Development Plan attached hereto as **Exhibit D.**

(6) As part of this Agreement, the City hereby approves in form and substance a Reciprocal Easement Maintenance Agreement (hereafter "REMA") attached hereto without the legal descriptions, surveys or other exhibits and the fully executed REMA with legal description, survey and other exhibits will be submitted before final site plan approval and held by the City for recording after engineering is approved by the City.

(7) There will be additional ideas, plans and improvements to the City Park Property which the City desires to include as part of its overall development of the City Park

Property as it evolves. The City has not yet finalized its detailed plans for pathways, overall landscaping, bathroom facilities, fencing and other City Park Property amenities. Because Developer is satisfied that it is in its best interests as part of the Jointly Developed City Park under this PUD Agreement to have a City Park which is attractive and desirable to the City, its citizens and users, and the Developer and its residents, Developer has committed to provide to the City, in advance, upon completion of the Developer's specified obligations on the City Park Property as set forth in this Agreement, an additional fund of Fifty Thousand ($50,000.00) Dollars which the City may use in its discretion for the further completion of amenities of its choice in the City Park at the City's cost. These funds will be provided by Developer upon acceptance by the City of the improvements which Developer is obligated to provide on the City Park Property as set forth in this Agreement.

E. The Developer has agreed to undertake, at Developer's cost, the construction of various public roads, entrance drive, cross-access drive, sidewalks, detention/retention pond, and public and private utility improvements necessary for the Project. Developer agrees to construct the Project in one phase which is set forth on the Preliminary Site Plan dated September 2, 2015, attached hereto as **Exhibit E** attached hereto (the "Preliminary Site Plan"). The City Council of the City has issued Concept Development Plan and Preliminary Development Plan approval for the rezoning of the Developer Property in accordance with this PUD as required by the City's Zoning Ordinance.

F. In connection with the grant of rezoning of the Developer Property to PUD, Chapter 39, Section 11.06 E. of the City's Zoning Ordinance requires the execution of a Planned Unit Development Agreement which incorporates the Concept Development Plan and Preliminary Development Plan, which are attached to this Agreement and include a summary description of the nature and character of the proposed Development; a statement of the conditions upon which the Concept Development Plan Approval and Preliminary Development Plan Approval by the City Council is based; a summary of public improvements and financial guarantees to complete those improvements; and other documents enumerated as PUD Documents, and which require Concept Development Plan Approval by City Council as part of the grant of rezoning of the Developer Property to PUD. However, Developer submitted a Concept Development Plan and Preliminary Development Plan pursuant to Chapter 39, Section 11.07 which was recommended for approval by the Planning Commission on September 22, 2015.As part of PUD plan approval, Developer has offered and agreed to make the improvements and to proceed with the undertakings described in the PUD Documents which Developer and the City agree were necessary and roughly proportional to the burden imposed in order to (i) ensure that the public services and facilities affected by the Project will be capable of accommodating increased services and facility loads caused by the Project, (ii) protect the natural environment and conserve natural resources, (iii) ensure compatibility with adjacent uses of land, (iv) promote use of the Developer Property and City Park Property in an economically desirable manner and (v) achieve other legitimate objectives authorized under the Michigan Zoning Enabling Act, MCL 125.3101, *et. seq.* and Chapter 39, Article 11 of the City of Troy Zoning Ordinance.

G. For the purpose of confirming the rights, obligations and restrictions in connection with the improvements and development to be undertaken on the Developer Property and the City Park Property, once City Council has granted rezoning to Stonecrest Senior Living

and Memory Care Residences and Jointly Developed City Park Planned Unit Development, and approved this Agreement and the Concept Development Plan and the Preliminary Development Plan, including preliminary site plan, preliminary landscape plan, preliminary grading plan, tree list, tree preservation plan, topographic survey, site photometer plan, innovations lighting solutions, the temporary construction easement, the various perpetual easements and reciprocal easement maintenance agreement ("REMA"), the floor plans room details and elevation plan for the Stonecrest Senior Living and Memory Care Residences, and the other PUD Documents referenced herein and attached hereto. This Agreement is effective on the date the City's Zoning Ordinance is amended to grant rezoning of the Developer Property to PUD (the "Effective Date") and to be binding upon the City, the Developer, and their successors and assigns.

NOW, THEREFORE, as an integral part of the grant of the rezoning of the Developer Property to Stonecrest Senior Living and Memory Care Residences and Joint City Park Planned Unit Development, and for other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

ARTICLE I

GENERAL TERMS

1.1 This Agreement, incorporates all PUD Documents, and shall run with the land, both as to Developer's Property and pursuant to the perpetual easements and agreements on Developer's Property and/or City Park Property. Reference in this Agreement or any PUD Documents to "Developer" shall include Developer's respective successors and assigns. It is the intent of the City and Developer to put all future owners of the Developer Property and/or the City Park Property or parties in interest on notice of the rights, obligations, restrictions, and perpetual easements and agreements contained herein by recording this Agreement and its attached Exhibits with the Oakland County Register of Deeds. The terms and conditions of this Agreement shall be considered "Deed Restrictions" for any successors or assigns of the Developer Property, and shall be incorporated by reference in any other restrictions created in connection with the development and/or use of the Developer Property, the 5+ acres of Developer Undeveloped Property and/or City Park Property.

1.2 The Developer Property shall be developed and improved only in accordance with the following, which shall be referred to herein as the "PUD Documents". Additional "PUD Documents City Park Property", which are a part of the Jointly Developed City Park are also referenced herein and made a part of this Agreement:

A. Chapter 39, Article 11 of the City's Zoning Ordinance, and amendments, if any.

B. The Stonecrest Senior Living and Memory Care Residences and Joint City Park Planned Unit Development Concept Development Plan/Preliminary Development Plan Application, submitted by Developer to the City Planning Department on September 2, 2015. Information included in the

Concept Development Plan/Preliminary Development Plan Application, or subsequently submitted to the City by Developer, its architects, professional engineers or landscaping consults, including but not necessarily limited to, the following:

General Description of Document		Date of Document	Draftor or Preparer
C-0.0	Cover Sheet	9/2/15	PEA Inc.
C-1.0	Topographic Survey	9/2/15	PEA Inc.
C-1.1	Tree List	9/2/15	PEA Inc.
C-1.2	Tree Preservation Plan	9/2/15	PEA Inc.
C-2.0	Preliminary Site Plan	9/2/15	PEA Inc.
C-3.0	Preliminary Grading Plan	9/2/15	PEA Inc.
L-1.0	Preliminary Landscape Plan	9/2/15	PEA Inc.
_____	Site Photometric Plan	9/15/15	Innovative Lighting Solutions
SK1	First Floor Plan	9/1/15	pi architects
SK2	First Floor Plan – West Half	9/1/15	pi architects
Sk3	First Floor Plan – Middle Section	9/1/15	pi architects
Sk4	First Floor Plan – East Half	9/1/15	pi architects
Sk5	First Floor Plan – Second Floor Plan	9/1/15	pi architects
Sk6	Room Details	9/1/15	pi architects
Sk7	Elevation Plan	9/1/15	pi architects
Sk9	Section @ Left Wing	9/1/15	pi architects

C. Signage. all signs shall comply with the requirements for multiple residential uses in Chapter 85-Signs of the Troy Code of Ordinances. Such signs may be lighted and shall be designed to attract and inform pedestrians and vehicles of the Project location, address and use. No such projecting sign shall exceed 32 square feet per sign. The location of all

ground signs shall be subject to review and approval by the City Building Official.

D. Any and all conditions of the approval of the City Council pertaining to the Stonecrest Senior Living and Memory Care Residences and Joint City Park Planned Unit Development Concept Development/Preliminary Development Plan as specifically reflected in the resolution of the official minutes of the meeting at which such approval is granted.

E. An Affidavit of Property Ownership to be recorded by Developer with the Oakland County Register of Deeds prior to commencement of construction and prior to the lease, rental or occupancy by tenants of any portion of the Project, containing the legal description of the entire Developer Property, specifying the date of Concept Development/Preliminary Development Plan approval and rezoning of the Planned Unit Development by the City Council, and declaring that all future development of the Developer Property and by Developer on the City Park Property has been authorized, restricted and required to be carried out in accordance with this Agreement and the Ordinance amendment granting rezoning to Stonecrest Senior Living and Memory Care Residences and Joint City Park Planned Unit Development.

F. Developer shall have the right hereunder to modify the interior floor plans for the Senior Living and Memory Care Residences on the Developer Property without the consent (but subject to compliance with all other applicable City ordinances), so long as the exterior elevations for the improvements in the Senior Living and Memory Care Residences do not significantly change. Any significant changes to the building elevation on the Developer Property (as determined by the City Zoning Administrator) may be reviewed and approved by the City Planning Commission following procedures set forth in the Troy Zoning Ordinance for an amendment to a Site Plan.

G. Trash pickup on the Developer Property may not occur between the hours of 10 p.m. and 8 a.m.

H The City of Troy Planning Department may administratively approve improvements to the City Park Property including, but not limited to, restrooms, trails, fencing, sidewalks, parking lots, and play equipment, whether erected by Developer or the City.

1.3 Troy City Council Resolution #_____ and this Stonecrest Senior Living and Memory Care Residences and Joint City Park Planned Unit Development shall be considered an amendment to the Zoning Ordinance and the Zoning Map, reclassifying-the zoning of the Developer Property, which was not previously rezoned to PUD and constitutes the land use authorization for the Developer Property, and all use and improvement of the Developer

Property or by the Developer on the City Park Property shall be in substantial conformity with such Ordinance and the PUD Documents referenced herein and as set out in Chapter 39 of the Troy Zoning Ordinance.

ARTICLE II

DEVELOPER'S RIGHTS, OBLIGATIONS AND PROPERTY RESTRICTIONS

2.1 The Final Development Plan application submitted per the requirements of Section 11.08 of Chapter 39, Article 11 of the City's Zoning Ordinance, shall meet and conform to the criteria of the Concept Development Preliminary Development Plan and the Preliminary Development Plan as approved by the City.

2.2 Developer shall have the right to develop the Developer Property and make improvements or modifications to the City Park Property in accordance with the PUD Documents as per Chapter 39, Article 11 of the City's Zoning Ordinance. Any changes to the Project shall be approved in accordance with the PUD Documents and the City's Zoning Ordinance in effect at the time of the proposed changes.

2.3 The Project shall be developed in one phase.

2.4 List of Conditions Offered in Exchange for PUD Consideration. As part of the PUD approval and as conditions of said approval and to satisfy the PUD zoning standards, Developer's obligations shall include the following, plus any other requirements set forth in documents or Exhibits attached hereto and made a part hereof, which are designated as the obligations of Developer:

The conditions described on the Site Plan for the Developer Property and the City Park Property include, in summary only:

(a) Construction of a shared use parking lot with landscaped islands, water features, parking lot lights;

(b) construction of a stormwater detention/retention pond with water feature, fountain, electrical connections and landscaping;

(c) sidewalk and landscaping along the east side of Livernois Road on the City Park Property; and

(d) plaza and trailhead and a $50,000 contribution to the City for optional future City Park development and enhancement by the City.

2.5 Developer and the City have, in connection with the Entrance Drive and Cross-Access Driveway Easement Agreement located on the City Park Property, the Easement for Parking Lot and for Joint Parking Facilities located on the City Park Property and the Easement for Water Detention/Retention and for Joint Detention/Retention Facilities located on the City Park Property, entered into a Reciprocal Easement and Maintenance Agreement ("REMA") regarding the upkeep, care and maintenance of the improvements located on the City Park Property which will establish the obligations of the owners and/or occupants or users of the improvements within the City Park Property to maintain the landscaping and improvements, snowplowing, sweeping of drives, sidewalks and parking lot, and other Joint Parking Facilities within and upon the City Park area within the perpetual easement areas to the extent included in and as more particularly set forth in the Reciprocal Easement and Maintenance Agreement ("REMA").

2.6 Developer, or any successor owner of the Developer Property, shall maintain the landscaping and related improvements located within or upon the Developer Property in a neat and orderly appearance, substantially free from refuse and debris and, shall promptly replace any dead or dying plants and shrubs. If the weather does not allow for immediate removal and replacement, then it shall be done as soon as possible, but in no event shall it be longer than the end of the current planting season.

2.7 Developer shall comply with the City Code and Ordinances, make any necessary application for permits and obtain any necessary permits for the use of temporary sales trailers and/or rental, occupancy, and advertising signs.

ARTICLE III

PUBLIC IMPROVEMENTS

3.1 Water and Sanitary Sewer Systems. Developer shall, at its sole expense, construct and install improvements and/or connections tying into the municipal water and sewage systems, including any required fire hydrants on the Developer Property. Such improvements shall be designed and constructed in accordance with the Final Development Plan, approved engineering construction plans and all applicable City, County and State standards, codes, regulations, ordinances and laws. Such water and sanitary sewer service facilities, including any on-site and off-site facilities, extensions and easements to reach the area to be served, shall be provided by and at the sole expense of the Developer and shall be completed, approved and dedicated to (as required by the City in its discretion) the City to the extent necessary to fully service all proposed and existing facilities, structures and uses on the Developer Property and as part of the Developer Property. All water and sanitary system improvements required shall be completed before construction of the buildings to be erected on the Developer Property within said Development and shall be completed, approved and dedicated to and accepted by the City, if required, to the extent necessary to fully service all proposed and existing facilities, structures and uses, within the Developer Property to be served thereby, prior to issuance of any building permits. The water and sanitary sewer improvements within the Project must be completed such that upon completion and any dedication of such improvements, be fully sufficient to provide the required capacity for water and sewer services to

such buildings to be erected on the Developer Property according to the applicable laws, ordinances, codes, regulations and standards at the time of construction of buildings to be erected on the Developer Property. With respect to the Project, the Developer shall post security in the form of cash or check or certificate of deposit, irrevocable letter of credit (issued by an institution doing business in Oakland County) or a performance bond (the "Security"), as specified in a separate agreement approved by the City. The Security shall be in an amount equal to the estimated cost of installation, or a performance bond in an amount equal to the cost of construction of the water and sanitary sewer systems plus 10% refundable cash deposit. The Agreement shall also authorize the City, at its option, to complete these improvements as required by the City Engineer, if Developer fails to complete the water and sanitary sewer improvements in a timely fashion, once construction has commenced. All performance bonds shall be issued by institutions licensed and admitted to do business in the State of Michigan. In such case, building permits for the buildings to be erected on the Developer Property within the Project to be served by the water and sanitary sewer improvements in question shall be issued upon the posting of such Security and execution of such Agreement, which shall be approved by the City Attorney in the exercise of reasonable discretion. The water and sanitary sewer improvements shall be completed and approved prior to issuance of any certificates of occupancy for the last building to be erected on the Developer Property within the Project. At the Developer's request, but not more frequently than once a month, the Security may be reduced by the same percentage as the percentage of completion of the water and sanitary sewer improvements as determined by the City's engineer in the exercise of reasonable discretion. The balance of any Security shall be returned to Developer within thirty (30) days following the determination of the City that the water and sanitary sewer improvements have been completed per the approved engineering plans. A minimum of ten (10) percent of the Security shall be maintained by the City until such time as final approval has been issued for all improvements required for the Project on the Developer Property.

3.2 Storm Water Drainage. The Developer, at its sole expense, shall construct a storm water and retention/detention system on the Developer Property and the City Park Property, which system shall include the improvements provided in this Agreement, and shall be installed in accordance with the PUD Documents, the approved engineering construction plans and all applicable ordinances, laws, codes, standards and regulations. The Developer and the City have or will execute applicable easement agreements or other agreements relating to those improvements installed on the City Park Property. All drainage improvements necessary for the Project shall be completed and approved prior to issuance of a Final Certificate of Occupancy for any residence structure on the Developer Property. During the development of the Project, the Developer shall be obligated to maintain any then existing storm drainage and retention/detention system and facilities in a fully operational condition. Upon completion of the storm drainage and retention/detention system, the Developer may assign its responsibility with respect to such maintenance in accordance with the REMA. In such case, the obligation for maintenance shall be that of the party obligated under the REMA. For the construction of such storm water and retention/detention system, Developer shall post security in the form of cash or check or certificate of deposit, irrevocable letter of credit (issued by an institution doing business in Oakland County) or a performance bond (the "Security"), as specified in a separate agreement approved by the City. The Security shall be in an amount equal to the estimated cost of installation, or a performance bond in an amount equal to the cost of construction of the storm

drainage system plus 10% refundable cash deposit. The Agreement shall also authorize the City, at its option, to complete the drainage improvements as required by the City Engineer, if Developer fails to complete the drainage improvements in a timely fashion, once construction has commenced. All performance bonds shall be issued by institutions licensed and admitted to do business in the State of Michigan. In such case, building permits for the development of the Developer Property by Developer to be served by the drainage improvements in question will be issued upon the posting of such Security and execution of such Agreement, which shall be approved by the City in the exercise of reasonable discretion. The drainage improvements shall be completed and approved prior to issuance of any certificates of occupancy within the Development of the Developer Property. At the Developer's request, but not more frequently than once a month, the Security may be reduced by the same percentage as the percentage of completion of the drainage improvements as determined by the City's engineer in the exercise of reasonable discretion. The balance of any Security shall be returned to Developer within thirty (30) days following the determination of the City that the drainage improvements have been completed per the approved engineering plans. A minimum of ten (10) percent of the security shall be maintained by the City until such time as final approval has been issued for all improvements required by Developer serving the City Park Property.

3.3 Sidewalks, Drives, Entryways and Parking Lots. All entryways, drives, sidewalks, and parking lots (the "paving improvements") on the Developer Property or the City Park Property to be constructed by Developer shall be designed, situated and constructed in accordance with the Final Site Plan, engineering plans, all requirements and applicable ordinances of the City, the PUD Documents and the approved engineering construction plans. All internal drives, entryways, sidewalks, and parking lots on the Developer Property will be private except as otherwise set forth herein. The drives, entry ways, sidewalks, parking lots and pathways installed by Developer or the City on City Park Property will be public property subject to restrictions established by the City, but subject to the retained rights of Developer under the terms of this Agreement, the applicable perpetual easements referenced in and attached as exhibits to this Agreement, and/or the REMA. The Developer, its successors and assigns, shall provide for emergency access for public entities and their personnel on the Developer Property. The Developer shall post security in the form of cash or check or certificate of deposit or irrevocable letter of credit (issued by an institution doing business in Oakland County) or a performance bond (the "Security"), as specified in a separate agreement approved by the City. The Security shall be in an amount equal to the estimated cost of installation, or a performance bond in an amount equal to the cost of construction plus 10% refundable cash deposit. The Agreement shall also authorize the City, at its option, to complete the sidewalks, drives, entryways, landscaping, and parking lots required by Developer on the City Park Property as required by the City Engineer, if Developer fails to complete the sidewalks, drives, entryways and parking lots in a timely fashion, once construction has commenced. All performance bonds shall be issued by institutions licensed and admitted to do business in the State of Michigan. In such case, building permits for the applicable phase of the Project to be served by the sidewalks, drives, entryways, and parking lots in question will be issued upon the posting of such Security and execution of this Agreement. The sidewalks, drives, entryways, and parking lots on the Developer Property and the City Park Property, as provided for herein, shall be completed and approved prior to issuance of any certificates of occupancy for the last building on the Developer Property.

3.4 Prior to the issuance of the first certificate of occupancy on the Developer Property, parking spaces shall be provided necessary to serve the development of the Developer Property, and shall consist of, at a minimum, striping on a base course of asphalt, as determined by the City Engineer for all entranceways and internal drive areas to provide for access for construction traffic, City personnel, emergency and firefighting equipment to the Developer Property. Further, the Developer agrees to complete to the City's approval the paving of all areas referenced in this Section (including topcoat, parking lot striping, and permanent traffic control signing required on Developer Property) prior to the issuance of the certificate of occupancy for the Project.

3.5 Developer, its successors and assigns, shall be responsible for upkeep, maintenance and repair of the drives, entranceways, sidewalks, and parking lots during the period of construction, and shall also keep streets abutting the Project free from debris and repair any damage to the streets abutting the Project (subject to City of Troy requirements) caused by construction activities on or for the Developer Property or the Project and use of abutting streets for construction purposes. If the Developer fails to maintain and repair the streets, boulevards, drives, entranceways, parking lots and abutting streets, as required by this Section, subject to normal construction requirements and construction traffic, the City may issue stop work orders and/or withhold issuance of further approvals, permits and occupancy certificates for development of the Project until such failure is cured in addition to any enforcement authorization or remedy provided herein, or any other agreement. At all times during and after completion of construction, Developer, its successor and assigns, shall cause all drives, entranceways and parking lots located on the Developer Property to be maintained, repaired and kept in an unimpeded, unobstructed, safe and passable condition to allow for the free flow and circulation of traffic throughout the Project, except for temporary closures or obstruction due to construction, repairs or snow. The responsibility and obligation for such ongoing maintenance and repair on the Developer Property shall be that of the Developer, its successors and assigns.

3.6 Developer shall have the right, subject to required City approvals, to assign its maintenance and repair obligations under this Agreement to any successor owner of the Developer Property. Upon the assignment to and assumption by the successor owner of Developer's maintenance and repair obligations, Developer shall have no further obligations or liability with respect thereto.

3.7 For purposes of maintenance obligations set forth in this Paragraph, the term "maintenance," "maintain" and "maintained" shall mean and include regular inspections.

ARTICLE IV

THE CITY'S RIGHTS AND OBLIGATIONS

4.1 The City, in each instance, shall endeavor to provide by written thirty (30) days notice to Developer documentation of any and all deficiencies and shall provide Developer with an adequate time period in which to cure any deficiencies under this Agreement, which shall be enough time for Developer, its successors, or assigns, to cure the deficiency, taking into consideration applicable weather and related conditions.

If, following the expiration of the period set forth to cure any deficiencies, such deficiencies have not been cured, the City shall there upon have the power and authority, but not the obligation, to take any of the following actions, in addition to any actions authorized under City ordinance and/or State law:

(a) Demand that the non-performance, deficiency or obligation be fulfilled, performed or completed before Developer assigns its obligations to another owner of the Developer Property and set a specific date to complete the performance, fulfill the obligation or correct the deficiency. If Developer has not completed the performance, fulfilled the obligation or corrected the deficiency by the date specified, the Developer shall not assign its obligations to a subsequent owner of the Developer Property, and the City may proceed under paragraph 4.1(b).

(b) Enter upon the Developer Property, or cause its agents or contractors to enter upon the Developer Property and perform such obligation or take such corrective measures as reasonably found by the City Administration to be appropriate. In addition to any financial assurance given to ensure completion of the improvements, the additional costs and expense of making and financing such action by the City, including without limitation notices by the City, upon written documentation of such additional costs and expenses, and reasonable legal fees incurred by the City, plus an administrative fee in the amount of ten (10%) percent of the total of all such costs and expenses incurred, shall be paid by Developer within thirty (30) days of City's invoicing to Developer.

(c) The City may initiate legal action for the enforcement of any of the provisions, requirements, and obligations set forth in the PUD Documents.

(d) The City may issue a stop work order as to any or all aspects of then uncompleted portions of the Project detailing in writing the uncompleted portions of the Project, may deny the issuance of any requested building permit or certificate of occupancy within any part or all of the Project, regardless of whether the Developer is the named applicant for such permit or certificate of occupancy, and may suspend further inspections of any or all aspects of the Project until such issues have been satisfactorily resolved.

4.2 At any time throughout the period of development and construction of any part of the Project, the City, its contractors, representatives, consultants and agents, shall be permitted and are hereby granted authority to enter upon all or any portion of the Developer Property for the purpose of inspecting and/or completing the respective improvements, and for the purposes of inspecting for compliance with and enforcement of the PUD Documents.

4.3 To the extent the PUD Documents deviate from the City of Troy Development Standards, Zoning Ordinance or other City ordinances, or any amendments thereto, the PUD Documents shall control. All improvements constructed in accordance with the PUD Documents shall be deemed to be conforming under the Zoning Ordinance and in compliance with all ordinances of the City.

ARTICLE V

MAINTENANCE OBLIGATIONS

The Developer, its successors and assigns, shall indemnify and hold harmless the City, from and against any and all claims for injuries and/or damages, excluding therefrom claimed loss of profits, arising out of Developer's specific use or required maintenance of the City Park Property owned by the City but maintained by the Developer, except those claims arising from the negligence or willful misconduct of the City, its agents, employees, licensees or invitees; provided, however, that in no event is the Developer required to indemnify and hold harmless the City from and against any and all claims for injuries and/or damages arising out of the use or maintenance of the City Park Property except as otherwise specifically required under the terms of this Agreement or any REMA Agreement which specifies obligations of Developer or its successors thereunder.

Likewise, the City, its successors and assigns, shall indemnify and hold harmless the Developer, its successors and assigns, from and against any and all claims for injuries and/or damages, excluding therefrom claimed loss of profits, arising out of the City's specific use or required maintenance of the City Park Property owned by the City and required to be maintained by the City, except those claims arising from the negligence or willful misconduct of the Developer, its agents, employees, licensees or invitees; provided, however, that in no event is the City required to indemnify and hold harmless the Developer from and against any and all claims for injuries and/or damages arising out of the use or maintenance of the City Park

Property except as otherwise specifically required under the terms of this Agreement or any REMA Agreement which specifies obligations of the City or its successors thereunder.

ARTICLE VI

MISCELLANEOUS PROVISIONS

6.1 This Agreement may not be modified, replaced, amended or terminated without the prior written consent of the parties to this Agreement. Developer shall have the right to delegate its rights and obligations under this Agreement to a successor owner of the Developer Property as set out in this Agreement. Until the rights and responsibilities under this Agreement are transferred to a third party under this Agreement and/or any REMA Agreement between the parties, Developer and the City shall be entitled to modify, replace, amend or terminate this Agreement, without requiring the consent of any other person or entity whatsoever, regardless of whether such person has any interest in the Developer Property, including mortgagees and others.

6.2 This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan.

6.3 If there is a conflict between the terms of any of the PUD Documents, such documents shall control in the following order: (1) this Agreement and the attached Exhibits which are made a part hereof; (2) Chapter 39, of the City's Zoning Ordinance, and amendments, if any; (3) Final Development Plan, and (4) the Concept Development/Preliminary Development Plan. Where there is a question with regard to applicable regulations for a particular aspect of the Project, or with regard to clarification, interpretation, or definition of terms or regulations, and there are no apparent express provisions of the PUD Documents which apply, the City in the reasonable exercise of its discretion, shall determine the regulations of the City's Ordinances that are applicable, provided such determination is not inconsistent with the nature and intent of the PUD Documents or in violation of applicable Federal or Michigan law; provided that Developer, its successors or assigns, shall have the right to challenge or contest the determination of the City in any court having jurisdiction.

6.4 The terms of the PUD Documents, including this Agreement, have been negotiated by the undersigned parties and such documentation represents the product of the joint efforts and agreement of the Developer and the City. Developer and the City fully accept and agree to the final terms, conditions, requirements and obligations of the PUD Documents, and shall not be permitted in the future to claim that the effect of these PUD Documents results in an unreasonable limitation upon uses of all or a portion of the Developer Property or City Park Property, or claim that enforcement of any of the PUD Documents causes an inverse condemnation or taking of all or a portion of the Developer Property. Furthermore, it is agreed that the improvements and undertakings set forth in the PUD Documents are necessary and roughly proportional to the burden imposed in order to ensure that services and facilities affected by the Stonecrest Senior Living and Memory Care Residences and Joint City Park Planned Unit Development will be capable of accommodating increased services and facility loads, traffic and

storm water drainage caused by the development thereof, to protect the natural environment and conserve natural resources, to ensure compatibility with adjacent uses of land, to promote use of the Developer Property in a socially and economically desirable manner, and to achieve other legitimate objectives authorized under the Michigan Zoning Enabling Act, MCL 125.3101, *et seq*. It is further agreed and acknowledged hereby that all of such improvements are substantially related to the burdens to be created by the Project contemplated hereby, and all such improvements and the requirements and regulations of the Project under the PUD Documents and Zoning Ordinance, without exception, are clearly and substantially related to the City's legitimate interests in protecting the public health, safety and general welfare.

6.5 This Agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which shall constitute one agreement. The signature of any party to any counterpart shall be deemed to be a signature to, and may be appended to, any other counterpart.

6.6 This Agreement shall be binding on, and shall inure to the benefit of the parties and their respective successors and assigns.

THIS AGREEMENT was executed by the respective parties on the date specified with the notarization with their name, and shall take effect on the date of adoption by the Troy City Council of the Zoning Ordinance amendment granting rezoning of the Developer Property to Stonecrest Senior Living and Memory Care Residences and Joint City Park Planned Unit Development.

[Signatures Follow]

IN WITNESS WHEREOF, Developer and the City of Troy have caused this Development Agreement to be executed the day and year first above written.

"Developer"

NP TROY, LLC
a Missouri limited liability company

By: _____
Name:
Its: Manager

Dated: November 19, 2015

STATE OF Missouri)
) SS
COUNTY OF Platte)

The foregoing instrument was acknowledged before me this 19th day of November, 2015, by Nathaniel Hagedorn the Manager of NP Troy, LLC, a Missouri limited liability company, on behalf of the company.

ANN A. ERDMANN
Notary Public, Notary Seal
State of Missouri
Platte County
Commission # 14439134
My Commission Expires April 24, 2018

Ann A Erdmann
Print Name: Ann A Erdmann
Notary Public
Platte County, Missouri
My Commission Expires: April 24, 2018
Acting in the County of Platte

"City"

CITY OF TROY, a Michigan Municipal Corporation

By:_____
Name: Dane Slater
Its: Mayor

Dated:_____

By:_____
Name: Aileen Dickson
Its: City Clerk

Dated:_____

STATE OF MICHIGAN)
) SS.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2015, by Dane Slater, Mayor and Aileen Dickson, City Clerk of the City of Troy, a Michigan municipal corporation, on behalf of the Corporation.

_____
Print Name:_____
Notary Public, Oakland County, Michigan
My Commission Expires:_____
Acting in the County of Oakland

COOPERATIVELY DRAFTED BY:
Thomas G. Sawyer, Esq.
Hutson, Sawyer, Rupp & Schroeder
292 Town Center Dr., Troy, MI 48084
AND
Allan T. Motzny, Assistant City Attorney
City of Troy
500 W. Big Beaver Rd., Troy, MI 48084
Troy, MI 48084

WHEN RECORDED RETURN TO:
Aileen Dickson, City Clerk
City of Troy
500 W. Big Beaver Rd.
Troy, MI 48084

DEVELOPMENT AGREEMENT FOR STONECREST SENIOR LIVING AND MEMORY CARE RESIDENCES AND JOINTLY DEVELOPED CITY PARK PLANNED UNIT DEVELOPMENT

INDEX OF EXHIBITS

Exhibit A – Certificate of Survey and Legal Description City Park Property

Exhibit B – Certificate of Survey and Legal Description of Developer Property

Exhibit C – Sketch of Conservation Area and Legal Description of Conservation Area

Entrance Drive and Cross-Access Easement (Approved Form)

Exhibit C-1.0 – Preliminary Landscape Plan

Easement for Parking Lot and for Joint Parking Facilities (Approved Form)

Exhibit D – Preliminary Development Plan

Easement for Water Detention/Retention and for Joint Detention/Retention Facilities (Approved Form)

Temporary Grading, Slope, Land Balancing, Excavation, Soil Removal, Construction, Landscaping and Installation Easement (Approved Form)

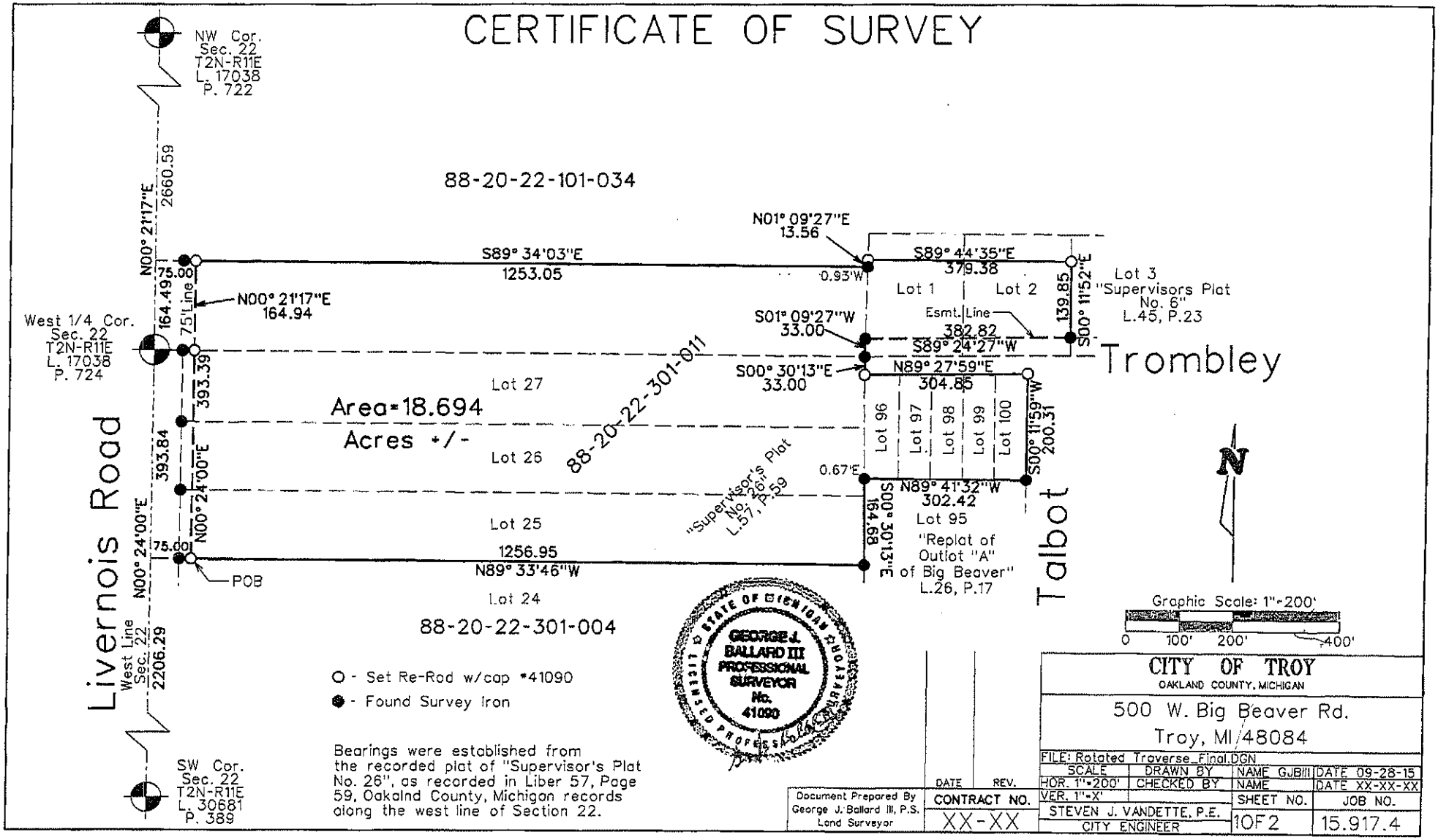
Monument Sign Easement Agreement (Approved Form)

Reciprocal Easement Maintenance Agreement (Approved Form)

Exhibit E – Preliminary Site Plan

EXHIBIT A
CERTIFICATE OF SURVEY AND LEGAL DESCRIPTION OF CITY PARK PROPERTY

CERTIFICATE OF SURVEY



CITY OF TROY
OAKLAND COUNTY, MICHIGAN

500 W. Big Beaver Rd.
Troy, MI 48084

FILE: Rotated Traverse_Final.DGN			
SCALE	DRAWN BY	NAME GJB/II	DATE 09-28-15
HOR. 1"=200'	CHECKED BY	NAME	DATE XX-XX-XX
VER. 1"=X'		SHEET NO.	JOB NO.
STEVEN J. VANDETTE, P.E. CITY ENGINEER		1OF2	15.917.4

Document Prepared By George J. Ballard III, P.S. Land Surveyor

DATE REV.

CONTRACT NO. XX-XX

Description of Parcel:

Lots 25 through 27 except the West 22.00 feet, inclusive, of "Supervisor's Plat No. 26", as recorded in Liber 57, Page 59 of Oakland County, Michigan records and Lots 1 and 2 except the North 50.00 feet, of "Supervisors Plat No. 6", as recorded in Liber 45, Page 23 of Oakland County, Michigan records and Lots 96 through 100, inclusive, of "Replat of Outlot "A"of Big Beaver", as recorded in Liber 26, Page 17 of Oakland County, Michigan records and part of the West 1/2 of Section 22, all being part of the West 1/2 of Sec. 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan. Being more particularly described as: Commencing at the Southwest Corner of said Section 22; thence North 00 degrees 24 minutes 00 seconds East, along the west line of section, 2206.29 feet and South 89 degrees 33 minutes 46 seconds East 75.00 feet to the Point of Beginning being on the east line of Livernois Road and the south line of said Lot 25; thence North 00 degrees 24 minutes 00 seconds East, along said east line, 393.39 feet to the north line of said Lot 27; thence continuing along said east line, North 00 degrees 21 minutes 17 seconds East 164.94 feet; thence South 89 degrees 34 minutes 03 seconds East 1253.05 feet to the west line of said Lot 1 of said "Supervisors Plat No. 6" thence North 01 degrees 09 minutes 27 seconds East (recorded as North 01 degrees 35 minutes 00 seconds East), along said west line, 13.56 feet; thence South 89 degrees 44 minutes 35 seconds East, 376.38 feet to the east line of Lot 2 of said "Supervisors Plat No. 6"; thence South 00 degrees 11 minutes 52 seconds East, along said east line, 139.85 feet to the north line of a platted easement for public use; thence South 89 degrees 24 minutes 27 seconds West, along said north line of easement, 382.82 feet to the west line of said Lot 1; thence South 01 degrees 09 minutes 27 seconds West (recorded as South 01 degrees 35 minutes 00 seconds West), along said west line, 33.00 feet to the southwest corner of said Lot 1 and the northwest corner of said "Replat of Outlot "A"of Big Beaver", thence South 00 degrees 30 minutes 13 seconds East (recorded as South 00 degrees 15 minutes 00 seconds West), along the west line of said "Replat of Outlot "A"of Big Beaver", 33.00 feet to the northwest corner of said Lot 96; thence North 89 degrees 27 minutes 59 seconds East (recorded as South 89 degrees 20 minutes 00 seconds East, 304.90 feet), along the north line of said Lots 96 through 100, inclusive, 304.85 feet to the northeast corner of Lot 100; thence South 00 degrees 11 minutes 59 seconds West, 200.31 feet (recorded as 199.60 feet) to the southeast corner of Lot 100; thence North 89 degrees 41 minutes 32 seconds West, along the south line of said Lots 100 through 96, inclusive, 302.42 feet (recorded as 302.50 feet) to the southwest corner of said Lot 96 and the east line of said "Supervisor's Plat No. 26", thence South 00 degrees 30 minutes 13 seconds East (recorded as South 00 degrees 30 minutes 00 seconds East), along the said east line, 164.68 feet to the southeast corner of Lot 25 of said "Supervisor's Plat No. 26"; thence North 89 degrees 33 minutes 46 seconds West, along the south line of said Lot 25, 1256.95 feet to the east line of Livernois Road and the Point of Beginning. Containing 814,321 Square Feet or 18.694 Net Acres more or less and being subject to all encumbrances of record.

Certification:

I, hereby certify that I have surveyed and mapped the land above platted and described on September 28, 2015, and that the ratio of closure of the unadjusted field observations of such survey was 1 in 74,000 and that all of the requirements of P.A. 132 of 1970 have been complied with.

George J. Ballard III, P.S. — Date: 9-28-2015

Witness Ties

SW Cor. Sec. 22
(Remon. Mon. in Mon. Box)
S65° E, 50.36'-PK in SW Cor. of Pole Base
N88° E: 48.70'-PK in NW Cor. Light Pole Base
N65° W: 52.85'-PK in NE Cor. Pole Base
S75° W: 52.35'-Nail in SE Cor. Ped. Signal Pole Base

West 1/4 Cor. Sec. 22
(Remon. Mon. in Mon. Box)
N63° W, 55.97'-PK/Washer SW-Face PP
N49° E, 91.36'-PK/Washer NW-Face PP
S37° W, 107.94'-PK/Washer NW-Face PP
East, 75.00'-1/2" Re-Rod #41090

NW Cor. Sec. 22
(Remon. Mon. in Mon. Box)
N55° E, 76.33'-"X" T/SW Bolt of Pole
S42° E, 79.73'-Remon. N/T NE-Face PP
S41° W, 77.67'-Remon. N/T SE-Face PP
N35° W, 88.62'-Troy N/T SW-Face PP

STATE OF MICHIGAN — LICENSED PROFESSIONAL SURVEYOR
GEORGE J. BALLARD III
PROFESSIONAL SURVEYOR
No. 41090

Graphic Scale: 1"=200'
0 100' 200' 400'

CITY OF TROY
OAKLAND COUNTY, MICHIGAN
500 W. Big Beaver Rd.
Troy, MI 48084

DATE	REV.
CONTRACT NO.	
N/A	

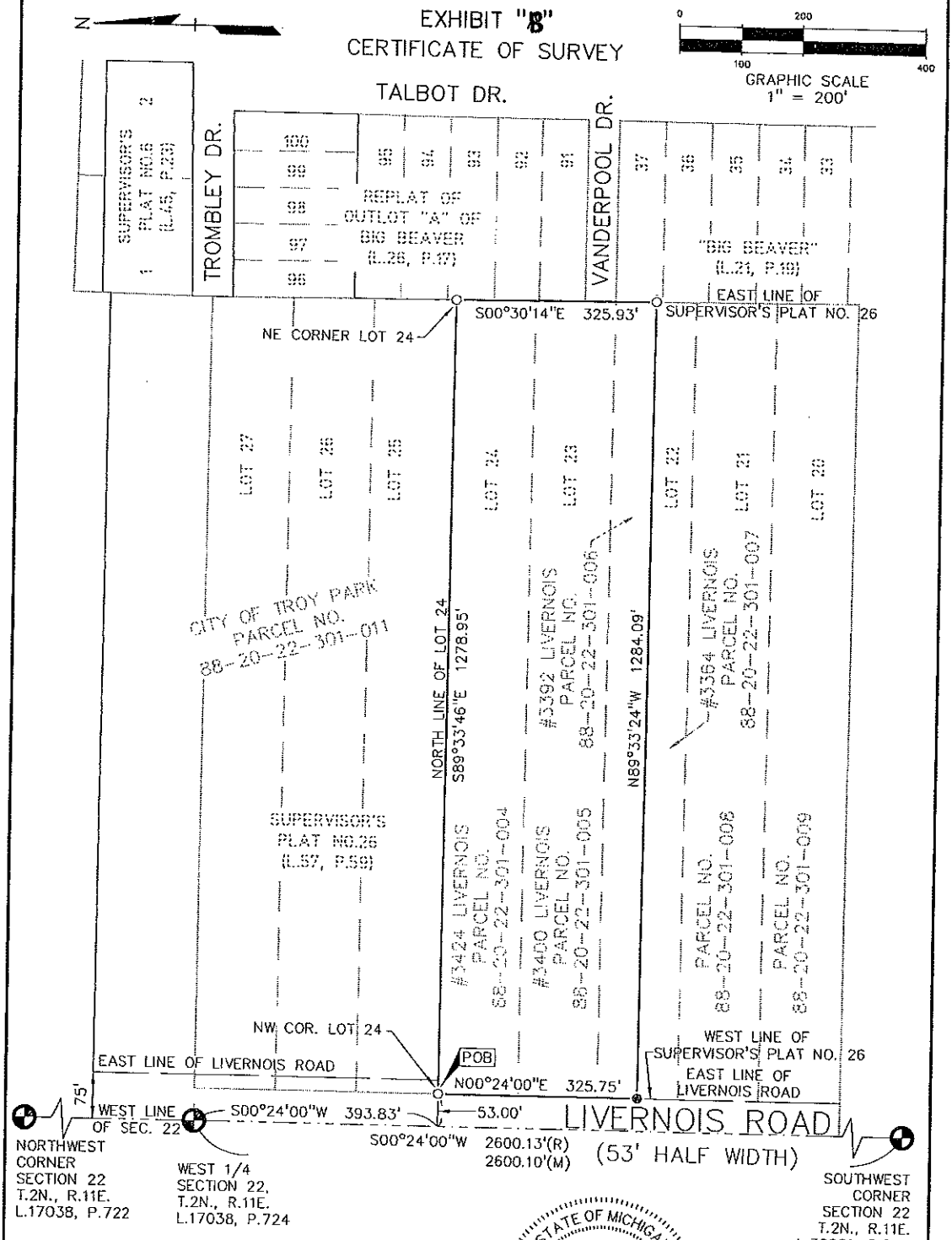
Document Prepared By
George J. Ballard III, P.S.
Land Surveyor

FILE: Rotated Traverse_Final.DGN

SCALE	DRAWN BY	NAME	DATE
HOR. 1"=200'	CHECKED BY	GJBIII	09-28-15
VER. 1"=X'	STEVEN J. VANDETTE, P.E. CITY ENGINEER	NAME	XX-XX-XX
		SHEET NO.	JOB NO.
		2OF2	15.917.4

EXHIBIT B
CERTIFICATE OF SURVEY AND LEGAL DESCRIPTION OF DEVELOPER PROPERTY

EXHIBIT "B"
CERTIFICATE OF SURVEY



BASIS OF BEARING:

WEST LINE OF SECTION 22 AS RECORDED IN "SUPERVISOR'S PLAT NO. 26", AS RECORDED IN LIBER 57, PAGE 59, OAKLAND COUNTY RECORDS.

LEGEND:

- ⊕ SECTION CORNER FOUND
- ● FOUND IRON
- O SET IRON

STATE OF MICHIGAN
DANIEL L. COLE
PROFESSIONAL SURVEYOR
NO. 59791
LICENSED PROFESSIONAL SURVEYOR

Daniel Cole

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

CLIENT: NORTH POINT DEVELOPMENT 5015 NW CANAL STREET, SUITE 200 RIVERSIDE, MO 54150	SCALE: 1"= 200'	JOB No: 2015141
	DATE: 10-5-15	DWG. No: 1 of 2

S:\PROJECTS\2015\2015141 NORTH POINT - TROY SENIOR CARE -DNH\SURVEY-DEPT\15141BND\dwg\15141 CERT OF SURVEY.dwg;DLC

EXHIBIT "B"
CERTIFICATE OF SURVEY

LEGAL DESCRIPTION:
(Per PEA, Inc.)

The North 1/2 of Lot 22, and all of Lot 23 and Lot 24 of "Supervisor's Plat No. 26", as recorded in Liber 57, Page 59, Oakland County Records, being lands in the Southwest 1/4 of Section 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, more particularly described as:

Commencing at the West 1/4 of said Section 22;
thence along the West line of said Section 22, S00°24'00"W, 393.83 feet;
thence S89°33'46"W (recorded as S89°36'00"E), 53.00 feet to the East line of Livernois Road (53 foot half width), also being the Northwest corner of said Lot 24 and the POINT OF BEGINNING;

thence continuing S89°33'46"E, 1278.95 feet along the North line of said Lot 24 to the Northeast corner of said Lot 24, also being the East line of said "Supervisor's Plat No. 26";
thence along said East line, S00°30'14"E (recorded as S00°30'E), 325.93 feet;
thence N89°33'24"W, 1284.09 feet to the aforementioned East line of Livernois Road, also being the West line of said "Supervisor's Plat No. 26";
thence along said East line N00°24'00"E, 325.75 feet to the POINT OF BEGINNING.
Containing ±9.585 acres of land. Subject to any easements and restrictions of record.

Section Corner Witnesses:

Southwest Corner of Section 22, Town 2 North, Range 11 East
(Monument w/ remon cap in monument box)

S65°E	50.36' –	PK nail in Southwest face of pole base
N88°E	48.70' –	PK nail in Northwest face of light pole base
N65°W	52.85' –	PK nail in Northeast face of pole base
S75°W	52.35' –	Nail in Southeast face of pedestal in signal pole base

West 1/4 Corner of Section 22, Town 2 North, Range 11 East
(Monument w/ remon cap in monument box)

N63°W	55.97' –	PK nail w/ washer in Southwest face of power pole
N49°E	91.36' –	PK nail w/ washer in Northwest face of power pole
S37°W	107.94' –	PK nail w/ washer in Northwest face of power pole
EAST	75.00' –	1/2" Re-Rod w/ cap #41090

Northwest Corner of Section 22, Town 2 North, Range 11 East
(Monument w/ remon cap in monument box)

N55°E	76.33' –	Chiseled "X" in top of Southwest bolt of pole
S42°E	79.73' –	Nail w/ remon tag in Northeast face of power pole
S41°W	77.67' –	Nail w/ remon tag in Southeast face of power pole
N35°W	88.62' –	Nail w/ "Troy" tag in Southwest face of power pole

I, Daniel L. Cole, a Licensed Land Surveyor in the State of Michigan, certify that I have surveyed the parcel(s) of land hereon described; that are no encroachments except as shown; that the field error of closure is greater than 1 part in 10,000; and that I have complied with the survey requirements of Public Act 132 of 1970, as amended. The seller of this property is required to record this instrument at the time of sale.

10/05/15
DATE:

Daniel L. Cole, P.S. #59791
An Agent for PEA, Inc.

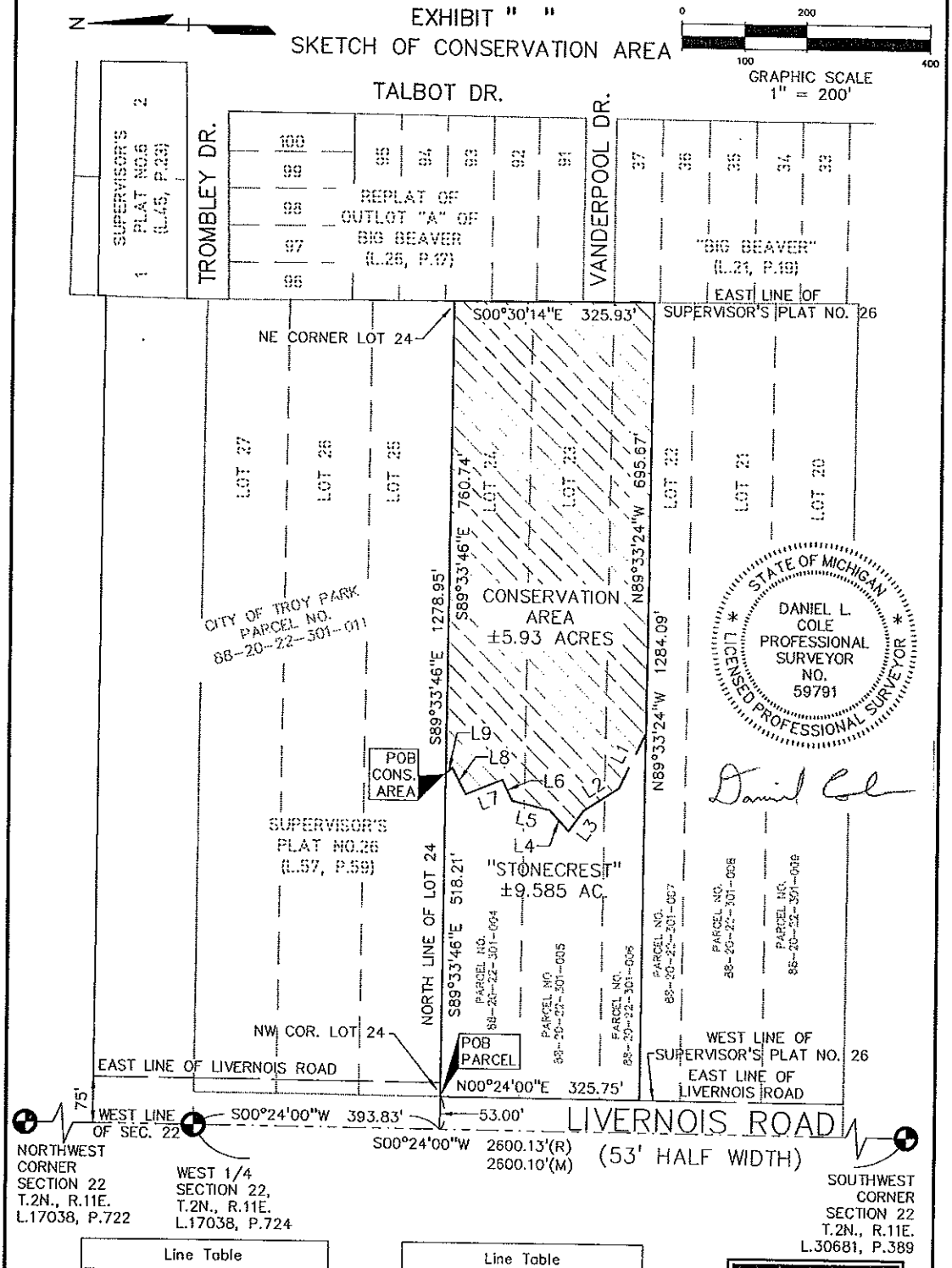
PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

CLIENT: NORTH POINT DEVELOPMENT 5015 NW CANAL STREET, SUITE 200 RIVERSIDE, MO 54150	SCALE: –	JOB No: 2015141
	DATE: 10-5-15	DWG. No: 2 of 2

S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE -DNH\SURVEY-DEPT\15141BND\dwg\15141 CERT OF SURVEY.dwg;DLC

EXHIBIT C
SKETCH OF CONSERVATION AREA AND LEGAL DESCRIPTION OF CONSERVATION AREA

EXHIBIT " "
SKETCH OF CONSERVATION AREA



Line Table		
Line #	Direction	Length
L1	N63°48'48"W	97.29'
L2	N33°07'13"W	67.61'
L3	N53°24'44"W	42.07'
L4	N47°05'26"E	46.72'
L5	N12°54'30"E	62.08'

Line Table		
Line #	Direction	Length
L6	N63°53'55"E	37.51'
L7	N21°40'51"W	65.12'
L8	N62°16'03"E	47.01'
L9	N41°18'39"W	13.96'

CLIENT:
NORTH POINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 54150

SCALE: 1"= 200' | JOB No: 2015141

DATE: 11-10-15 | DWG. No: 1 of 2

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

S:\PROJECTS\2015\2015141 NORTH POINT - TROY SENIOR CARE -DNH\SURVEY-DEPT\15141BND\dwg\15141ESMT Conservation Area.dwg;DLC

EXHIBIT " "
LEGAL DESCRIPTIONS

LEGAL DESCRIPTION – "Stonecrest" Parcel:
(Per PEA, Inc.)

The North 1/2 of Lot 22, and all of Lot 23 and Lot 24 of "Supervisor's Plat No. 26", as recorded in Liber 57, Page 59, Oakland County Records, being lands in the Southwest 1/4 of Section 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, more particularly described as:

Commencing at the West 1/4 of said Section 22;
thence along the West line of said Section 22, S00°24'00"W, 393.83 feet;
thence S89°33'46"W (recorded as S89°36'00"E), 53.00 feet to the East line of Livernois Road (53 foot half width), also being the Northwest corner of said Lot 24 and the POINT OF BEGINNING;

thence continuing S89°33'46"E, 1278.95 feet along the North line of said Lot 24 to the Northeast corner of said Lot 24, also being the East line of said "Supervisor's Plat No. 26";
thence along said East line, S00°30'14"E (recorded as S00°30'E), 325.93 feet;
thence N89°33'24"W, 1284.09 feet to the aforementioned East line of Livernois Road, also being the West line of said "Supervisor's Plat No. 26";
thence along said East line N00°24'00"E, 325.75 feet to the POINT OF BEGINNING.
Containing ±9.585 acres of land. Subject to any easements and restrictions of record.

Legal Description – Conservation Area:
(Per PEA, Inc.)

A parcel of land over the above described parcel, being part of the Southwest 1/4 of Section 22, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, being more particularly described as:

Commencing at the West 1/4 of said Section 22;
thence along the West line of said Section 22, S00°24'00"W, 393.83 feet;
thence S89°33'46"W, 53.00 feet to the East line of Livernois Road (53 foot half width), also being the Northwest corner of Lot 24 of "Supervisor's Plat No. 26", as recorded in Liber 57, Page 59, Oakland County Records;
thence continuing S89°33'46"E, 518.21 feet along the North line of said Lot 24 to the POINT OF BEGINNING;

thence continuing S89°33'46"E, 760.74 feet to the Northeast corner of said Lot 24, also being the East line of said "Supervisor's Plat No. 26";
thence along said East line, S00°30'14"E, 325.93 feet;
thence N89°33'24"W, 695.67 feet;
thence (L1) N63°48'48"W, 97.29 feet;
thence (L2) N33°07'13"W, 67.61 feet;
thence (L3) N53°24'44"W, 42.07 feet;
thence (L4) N47°05'26"E, 46.72 feet;
thence (L5) N12°54'30"E, 62.08 feet;
thence (L6) N63°53'55"E, 37.51 feet;
thence (L7) N21°40'51"W, 65.12 feet;
thence (L8) N62°16'03"E, 47.01 feet;
thence (L9) N41°18'39"W, 13.96 feet to the aforementioned North line of Lot 24 and the POINT OF BEGINNING.
Containing ±5.93 acres of land.

CLIENT: NORTH POINT DEVELOPMENT 5015 NW CANAL STREET, SUITE 200 RIVERSIDE, MO 54150	SCALE: –	JOB No: 2015141
	DATE: 11-10-15	DWG. No: 2 of 2

PEA, Inc.
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S:\PROJECTS\2015\2015141 NORTH POINT – TROY SENIOR CARE -DNH\SURVEY-DEPT\15141BND\dwg\15141ESMT Conservation Area.dwg;DLC

ENTRANCE DRIVE AND CROSS-ACCESS EASEMENT (APPROVED FORM)

ENTRANCE DRIVE AND CROSS-ACCESS DRIVEWAY EASEMENT AGREEMENT

THIS EASEMENT FOR ENTRANCE DRIVE AND CROSS-ACCESS DRIVEWAY (the "Entrance Drive and Driveway Easement") is made and entered into as of this _____ day of _____, 20____, by and between **THE CITY OF TROY**, a Michigan municipal corporation, whose address is 500 West Big Beaver Road, Troy, Michigan 48084 ("Grantor") and **NP TROY, LLC**, a Missouri limited liability company, whose address is 5015 NW Canal Street, Suite 200, Riverside, Missouri 64150 ("Grantee").

RECITALS:

A. Grantor is the owner of the real property legally described in **Exhibit A** attached hereto ("Grantor Property") and Grantee is the owner of the real property legally described in **Exhibit B** attached hereto ("Grantee Property"), which Grantee Property is adjacent to Grantor Property and both Properties front on Livernois Road.

B. Each of Grantor Property and Grantee Property is presently unimproved property but it is currently intended by the Parties that Grantee Property will be developed as a senior living and memory care residence complex with related parking areas, and other improvements. Additional improvements will be constructed and installed on Grantor Property for use of both Grantor Property and Grantee Property.

C. As part of a Planned Unit Development Agreement for the Stonecrest Senior Living and Memory Care Residences on the Grantee Property, the Grantor and Grantee intend to jointly cooperate, design, plan, participate in and develop certain improvements on the Grantor Property,

including this Entrance Drive and Driveway Easement and other easements to be located on the Grantor Property which is to be developed as a City Park in accordance with the City of Troy Planned Unit Development provisions of its Zoning Ordinance.

D. As part of the simultaneous development of the Grantor Property and Grantee Property, Grantor has agreed to grant Grantee a permanent non-revocable easement across the Grantor Property for the construction by Grantee of an entrance way drive from Livernois Road and, as part thereof, a cross-access driveway extending to parking lots on Grantor Property and further extending tithe Grantee Property for use by the Grantee Property, which above described improvements will serve both the Grantor and Grantee Properties, and will be constructed and installed at Grantee's cost for design, engineering and construction of the above-referenced improvements in the areas of Grantor's Property set forth in engineering plans and drawings attached to and made a part of the certain PUD Development Agreement for Stonecrest Senior Living and Memory Residences and Joint City Park Development dated November 23, 2015, to which this Entrance Drive and Cross-Access Driveway Easement is made a part thereof (the "PUD Development Agreement"). The legal description and survey of the Entrance Drive and Cross-Access Driveway Easement is set forth on **Exhibit C** attached hereto and incorporated herein by reference (the "Entrance Drive and Cross-Access Driveway Easement").

NOW, THEREFORE, for value received and in consideration of One ($1.00) Dollar, the receipt of which is hereby acknowledged, Grantor agrees and declares that the Entrance Drive and Cross-Access Driveway Easement to be located on the Grantor Property shall be held, transferred, sold, conveyed, mortgaged, leased, occupied, and used subject to the terms, provisions and easements set forth in this Easement as follows:

1. Easements.

1.1 Grant and Reservation. Grantor and Grantee each hereby grants to the other and reserve to themselves, perpetual easements and use of the entrance drive and cross-access driveway areas shown on the engineering plans and drawings attached to the PUD Development Agreement and the legal description and survey of the Entrance Drive and Cross-Access Driveway Easement attached to this Agreement as **Exhibit C,** for pedestrian, vehicular and bicycle ingress and egress to and from each of the Grantor Property and Grantee Property and for access to the separate parking lot and parking lot easement for the mutual benefit of Grantor and Grantee to be constructed by Grantee on the Grantor Property. The easements herein granted and reserved are for use by each of Grantor and Grantee, and their respective successors and assigns, as the record fee owners from time to time of the Grantor Property and Grantee Property, by anyone from time to time entitled to have access to and/or utilize all or any part of the Grantor Property and Grantee Property by way of lease, license, concession, invitee, licensee, or other agreement or arrangement (each, an "Authorized User") , and by the employees, agents, contractors, customers and invitees of Grantor or Grantee. The easements granted and reserved in this Section 1.1 are not limited to present users of Grantor Property and Grantee Property or present improvements thereon.

1.2 Temporary Easements.

1.2.1 Grantor hereby grants to Grantee, its employees, agents, contractors and suppliers, a temporary construction easement to go upon Grantor Property from time to time, to the extent necessary to construct and improve the entrance drive and cross-access driveway improvements as described and referenced in this Entrance Drive and Cross-Access Driveway Easement.

1.2.2 Grantor hereby grants to Grantee, its employees, agents, contractors and suppliers, an easement to go upon Grantor's Property to the extent necessary to effect

maintenance, repair or replacement as permitted or required of Grantee in this Entrance Drive and Driveway Easement or a separate Reciprocal Easement Maintenance Agreement entered into by Grantor and Grantee on or about the date hereof ("REMA").

1.3 Easement Non-Exclusive and Appurtenant. The easements granted and reserved in Sections 1.1 and 1.2 above shall be non-exclusive and shall be appurtenant to each of Grantor Property and Grantee Property.

1.4 No Obstructions. No walls, fences or barriers of any kind shall be constructed or permitted on any portion of the entrance drive and cross-access driveway improvements that would prevent or impair the use or exercise of the easement rights granted and reserved herein by Grantor, Grantee, their respective successors and assigns, and any Authorized User.

2. Enforcement. This Easement Agreement may be enforced only by Grantor and Grantee, their successors and assigns, and not by any other person, Authorized User or unauthorized user. Grantor and Grantee each shall have the right to prosecute any proceedings at law and/or in equity against any other Party or anyone else violating or attempting to violate any of the provisions of this Easement Agreement, to restrain or enjoin such violation or attempted violation and/or to recover damages therefor. All remedies available to Grantor or Grantee under this Easement Agreement or otherwise shall be cumulative and not mutually exclusive.

3. **Easement Agreement Given in Perpetuity.** This Easement Agreement is expressly given in perpetuity and runs with the land. If any action or suit is brought for the enforcement of any provision of this Easement Agreement, or as a result of any alleged violation of any provision of this Easement Agreement, the prevailing party, as determined by the Court having jurisdiction of the matter, shall be entitled to recover its costs of suit, including reasonable attorneys' fees, from the losing party, and any judgment or decree entered in such proceeding shall include an award therefor.

4. **Duration.** The Entrance Drive and Cross-Access Driveway Easement granted herein is for the benefit of, shall inure to, and shall be appurtenant to both the Grantee Property and the Grantor Property and shall bind and inure to the benefit of all of the Parties hereto and their respective heirs, successors and assigns, including, without limitation, all subsequent owners of the Entrance Drive and Driveway Easement and the Grantor Property and the Grantee Property, and all persons or entities claiming under or through them, and shall run with the land and shall continue in perpetuity. Any person or entity subsequently acquiring an interest in the Grantee Property or the Grantor Property, or any part thereof, shall be bound by this Entrance Drive and Driveway Easement, but only as to the Grantor Property or the Grantee Property, or portion of either such Property acquired by such person or entity and only to the extent such Property utilizes the Entrance Drive and Driveway Easement from or to its Property. Although persons and entities may be released under this Section 4 if they are no longer Owners of portions of the Grantor Property or Grantee Property, the easements, covenants and restrictions set forth herein shall continue to be a benefit to and a servitude upon said Grantor Property and Grantee Property as set forth in this Entrance Drive and Driveway Easement running with the land in perpetuity.

5. **General Provisions.** Any and all notices, demands, requests and other communications required or permitted hereunder ("**Notices**") shall be in writing, addressed to Grantor and Grantee at their respective addresses set forth above on the cover page of this Easement Agreement, to each other Owner of the Grantor Property or Grantee Property, at its or their address set forth in the recorded vesting deed by which the subsequent Owner acquires title to the Grantor Property or Grantee Property, or at such other address as any subsequent Owner may designate by notice delivered in accordance with this Section. A copy of each Notice shall also be sent to the mortgage holder, if any, of each of Grantor Property or Grantee Property, to the extent such mortgage holder has provided written notice of its address to the Grantor or Grantee. Each Notice shall be given by registered or certified mail, return receipt requested, with all postage and charges prepaid, or by U.S. Post Office Express Mail, Federal Express or similar nationally recognized overnight courier which delivers only upon signed receipt of the addressee. Grantor or Grantee, their successors and assigns, may, at any time and from time to time, in connection with the sale, transfer, financing or refinancing of the Grantor Property or Grantee Property, deliver written request to the Grantor or Grantee to execute estoppel certificates certifying, to the best knowledge of the Grantor or Grantee, the status of this Easement Agreement and performance hereunder, and each Grantor and Grantee shall provide its estoppel certificate within 15 days after receipt of such request. This Easement Agreement may be amended or terminated only by a written agreement signed and acknowledged by Grantor and Grantee, and the respective first mortgagees of all of the Grantor Property and Grantee Property and recorded with the Oakland County Register of Deeds. All provisions of this Easement Agreement shall be covenants running with the land pursuant to applicable Laws. Each of Grantor and Grantee shall automatically be deemed, by acceptance of the title to the Grantor Property or Grantee Property, or any part thereof, to have accepted this Easement Agreement, agreed to comply with all of its provisions, and assumed all obligations applicable to such Easement Agreement or part thereof arising during and with respect to such Grantor and Grantee

period of ownership, and to have agreed to execute any and all instruments and do any and all things reasonably required to carry out the intent of this Easement Agreement. All exhibits referred to herein and attached to this Easement Agreement are incorporated herein by this reference. The section and paragraph headings and captions in this Easement Agreement are for reference and convenience only and shall not enter into the interpretation hereof. Whenever the context so requires, the singular shall be deemed to include the plural and the plural the singular, and the masculine, feminine or neuter gender shall be deemed to include any other gender. The terms "hereof," "herein," "hereunder" and similar terms shall be deemed to refer to this Easement Agreement. The terms "include," "includes" and "including" shall be deemed to be followed by the words "without limitation." This Agreement shall be interpreted in accordance with the Laws of the State of Michigan.

[Signatures on Following Page]

IN WITNESS WHEREOF, Grantor and Grantee have executed this Entrance Drive and Driveway Easement as of the date first above written.

"GRANTEE":

NP TROY, LLC
a Missouri limited liability company,

By:_____

Its: _____

"GRANTOR":

THE CITY OF TROY,
a Michigan municipal corporation

By:_____
Dane Slater
Its: Mayor

And By:_____
Aileen Dickson
Its: City Clerk

STATE OF _____)
) SS
COUNTY OF _____)

On this _____ day of _____, 20___, before me appeared _____, personally known, and who, being by me duly sworn, did say that he is the Manager of NP Troy, LLC, a _____ limited liability company, and that the instrument was signed in behalf of said entity by authority duly conferred upon him and acknowledged said instrument to be the free act and deed of said entity.

_____
Print Name:_____
Notary Public, _____ County, _____
My Commission Expires:_____
Acting in the County of _____

STATE OF MICHIGAN)
) SS.
COUNTY OF OAKLAND)

On this _____ day of _____, 20___, before me appeared Dane Slater, to me personally known, and who, being by me duly sworn, did say that he is the Mayor of the City of Troy, Michigan, a Michigan municipal corporation and Aileen Dickson, to me personally known, and who, being by me duly sworn, did say that she is the City Clerk of the City of Troy, a Michigan municipal corporation, and that the instrument was signed in behalf of said municipal corporation by authority duly conferred upon them and acknowledged said instrument to be the free act and deed of said municipal corporation.

_____
Print Name:_____
Notary Public, Oakland County, Michigan
My Commission Expires:_____
Acting in the County of Oakland

COOPERATIVELY DRAFTED BY:
Thomas G. Sawyer, Esq.
Hutson, Sawyer, Rupp & Schroeder
292 Town Center Dr., Troy, MI 48084
AND
Allan T. Motzny, Assistant City Attorney
City of Troy
500 W. Big Beaver Rd., Troy, MI 48084
Troy, MI 48084

WHEN RECORDED RETURN TO:
Aileen Dickson, City Clerk
City of Troy
500 W. Big Beaver Rd.
Troy, MI 48084

EXHIBIT "A"

GRANTOR PROPERTY

EXHIBIT "B"

GRANTEE PROPERTY

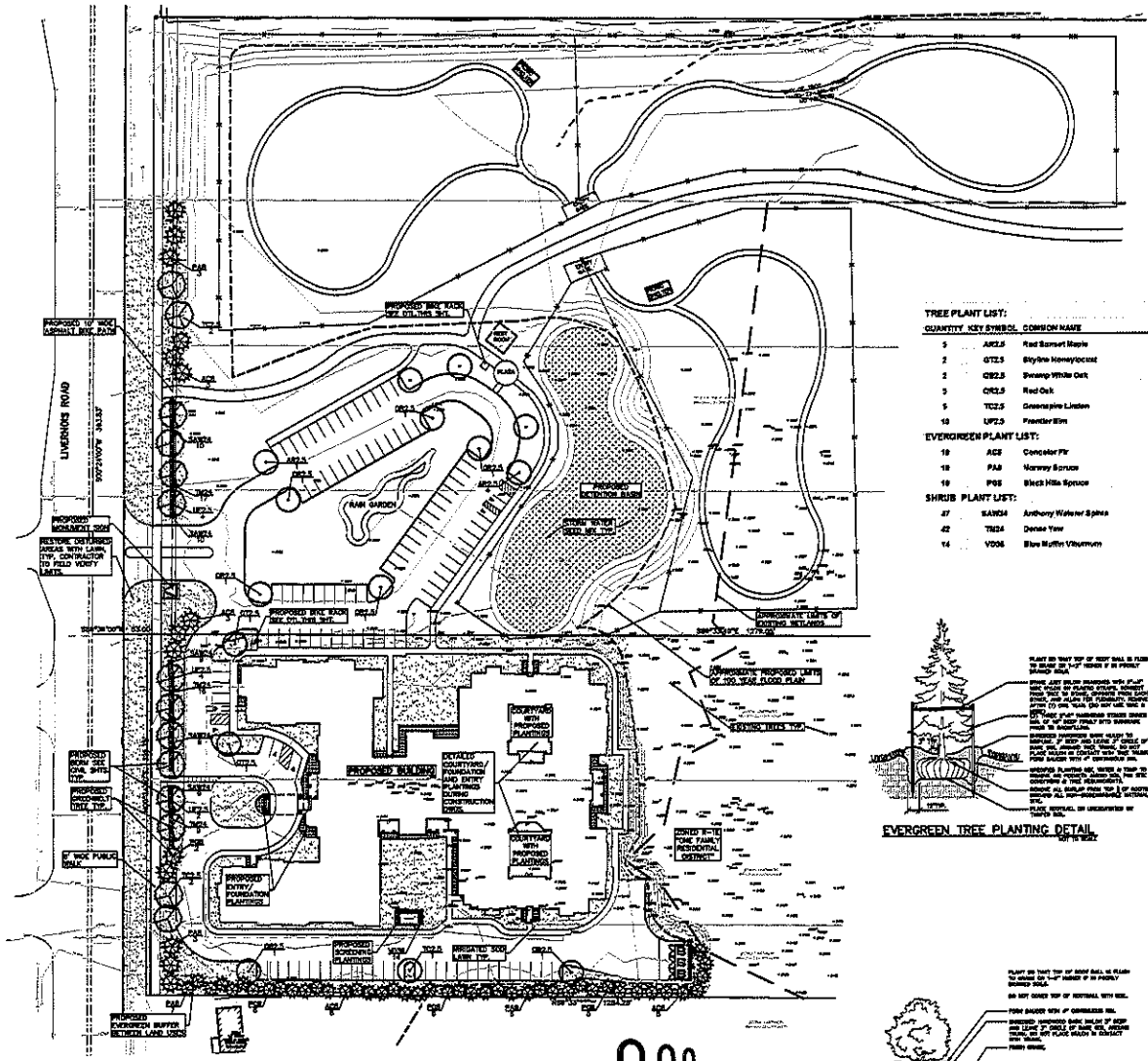
EXHIBIT "C"

LEGAL DESCRIPTION AND SURVEY OF THE PORTION OF GRANTOR PROPERTY ON WHICH THE ENTRANCE DRIVE AND CROSS-ACCESS DRIVEWAY EASEMENT IS LOCATED

EXHIBIT "D"

THE PUD DEVELOPMENT AGREEMENT AND ITS ATTACHMENTS RELATING TO THIS ENTRANCE DRIVE AND CROSS-ACCESS DRIVEWAY EASEMENT ARE NOT ATTACHED TOTHIS EASEMENT, BUT ARE INCORPORATED HEREIN BY THIS REFERENCE AS THOUGH FULLY SET FORTH HEREIN

EXHIBIT C-1.0
PRELIMINARY LANDSCAPE PLAN



GRAPHIC SCALE

-50 0 25 50 100 200

(IN FEET)

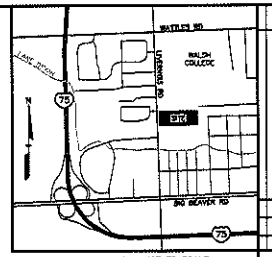
1 inch = 50 ft.

KEY:

- = DECIDUOUS FRONTAGE TREES
- = PARKING LOT TREES
- = GREENBELT BUFFER TREE
- X XXX = EXISTING TREES
- = SHRUB/ GROUNDCOVER MIX
- = ENTRYWAY/FOUNDATION PLANTINGS (w/BRUSH PERENNIALS - NOT SEE PLAN REQUIRED)
- = IRRIGATED SOD LAWN
- = STORMWATER/REED MIX BY: OAKLAND NATIVE PLANT NURSERY 517-694-2412

NOTE: SOD LAWN AND PLANT BEDS TO BE IRRIGATED WITH IN-GROUND SPRINKLER SYSTEM.

N



LOCATION MAP -- NOT TO SCALE

TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
5	ARS.5	Red Sunset Maple	*Acer rubrum 'Red Sunset'*	2.5" Cal.	B&B
2	GTI2.5	Skyline Honeylocust	*Gleditsia triacanthos 'Skyline' Inermis*	2.5" Cal.	B&B
2	QBI2.5	Swamp White Oak	*Quercus bicolor*	2.5" Cal.	B&B
3	QRU2.5	Red Oak	*Quercus rubra*	2.5" Cal.	B&B
5	TCI2.5	Greenspire Linden	*Tilia cordata 'Greenspire'*	2.5" Cal.	B&B
10	UFI2.5	Frontier Elm	*Ulmus 'Frontier'*	2.5" Cal.	B&B

EVERGREEN PLANT LIST:

10	ACE	Concolor Fir	*Abies concolor*	6' Ht.	B&B
10	PAB	Norway Spruce	*Picea abies*	6' Ht.	B&B
10	PGE	Black Hills Spruce	*Picea glauca 'Densata'*	6' Ht.	B&B

SHRUB PLANT LIST:

47	SAW24	Anthony Waterer Spirea	*Spirea x bumalda 'Anthony Waterer'*	24" Ht.	Cont.
42	TIN24	Dense Yew	*Taxus x media 'Densiformis'*	24" Ht.	Cont.
14	VDO6	Blue Muffin Viburnum	*Viburnum dentatum 'Christom'*	36" Ht.	Cont.

LANDSCAPE CALCULATIONS:
PER CITY OF TROY ZONING ORDINANCE

GENERAL SITE LANDSCAPE
REQUIRED: 20% OF SITE AREA SHALL BE COMPRISED OF LANDSCAPE MATERIAL
9.59 AC.(417,740) SQ FT x 20% = 83,548 SQ FT
PROVIDED: 323,245 SQ FT OF SOFT-SCAPE, 77% (LAWN, PLANT BEDS AND EAST UNDISTURBED WOODLANDS)

PARKING LOT LANDSCAPE
REQUIRED: 1 TREE / 8 PARKING SPACES
3' HT BERM OR SHRUB HEDGE FOR PARKING ADJ. TO A PUBLIC ROAD
CITY PARK--80 SPACES: 80/8 = 10 TREES AND HEDGE REQ'D
SENIOR HOUSING--37 SPACES: 35/8 = 5 TREES AND HEDGE REQ'D
PROVIDED: 10 TREES & SHRUB HEDGE ALONG LIVERNOIS RD. AT CITY PARK AREA
5 TREES & SHRUB HEDGE ALONG LIVERNOIS RD. AT SENIOR HOUSING

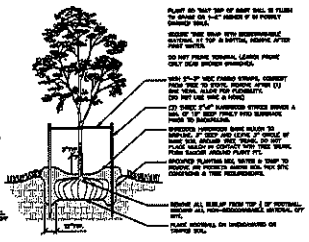
GREENBELT FRONTAGE
REQUIRED: 1 TREE / 30 LF OF FRONTAGE
LIVERNOIS RD. = 718.6 LF FRONTAGE / 30 = 24 TREES
PROVIDED: LIVERNOIS RD.= 28 TREES

GREENBELT BUFFER BETWEEN LAND USES; SOUTH PROPERTY LINE (LIMITS OF PROJECT)
REQUIRED: 1 EVERGREEN TREE / 10 LF; 430 LF / 10 = 43 EVERGREEN TREES
PROVIDED: 43 EVERGREEN TREES

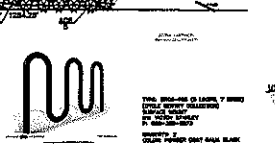
GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN. QUANTITIES, CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION OR MAJOR PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 800--482--7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1, U.N.O.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER. TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR TREES WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH, SEE SPECIFICATIONS. SHREDDED PALETTE AND SHED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

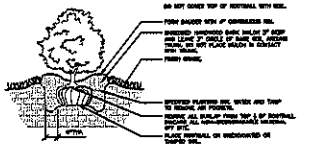
EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



BIKE RACK DETAIL



SHRUB PLANTING DETAIL
NOT TO SCALE

TREE PROTECTION DETAIL
NOT TO SCALE

NOT FOR CONSTRUCTION

REVISIONS

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Fax: (248) 689-1044
website: www.peainc.com

NORTHPOINT DEVELOPMENT
4615 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

PRELIMINARY LANDSCAPE PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ALE	DRN	AJS	CHK	SAR	PER	PJM

K:\NDC\2016\2016-141\Dwg\Plan - Landscape\2016-141 Landscape.dwg

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2016

PEA JOB NO. 2016-141

SCALE: 1" = 50'

DRAWING NUMBER:
L-1.0

EASEMENT FOR PARKING LOT AND FOR JOINT PARKING FACILITIES (APPROVED FORM)

EASEMENT FOR PARKING LOT
AND FOR JOINT PARKING FACILITIES

THIS EASEMENT FOR PARKING LOT AND FOR JOINT PARKING FACILITIES (the "Parking Facilities Easement") is made and entered into as of this _____ day of _____, 20____, by and between **THE CITY OF TROY**, a Michigan municipal corporation, whose address is 500 West Big Beaver Road, Troy, Michigan 48084 ("Grantor") and **NP TROY, LLC**, a Missouri limited liability company, whose address is 5015 NW Canal Street, Suite 200, Riverside, Missouri 64150 ("Grantee").

RECITALS:

A. Grantor is the owner of the real property legally described in **Exhibit "A"** attached hereto ("Grantor Property"), and Grantee is the owner of the real property legally described in **Exhibit "B"** attached hereto ("Grantee Property"), which property is adjacent to Grantor Property.

B. Each of the Grantor Property and Grantee Property is presently unimproved property, but it is currently intended by the parties that a portion of the Grantee Property will be developed as senior living and memory care residences complex with related parking areas, driveways, utilities and other improvements to be constructed thereon.

C. As part of a Development Agreement for the Stonecrest Senior Living and Memory Care Residences on the Grantee Property, the Grantor and Grantee intend to jointly cooperate, plan, participate in and share certain improvements, including this Parking Facilities Easement and other easements to be located on the Grantor Property as part of a City Park to be developed on the Grantor Property in accordance with the City of Troy Planned Unit Development provisions of its Zoning Ordinance.

D. As part of the simultaneous development of the Grantor Property and Grantee Property, Grantor has agreed to grant Grantee certain easements across Grantor Property, including this Parking Facilities Easement, for the construction of a parking lot, parking lanes, curbing, a water detention and water feature, landscaping and electric illumination within this Parking Facilities Easement. These parking lot improvements will be installed on the Grantor Property at Grantee's cost for construction of the referenced improvements in the areas depicted and in the manner specified in detailed engineering plans and drawings attached to a certain Development Agreement for Stonecrest Senior Living and Memory Care Residences and Jointly Developed City Park Planned Unit Development dated November 23, 2015(the "PUD Development Agreement") to which this Parking Facilities Easement is attached and made a part thereof.

NOW, THEREFORE, for value received, and in consideration of One ($1.00) Dollar, the receipt of which is hereby acknowledged, Grantor agrees and declares that the Parking Facilities Easement to be located on the Grantor Property shall be held, transferred, sold, conveyed, mortgaged, leased, occupied, and used subject to the terms, provisions and easements set forth in this Parking Facilities Easement as follows:

1. **Easements.** Grantor does hereby remise, release and forever grant unto Grantee, a perpetual non-exclusive easement for the construction, installation and improvement, of parking lot facilities with landscaped islands, parking lanes, parking spaces, a water detention and water run-off feature, landscaping, overhead lighting and other necessary improvements (the "Parking Lot Facilities") in, under, upon, over and through the Parking Facilities Easement, all in accordance with the Parking Facilities Easement legal description and survey attached hereto as **Exhibit "C"** and detailed improvements thereto as set forth in the PUD Development Agreement and attachments thereto incorporated herein by this reference. The Parking Facilities

Easement herein granted and reserved is for use by and benefit of Grantee and Grantor, and their respective successors and assigns, as the record fee owners from time to time, of all or any portion of the Grantor Property and/or the Grantee Property. This Parking Facilities Easement is designed to serve the needs and requirements of both the Grantor and Grantee Properties. The Parking Lot Facilities and all incidental improvements thereto are to be constructed by Grantee as part of a certain engineering plan for parking lot, landscaping, parking sites, parking access lanes, overhead lighting, water detention/retention, a water feature, parking lot access and other improvements thereto, prepared by Professional Engineering Associates, Inc., working in cooperation with the staff personnel of Grantor, as set forth in the PUD Development Agreement, and will at all times serve the needs and requirements of both the Grantor Property and Grantee Property.

2. **Development and Operation.** Grantor and Grantee have jointly participated in the design and engineering of the Parking Lot Facilities Easement and the engineering plan for the Parking Lot Facilities Easement attached to and made a part of the above referenced PUD Development Agreement. Grantor and Grantee will not interfere with or jeopardize the construction, operation, reconstruction, preservation, and use of the Parking Facilities Easement for the use and benefit of both the Grantor Property and Grantee Property. Grantor and Grantee shallot, except as required for construction of the Parking Lot Facilities, erect, install or place any structures, materials, devices, things or matters within the Parking Facilities Easement which obstruct or impede the use of the Parking Lot Facilities by the Grantor or Grantee, their heirs, successors, invitees, and licensees, or impede or interrupt the normal flow and design for flow of surface water to, over, or within or from the Parking Facilities Easement, without obtaining the prior written consent of the other Party, which approval shall not be unreasonably withheld or delayed. Additionally, the Parties agree that after completion and installation of the Parking Lot Facilities, upon prior written notice to Grantee, Grantor may, at its reasonable election, and its

sole cost, further improve, alter, or expand the Parking Lot Facilities (the "Grantor Improvements"), at Grantor's sole cost, in order to facilitate further development of the Grantor Property into a City Park, provided, however, that at all times, such Parking Facilities Easement shall be maintained to adequately handle the overflow Grantee parking requirements in the normal course of business from the Grantee Property and the Parking Lot Facilities, while possibly expanded and/or modified by Grantor at Grantor's sole cost, will also continue to exist at least in its present location in accordance with **Exhibit "C"** hereto.

3. **Maintenance of the Parking Lot Easement During Construction of Parking Lot Facilities.**

Maintenance of the Parking Lot Facilities During Construction of the Parking Lot Facilities by Grantee in Accordance with the Approved Engineering Plans. Commencing with (i) the start of construction by Grantee of any improvements permitted or required by Grantee on the Parking Facilities Easement on Grantor Property, or (ii) the date Grantee performs any action to improve, alter or install all or any portion of the Parking Lot Facilities pursuant to the approved engineering plans attached to the PUD Development Agreement, Grantee, at Grantee's sole expense, shall be responsible for the construction, maintenance, repair and restoration, if necessary, of the Parking Lot Facilities within or in proximity of the Parking Facilities Easement, including, without limitation, obtaining all necessary improvement or repair permits from the City of Troy prior to performing any construction work on the Parking Lot Facilities. Grantee and Grantor, their respective agents, employees, contractors, suppliers and equipment shall have access to Grantor Property as necessary to complete the required work under the approved engineering plans referenced herein. Upon completion of construction of the Parking Facilities under the approved engineering plans referenced herein, the maintenance, repairs and upkeep of the Parking Facilities Easement shall be carried out pursuant to the Reciprocal Easement

Maintenance Agreement between Grantor and Grantee of even date which is incorporated herein by this reference.

4. **Duration.** The Parking Facilities Easement granted herein is for the benefit of, shall inure to, and shall be appurtenant to, the Grantee Property. The Parking Facilities Easement shall bind and inure to the benefit of all of the Parties hereto and their respective heirs, successors and assigns, including, without limitation, all subsequent owners of the Parking Facilities Easement and the Grantor Property and the Grantee Property, and all persons or entities claiming under or through them, and shall continue in perpetuity, provided that both Grantor and Grantee Properties are used for the purposes contemplated in the PUD Development Agreement. Any person or entity acquiring an interest in the Grantee Property or the Grantor Property shall be bound by this Parking Facilities Easement, but only as to the Grantor Property or the Grantee Property, or portion of either such Property acquired by such person or entity and only to the extent such Property utilizes the Parking Facilities Easement for parking from or to its Property. Although persons and entities may be released under this Paragraph if they are no longer Owners of portions of the Grantor Property or Grantee Property, the easements, covenants and restrictions set forth herein shall continue to be a benefit to and a servitude upon said Grantor Property and Grantee Property as set forth in this Parking Facilities Easement running with the land in perpetuity, except as provided above.

IN WITNESS WHEREOF, Grantor and Grantee have executed this Parking Facilities Easement as of the date first above written.

[Signatures on Following Page]

"GRANTEE":

NP TROY, LLC
a Missouri limited liability company,

By:_____

Its: _____

"GRANTOR":

THE CITY OF TROY,
a Michigan municipal corporation

By:_____
Dane Slater
Its: Mayor

And By:_____
Aileen Dickson
Its: City Clerk

STATE OF _____)
) SS
COUNTY OF _____)

On this _____ day of _____, 20___, before me appeared _____, personally known, and who, being by me duly sworn, did say that he is the Manager of NP Troy, LLC, a _____ limited liability company, and that the instrument was signed in behalf of said entity by authority duly conferred upon him and acknowledged said instrument to be the free act and deed of said entity.

_____
Print Name:_____
Notary Public, _____ County, _____
My Commission Expires:_____
Acting in the County of _____

STATE OF MICHIGAN)
) SS.
COUNTY OF OAKLAND)

On this _____ day of _____, 20___, before me appeared Dane Slater, to me personally known, and who, being by me duly sworn, did say that he is the Mayor of the City of Troy, Michigan, a Michigan municipal corporation and Aileen Dickson, to me personally known, and who, being by me duly sworn, did say that she is the City Clerk of the City of Troy, a Michigan municipal corporation, and that the instrument was signed in behalf of said municipal corporation by authority duly conferred upon them and acknowledged said instrument to be the free act and deed of said municipal corporation.

_____
Print Name:_____
Notary Public, Oakland County, Michigan
My Commission Expires:_____
Acting in the County of Oakland

COOPERATIVELY DRAFTED BY:
Thomas G. Sawyer, Esq.
Hutson, Sawyer, Rupp & Schroeder
292 Town Center Dr., Troy, MI 48084
AND
Allan T. Motzny, Assistant City Attorney
City of Troy
500 W. Big Beaver Rd., Troy, MI 48084
Troy, MI 48084

WHEN RECORDED RETURN TO:
Aileen Dickson, City Clerk
City of Troy
500 W. Big Beaver Rd.
Troy, MI 48084

EXHIBIT "A"

GRANTOR PROPERTY

EXHIBIT "B"

GRANTEE PROPERTY

EXHIBIT "C"

LEGAL DESCRIPTION AND SURVEY OF THE PORTION OF GRANTOR PROPERTY ON WHICH THE PARKING FACILITIES EASEMENT IS LOCATED

EXHIBIT "D"

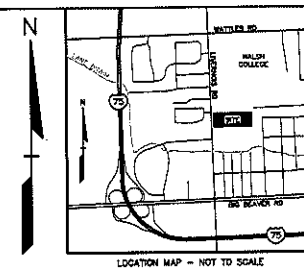
THE PUD DEVELOPMENT AGREEMENT AND ITS ATTACHMENTS RELATING TO THIS PARKING FACILITIES EASEMENT ARE NOT ATTACHED TO THIS EASEMENT, BUT ARE INCORPORATED HEREIN BY THIS REFERENCE AS THOUGH FULLY SET FORTH HEREIN

EXHIBIT D
PRELIMINARY DEVELOPMENT PLAN

PRELIMINARY AND CONCEPTUAL SITE PLANS FOR

STONECREST

PART OF THE SW 1/4 OF SECTION 22, T.2N., R.11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN



LOCATION MAP – NOT TO SCALE

DEVELOPER:

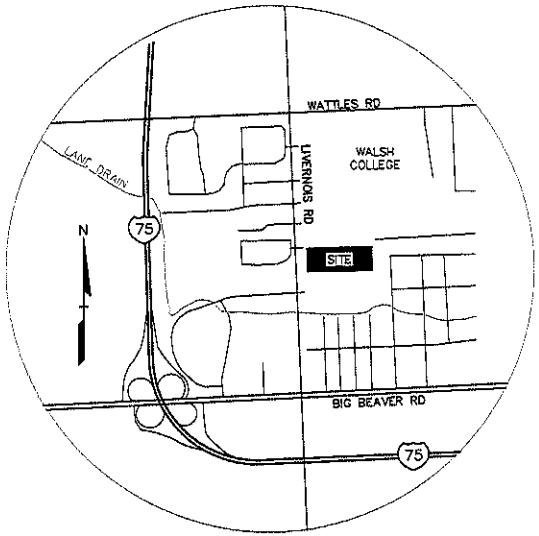
NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64105
CONTACT: MARK POMERENKE
PHONE: (816) 888-7391

ARCHITECT:

PI ARCHITECTS
3500 JEFFERSON ST. SUITE 303
AUSTIN, TX 78731
CONTACT: ERIC LANCON
PHONE: (512) 231-1910

CIVIL ENGINEER/LANDSCAPE ARCHITECT:

PROFESSIONAL ENGINEERING ASSOCIATES, INC.
2430 ROCHESTER CT., SUITE 100
TROY, MI 48083
PHONE: (248) 689-9090
FAX: (248) 689-1044
CONTACT: EMIL S. BUNEK III, PE
JANET EVANS, R.L.A.



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS:

C-0.0	COVER SHEET
C-1.0	TOPOGRAPHIC SURVEY
C-1.1	TREE LIST
C-1.2	TREE PRESERVATION PLAN
C-2.0	PRELIMINARY SITE PLAN
C-3.0	PRELIMINARY GRADING PLAN
L-1.0	PRELIMINARY LANDSCAPE PLAN
	SITE PHOTOMETRIC PLAN

ARCHITECTURAL PLANS

SK1	FIRST FLOOR PLAN
SK2	FIRST FLOOR PLAN – WEST HALF
SK3	FIRST FLOOR PLAN – MIDDLE SECTION
SK4	FIRST FLOOR PLAN – EAST HALF
SK5	FIRST FLOOR PLAN – SECOND FLOOR PLAN
SK6	ROOM DETAILS
SK7	ELEVATION PLAN
SK9	SECTION @ LEFT WING

NOT FOR CONSTRUCTION

REVISIONS

STATE OF MICHIGAN
EMIL S. BUNEK III
ENGINEER
5201058445
LICENSED PROFESSIONAL ENGINEER

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Fax: (248) 689-1044
website: www.peaeng.com

NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

COVER SHEET
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T.2N., R.11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES	ESB	DN	ESB/DRW	SJR	PEA	PM	DIB

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: AS NOTED

DRAWING NUMBER:
C-0.0

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT
3165	BX	7	Box elder	Acer negundo	GOOD	X3
3166	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3167	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3168	BX	8	Box elder	Acer negundo	GOOD	
3169	E	12	American Elm	Ulmus americana	FAIR	
3170	SM	31	Silver Maple	Acer saccharinum	POOR	
3171	EE	8	Siberian Elm	Ulmus pumila	GOOD	
3172	WH	12	White Willow	Salix alba	POOR	
3173	NS	10	Norway Spruce	Picea Abies	FAIR	
3174	NS	7	Norway Spruce	Picea Abies	FAIR	
3175	C	18	Catalpa	Catalpa speciosa	GOOD	
3176	C	31	Catalpa	Catalpa speciosa	GOOD	
3177	BX	6	Box elder	Acer negundo	GOOD	
3178	BS	18	Blue Spruce	Picea pungens	GOOD	
3179	SM	22	Silver Maple	Acer saccharinum	FAIR	
3180	SM	18	Silver Maple	Acer saccharinum	GOOD	
3181	BW	10	Black Walnut	Juglans nigra	GOOD	
3182	BX	7	Box elder	Acer negundo	POOR	X2
3183	BW	7	Black Walnut	Juglans nigra	FAIR	
3184	BP	15	Bradford Pear	Pyrus calleryana	POOR	
3185	BP	14	Bradford Pear	Pyrus calleryana	POOR	
3186	BP	7	Bradford Pear	Pyrus calleryana	POOR	
3187	BX	14	Box elder	Acer negundo	POOR	X2
3188	EE	18	Siberian Elm	Ulmus pumila	FAIR	X2
3189	AP	13	Domestic Apple	Malus sylvestris	POOR	
3190	CT	8	Cottonwood	Populus deltoides	GOOD	
3191	BW	10	Black Walnut	Juglans nigra	GOOD	
3192	EE	13	Siberian Elm	Ulmus pumila	POOR	
3193	BW	25	Black Walnut	Juglans nigra	GOOD	
3194	EE	6	Siberian Elm	Ulmus pumila	POOR	X4
3195	BW	31	Black Walnut	Juglans nigra	FAIR	
3196	C	18	Catalpa	Catalpa speciosa	POOR	
3197	C	11	Catalpa	Catalpa speciosa	FAIR	
3198	WP	16	(Eastern) White Pine	Pinus strobus	FAIR	
3199	BS	8	Blue Spruce	Picea pungens	GOOD	X2
3200	MR	10	Red Mulberry	Morus rubra	FAIR	
3201	BX	11	Box elder	Acer negundo	FAIR	X2
3202	BX	8	Box elder	Acer negundo	POOR	
3203	BX	8	Box elder	Acer negundo	POOR	
3204	BX	10	Box elder	Acer negundo	FAIR	X2
3205	BX	9	Box elder	Acer negundo	GOOD	
3206	BX	13	Box elder	Acer negundo	FAIR	
3207	BX	6	Box elder	Acer negundo	FAIR	X2
3208	EE	13	Siberian Elm	Ulmus pumila	FAIR	
3209	BX	9	Box elder	Acer negundo	GOOD	
3210	BX	8	Box elder	Acer negundo	POOR	X3
3211	BX	10	Box elder	Acer negundo	FAIR	
3212	MR	6	Red Mulberry	Morus rubra	GOOD	
3213	SM	9	Silver Maple	Acer saccharinum	FAIR	
3214	BX	8	Box elder	Acer negundo	FAIR	
3215	BW	9	Black Walnut	Juglans nigra	GOOD	
3216	BW	7	Black Walnut	Juglans nigra	GOOD	
3217	CT	44	Cottonwood	Populus deltoides	GOOD	
3218	BW	7	Black Walnut	Juglans nigra	GOOD	
3219	BW	8	Black Walnut	Juglans nigra	GOOD	
3220	BW	9	Black Walnut	Juglans nigra	FAIR	
3221	BW	8	Black Walnut	Juglans nigra	FAIR	
3222	BX	14	Box elder	Acer negundo	POOR	
3223	BW	15	Black Walnut	Juglans nigra	GOOD	
3224	BW	6	Black Walnut	Juglans nigra	GOOD	
3225	BW	6	Black Walnut	Juglans nigra	GOOD	
3226	BW	6	Black Walnut	Juglans nigra	GOOD	X2
3227	BW	7	Black Walnut	Juglans nigra	GOOD	
3228	BW	10	Black Walnut	Juglans nigra	GOOD	
3229	MR	6	Red Mulberry	Morus rubra	GOOD	
3230	EE	5	Siberian Elm	Ulmus pumila	FAIR	
3231	E	11	American Elm	Ulmus americana	GOOD	
3232	BW	7	Black Walnut	Juglans nigra	GOOD	
3233	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3234	EE	10	Siberian Elm	Ulmus pumila	GOOD	
3235	BX	7	Box elder	Acer negundo	FAIR	X2
3236	EE	13	Siberian Elm	Ulmus pumila	FAIR	
3237	BX	9	Box elder	Acer negundo	POOR	X2
3238	MR	8	Red Mulberry	Morus rubra	GOOD	
3239	BX	8	Box elder	Acer negundo	GOOD	
3240	SM	8	Silver Maple	Acer saccharinum	GOOD	
3241	SM	9	Silver Maple	Acer saccharinum	GOOD	
3242	SM	10	Silver Maple	Acer saccharinum	GOOD	
3243	WH	10	White Willow	Salix alba	GOOD	X3
3244	WH	9	White Willow	Salix alba	GOOD	X2
3245	WH	7	White Willow	Salix alba	GOOD	X2
3246	CT	7	Cottonwood	Populus deltoides	GOOD	
3247	CT	5	Cottonwood	Populus deltoides	GOOD	
3248	CT	11	Cottonwood	Populus deltoides	GOOD	
3249	CT	7	Cottonwood	Populus deltoides	GOOD	
3250	CT	8	Cottonwood	Populus deltoides	GOOD	
3251	CT	9	Cottonwood	Populus deltoides	GOOD	
3252	CT	12	Cottonwood	Populus deltoides	GOOD	
3253	CT	8	Cottonwood	Populus deltoides	GOOD	
3254	CT	11	Cottonwood	Populus deltoides	GOOD	
3255	CT	11	Cottonwood	Populus deltoides	GOOD	
3256	CT	9	Cottonwood	Populus deltoides	GOOD	
3257	CT	11	Cottonwood	Populus deltoides	GOOD	
3258	CT	11	Cottonwood	Populus deltoides	GOOD	
3259	WH	9	White Willow	Salix alba	GOOD	X3
3260	WH	10	White Willow	Salix alba	GOOD	X3
3261	BX	8	Box elder	Acer negundo	POOR	X2
3262	BX	7	Box elder	Acer negundo	FAIR	
3263	BX	8	Box elder	Acer negundo	GOOD	
3264	BX	7	Box elder	Acer negundo	FAIR	
3265	BX	8	Box elder	Acer negundo	GOOD	
3266	EE	9	Siberian Elm	Ulmus pumila	POOR	
3267	BX	6	Box elder	Acer negundo	GOOD	X3
3268	BX	10	Box elder	Acer negundo	FAIR	
3269	BX	8	Box elder	Acer negundo	POOR	
3270	BX	8	Box elder	Acer negundo	FAIR	X2
3271	BX	7	Box elder	Acer negundo	GOOD	X2
3272	BX	8	Box elder	Acer negundo	POOR	
3273	BX	14	Box elder	Acer negundo	FAIR	
3274	MR	15	Red Mulberry	Morus rubra	POOR	
3275	SM	15	Silver Maple	Acer saccharinum	GOOD	X3
3276	SM	16	Silver Maple	Acer saccharinum	GOOD	
3277	BW	8	Black Walnut	Juglans nigra	GOOD	
3278	BW	11	Black Walnut	Juglans nigra	GOOD	
3279	BW	9	Black Walnut	Juglans nigra	GOOD	
3280	BX	9	Box elder	Acer negundo	POOR	
3281	BX	6	Box elder	Acer negundo	POOR	X2
3282	BX	8	Box elder	Acer negundo	FAIR	
3283	BX	7	Box elder	Acer negundo	FAIR	
3284	BX	9	Box elder	Acer negundo	FAIR	X2
3285	BX	8	Box elder	Acer negundo	FAIR	
3286	BX	10	Box elder	Acer negundo	FAIR	
3287	BX	7	Box elder	Acer negundo	FAIR	
3288	WH	32	White Willow	Salix alba	POOR	
3289	BX	8	Box elder	Acer negundo	POOR	X2
3290	BX	9	Box elder	Acer negundo	FAIR	
3291	BX	14	Box elder	Acer negundo	FAIR	
3292	BX	8	Box elder	Acer negundo	FAIR	X2
3293	BX	10	Box elder	Acer negundo	FAIR	
3294	BX	11	Box elder	Acer negundo	POOR	
3295	BX	9	Box elder	Acer negundo	FAIR	
3296	BX	10	Box elder	Acer negundo	POOR	
3297	BX	10	Box elder	Acer negundo	FAIR	X3
3298	BX	7	Box elder	Acer negundo	FAIR	
3299	BX	6	Box elder	Acer negundo	POOR	X2
3300	BX	4	Box elder	Acer negundo	POOR	
3301	BX	8	Box elder	Acer negundo	GOOD	
3302	BX	9	Box elder	Acer negundo	FAIR	X2
3303	BX	8	Box elder	Acer negundo	FAIR	
3304	BX	7	Box elder	Acer negundo	FAIR	
3305	BX	6	Box elder	Acer negundo	POOR	X4
3306	BX	16	Box elder	Acer negundo	POOR	X4
3307	BX	7	Box elder	Acer negundo	FAIR	
3308	BX	6	Box elder	Acer negundo	POOR	
3309	BX	8	Box elder	Acer negundo	FAIR	
3310	BX	7	Box elder	Acer negundo	FAIR	
3311	BX	16	Box elder	Acer negundo	FAIR	
3312	SM	11	Silver Maple	Acer saccharinum	GOOD	X2
3313	BX	14	Box elder	Acer negundo	POOR	
3314	BX	9	Box elder	Acer negundo	FAIR	
3315	BX	17	Box elder	Acer negundo	FAIR	
3316	BX	9	Box elder	Acer negundo	FAIR	
3317	WH	48	White Willow	Salix alba	POOR	
3318	BX	8	Box elder	Acer negundo	FAIR	
3319	BX	27	Box elder	Acer negundo	FAIR	
3320	BX	10	Box elder	Acer negundo	FAIR	
3321	BW	9	Black Walnut	Juglans nigra	GOOD	
3322	BX	9	Box elder	Acer negundo	GOOD	
3323	BX	12	Box elder	Acer negundo	POOR	
3324	BX	7	Box elder	Acer negundo	POOR	
3325	BX	9	Box elder	Acer negundo	FAIR	
3326	BX	10	Box elder	Acer negundo	FAIR	
3327	BX	10	Box elder	Acer negundo	FAIR	X2
3328	BX	10	Box elder	Acer negundo	FAIR	
3329	BX	12	Box elder	Acer negundo	FAIR	
3330	BX	7	Box elder	Acer negundo	FAIR	
3331	BX	7	Box elder	Acer negundo	POOR	
3332	BX	7	Box elder	Acer negundo	FAIR	
3333	BX	6	Box elder	Acer negundo	POOR	
3334	BX	17	Box elder	Acer negundo	FAIR	
3335	BX	8	Box elder	Acer negundo	FAIR	
3336	BX	7	Box elder	Acer negundo	FAIR	
3337	BX	10	Box elder	Acer negundo	FAIR	
3338	BX	7	Box elder	Acer negundo	FAIR	
3339	BX	12	Box elder	Acer negundo	FAIR	
3340	BX	10	Box elder	Acer negundo	FAIR	
3341	MR	9	Red Mulberry	Morus rubra	FAIR	
3342	BX	9	Box elder	Acer negundo	FAIR	
3343	BW	10	Black Walnut	Juglans nigra	GOOD	
3344	BW	7	Black Walnut	Juglans nigra	GOOD	
3345	EE	5	Siberian Elm	Ulmus pumila	POOR	
3346	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3347	BW	13	Black Walnut	Juglans nigra	GOOD	
3348	BX	7	Box elder	Acer negundo	FAIR	
3349	BX	13	Box elder	Acer negundo	FAIR	
3350	BX	13	Box elder	Acer negundo	FAIR	
3351	BX	7	Box elder	Acer negundo	FAIR	
3352	BX	9	Box elder	Acer negundo	FAIR	
3353	SM	13	Silver Maple	Acer saccharinum	GOOD	
3354	SM	14	Silver Maple	Acer saccharinum	GOOD	
3355	SM	7	Silver Maple	Acer saccharinum	GOOD	
3356	SM	14	Silver Maple	Acer saccharinum	GOOD	
3357	SM	12	Silver Maple	Acer saccharinum	GOOD	X2
3358	BX	7	Box elder	Acer negundo	FAIR	
3359	CT	24	Cottonwood	Populus deltoides	GOOD	
3360	SM	15	Silver Maple	Acer saccharinum	GOOD	
3361	CT	17	Cottonwood	Populus deltoides	GOOD	
3362	CT	10	Cottonwood	Populus deltoides	GOOD	
3363	SM	8	Silver Maple	Acer saccharinum	FAIR	
3364	SM	9	Silver Maple	Acer saccharinum	FAIR	
3365	SM	7	Silver Maple	Acer saccharinum	FAIR	
3366	SM	8	Silver Maple	Acer saccharinum	GOOD	
3367	CT	18	Cottonwood	Populus deltoides	GOOD	
3368	SM	10	Silver Maple	Acer saccharinum	GOOD	X3
3369	SM	9	Silver Maple	Acer saccharinum	FAIR	
3370	SM	10	Silver Maple	Acer saccharinum	GOOD	
3371	SM	6	Silver Maple	Acer saccharinum	FAIR	
3372	CT	16	Cottonwood	Populus deltoides	GOOD	
3373	CT	20	Cottonwood	Populus deltoides	GOOD	
3374	CT	18	Cottonwood	Populus deltoides	GOOD	
3375	BX	7	Box elder	Acer negundo	FAIR	
3376	BX	7	Box elder	Acer negundo	FAIR	
3377	BX	10	Box elder	Acer negundo	FAIR	
3378	BX	9	Box elder	Acer negundo	FAIR	
3379	BX	11	Box elder	Acer negundo	FAIR	X2
3380	BX	9	Box elder	Acer negundo	FAIR	X2
3381	BX	11	Box elder	Acer negundo	FAIR	
3382	BX	14	Box elder	Acer negundo	FAIR	
3383	SM	5	Silver Maple	Acer saccharinum	FAIR	X3
3384	BX	10	Box elder	Acer negundo	POOR	
3385	BX	8	Box elder	Acer negundo	FAIR	X3
3386	BX	7	Box elder	Acer negundo	FAIR	
3387	BX	9	Box elder	Acer negundo	POOR	X3
3388	BX	12	Box elder	Acer negundo	FAIR	
3389	BX	9	Box elder	Acer negundo	POOR	X2
3390	BX	9	Box elder	Acer negundo	FAIR	
3391	BX	10	Box elder	Acer negundo	FAIR	X2
3392	BX	4	Box elder	Acer negundo	FAIR	
3393	BX	7	Box elder	Acer negundo	FAIR	
3394	BX	7	Box elder	Acer negundo	FAIR	
3395	BX	6	Box elder	Acer negundo	FAIR	
3396	BX	6	Box elder	Acer negundo	FAIR	
3397	CT	13	Cottonwood	Populus deltoides	GOOD	X2
3398	CT	26	Cottonwood	Populus deltoides	GOOD	
3399	BX	8	Box elder	Acer negundo	FAIR	
3400	SM	12	Silver Maple	Acer saccharinum	FAIR	
3401	BX	9	Box elder	Acer negundo	FAIR	
3402	WH	7	White Willow	Salix alba	GOOD	
3403	CT	18	Cottonwood	Populus deltoides	GOOD	
3404	BX	7	Box elder	Acer negundo	POOR	
3405	BX	10	Box elder	Acer negundo	GOOD	
3406	CT	9	Cottonwood	Populus deltoides	GOOD	
3407	CT	15	Cottonwood	Populus deltoides	GOOD	
3408	CT	15	Cottonwood	Populus deltoides	GOOD	
3409	CT	23	Cottonwood	Populus deltoides	GOOD	
3410	BX	9	Box elder	Acer negundo	FAIR	
3411	E	13	American Elm	Ulmus americana	GOOD	
3412	BX	10	Box elder	Acer negundo	FAIR	
3413	BX	9	Box elder	Acer negundo	FAIR	
3414	BX	11	Box elder	Acer negundo	GOOD	
3415	BX	12	Box elder	Acer negundo	GOOD	
3416	PN	6	Pin Cherry	Prunus pensylvanica	GOOD	X3
3417	BX	10	Box elder	Acer negundo	FAIR	
3418	BX	6	Box elder	Acer negundo	POOR	
3419	BX	7	Box elder	Acer negundo	POOR	
3420	BX	8	Box elder	Acer negundo	POOR	
3421	BX	13	Box elder	Acer negundo	FAIR	
3422	BX	9	Box elder	Acer negundo	POOR	
3423	BX	8	Box elder	Acer negundo	FAIR	
3424	BX	9	Box elder	Acer negundo	FAIR	
3425	BX	7	Box elder	Acer negundo	FAIR	
3426	SM	14	Silver Maple	Acer saccharinum	GOOD	X4
3427	SM	16	Silver Maple	Acer saccharinum	GOOD	X3
3428	BX	13	Box elder	Acer negundo	FAIR	
3429	BX	14	Box elder	Acer negundo	GOOD	
3430	BX	10	Box elder	Acer negundo	FAIR	X2
3431	BX	12	Box elder	Acer negundo	POOR	
3432	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3433	BX	9	Box elder	Acer negundo	GOOD	
3434	NM	7	Norway Maple	Acer platanoides	GOOD	X2
3435	HM	9	Hemlock	Tsuga canadensis	POOR	
3436	BX	23	Box elder	Acer negundo	FAIR	
3437	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3438	EE	11	Siberian Elm	Ulmus pumila	FAIR	X2
3439	BX	7	Box elder	Acer negundo	FAIR	X3
3440	BW	9	Black Walnut	Juglans nigra	GOOD	
3441	BX	8	Box elder	Acer negundo	FAIR	X2
3442	BW	10	Black Walnut	Juglans nigra	GOOD	
3443	BW	8	Black Walnut	Juglans nigra	GOOD	
3444	EE	15	Siberian Elm	Ulmus pumila	FAIR	
3445	BX	6	Box elder	Acer negundo	FAIR	
3446	BX	6	Box elder	Acer negundo	FAIR	
3447	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3448	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3449	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3450	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3451	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3452	EE	8	Siberian Elm	Ulmus pumila	POOR	
3453	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3454	BX	6	Box elder	Acer negundo	FAIR	
3455	BW	8	Black Walnut	Juglans nigra	GOOD	
3456	BX	9	Box elder	Acer negundo	FAIR	X2
3457	BW	7	Black Walnut	Juglans nigra	GOOD	
3458	BW	7	Black Walnut	Juglans nigra	GOOD	
3459	BX	9	Box elder	Acer negundo	FAIR	
3460	BX	7	Box elder	Acer negundo	FAIR	
3461	BX	6	Box elder	Acer negundo	FAIR	
3462	BX	6	Box elder	Acer negundo	FAIR	
3463	BX	8	Box elder	Acer negundo	FAIR	
3464	BX	8	Box elder	Acer negundo	FAIR	
3465	EE	26	Siberian Elm	Ulmus pumila	FAIR	
3466	BX	9	Box elder	Acer negundo	FAIR	
3467	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3468	BX	7	Box elder	Acer negundo	FAIR	
3469	EE	11	Siberian Elm	Ulmus pumila	FAIR	
3470	EE	11	Siberian Elm	Ulmus pumila	FAIR	
3471	BX	7	Box elder	Acer negundo	FAIR	
3472	BX	7	Box elder	Acer negundo	FAIR	
3473	BX	21	Box elder	Acer negundo	FAIR	
3474	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3475	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3476	BX	9	Box elder	Acer negundo	FAIR	
3477	BX	10	Box elder	Acer negundo	FAIR	
3478	BX	14	Box elder	Acer negundo	FAIR	
3479	BX	14	Box elder	Acer negundo	FAIR	
3480	BX	7	Box elder	Acer negundo	FAIR	
3481	BX	6	Box elder	Acer negundo	FAIR	
3482	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3483	E	6	American Elm	Ulmus americana	FAIR	
3484	BX	10	Box elder	Acer negundo	FAIR	
3485	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3486	EE	11	Siberian Elm	Ulmus pumila	FAIR	
3487	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3488	EE	8	Siberian Elm	Ulmus pumila	FAIR	
3489	EE	6	Siberian Elm	Ulmus pumila	FAIR	X3
3490	EE	9	Siberian Elm	Ulmus pumila	FAIR	
3491	BX	9	Box elder	Acer negundo	FAIR	
3492	BX	8	Box elder	Acer negundo	FAIR	
3493	BX	8	Box elder	Acer negundo	FAIR	
3494	BW	9	Black Walnut	Juglans nigra	GOOD	X2
3495	BW	9	Black Walnut	Juglans nigra	GOOD	
3496	BW	7	Black Walnut	Juglans nigra	GOOD	
3497	BW	6	Black Walnut	Juglans nigra	GOOD	
3498	CT	7	Cottonwood	Populus deltoides	FAIR	
3499	BW	6	Black Walnut	Juglans nigra	GOOD	
3500	BW	6	Black Walnut	Juglans nigra	GOOD	
3501	BW	8	Black Walnut	Juglans nigra	GOOD	
3502	BW	7	Black Walnut	Juglans nigra	GOOD	
3503	BW	12	Black Walnut	Juglans nigra	GOOD	
3504	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3505	BW	10	Black Walnut	Juglans nigra	GOOD	
3506	BW	7	Black Walnut	Juglans nigra	GOOD	
3507	BX	12	Box elder	Acer negundo	POOR	
3508	BW	8	Black Walnut	Juglans nigra	GOOD	
3509	BW	7	Black Walnut	Juglans nigra	GOOD	
3510	BW	7	Black Walnut	Juglans nigra	FAIR	
3511	BX	10	Box elder	Acer negundo	POOR	
3512	BW	29	Black Walnut	Juglans nigra	GOOD	
3513	BW	14	Black Walnut	Juglans nigra	POOR	
3514	BW	14	Black Walnut	Juglans nigra	GOOD	
3515	EE	7	Siberian Elm	Ulmus pumila	FAIR	
3516	SM	20	Silver Maple	Acer saccharinum	GOOD	
3517	SU	19	Sugar Maple	Acer saccharum	GOOD	
3518	SM	14	Silver Maple	Acer saccharinum	POOR	X2
3519	AA	10	Tree-of-Heaven	Ailanthus Altissima	GOOD	
3520	AA	20	Tree-of-Heaven	Ailanthus Altissima	GOOD	
3521	AA	9	Tree-of-Heaven	Ailanthus Altissima	GOOD	X2
3522	AA	8	Tree-of-Heaven	Ailanthus Altissima	GOOD	
3523	AA	5	Tree-of-Heaven	Ailanthus Altissima	GOOD	X3
3524	BW	9	Black Walnut	Juglans nigra	GOOD	
3525	BX	6	Box elder	Acer negundo	FAIR	
3526	BW	8	Black Walnut	Juglans nigra	GOOD	
3527	EE	16	Siberian Elm	Ulmus pumila	FAIR	
3528	EE	10	Siberian Elm	Ulmus pumila	FAIR	
3529	SM	6	Silver Maple	Acer saccharinum	FAIR	X3
3530	EE	17	Siberian Elm	Ulmus pumila	FAIR	
3531	BX	18	Box elder	Acer negundo	FAIR	
3532	BP	12	Bradford Pear	Pyrus calleryana	FAIR	
3533	BP	14	Bradford Pear	Pyrus calleryana	FAIR	
3534	BX	7	Box elder	Acer negundo	FAIR	
3535	BX	16	Box elder	Acer negundo	FAIR	
3536	BX	10	Box elder	Acer negundo	FAIR	X3
3537	BX	17	Box elder	Acer negundo	FAIR	
3538	BX	6	Box elder	Acer negundo	FAIR	
3539	SM	26	Silver Maple	Acer saccharinum	FAIR	
3540	BX	10	Box elder	Acer negundo	FAIR	
3541	WO	12	White Oak	Quercus alba	FAIR	
3542	BX	11	Box elder	Acer negundo	FAIR	
3543	BX	9	Box elder	Acer negundo	FAIR	
3544	SM	16	Silver Maple	Acer saccharinum	FAIR	
3545	BW	10	Black Walnut	Juglans nigra	GOOD	
3546	SM	16	Silver Maple	Acer saccharinum	POOR	
3547	BX	14	Box elder	Acer negundo	FAIR	
3548	BX	10	Box elder	Acer negundo	POOR	X2
3549	BX	6	Box elder	Acer negundo	FAIR	
3550	BX	16	Box elder	Acer negundo	FAIR	
3551	NM	29	Norway Maple	Acer platanoides	GOOD	
3552	MR	5	Red Mulberry	Morus rubra	FAIR	X2
3553	CT	40	Cottonwood	Populus deltoides	GOOD	
3554	WH	41	White Willow	Salix alba	FAIR	
3555	WH	48	White Willow	Salix alba	POOR	
3556	SM	42	Silver Maple	Acer saccharinum	GOOD	
3557	WH	62	White Willow	Salix alba	FAIR	
3558	SM	36	Silver Maple	Acer saccharinum	GOOD	
3559	AP	12	Domestic Apple	Malus sylvestris	FAIR	X2
3560	BX	18	Box elder	Acer negundo	POOR	
3561	BX	10	Box elder	Acer negundo	FAIR	X2
3562	BW	7	Black Walnut	Juglans nigra	GOOD	
3563	BX	24	Box elder	Acer negundo	FAIR	
3564	WH	34	White Willow	Salix alba	POOR	X2
3565	CT	35	Cottonwood	Populus deltoides	POOR	

REVISIONS

NO.	BY	CHK	DESCRIPTION	DATE

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2430 Rochester Ct. Suite 100
Troy, MI 48083-1872
Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.peainc.com

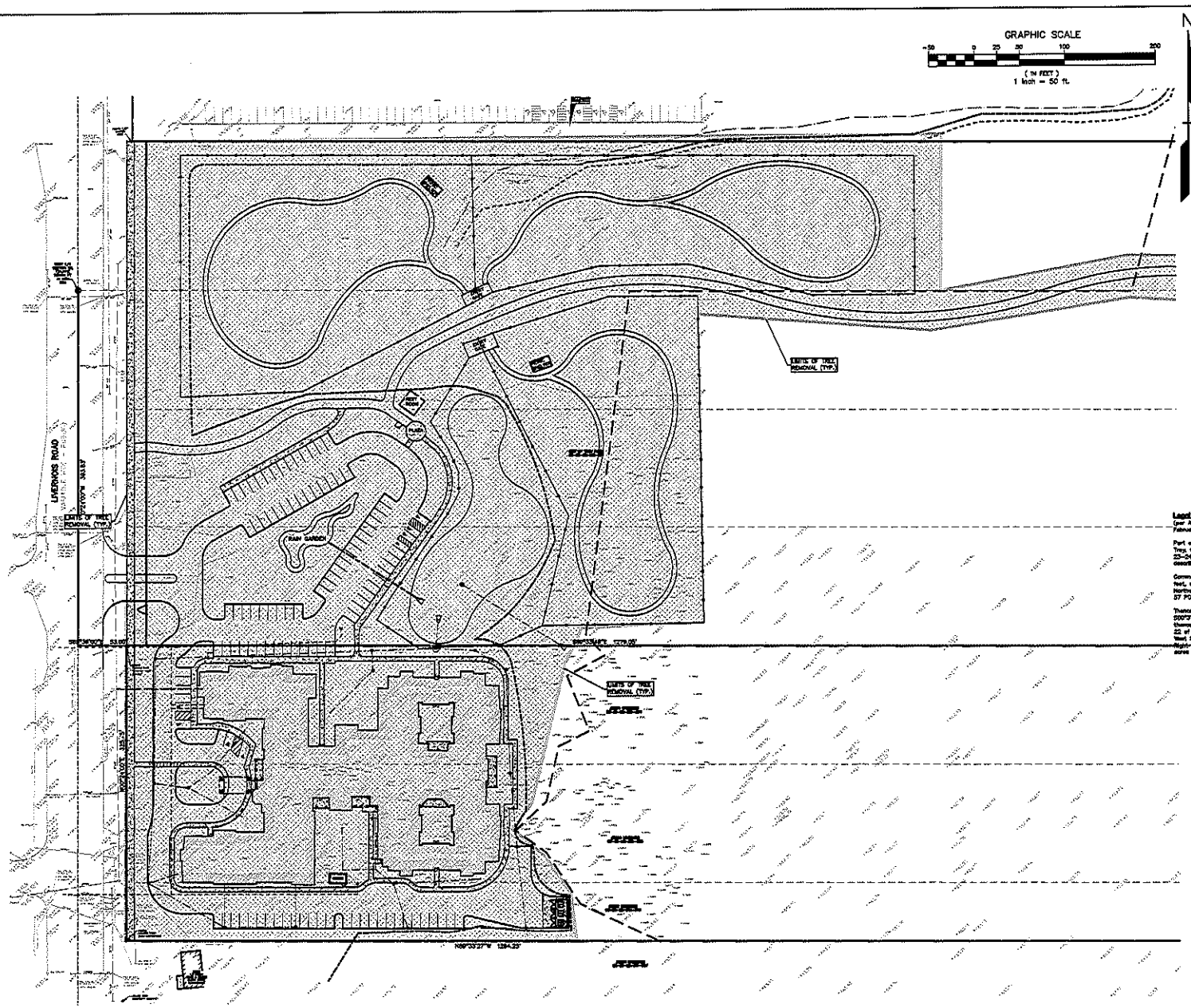
NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

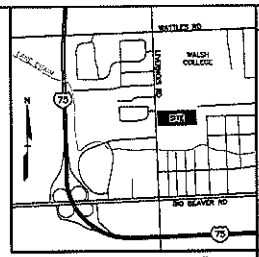
TREE LIST
STONECREST
PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. ESB | DN. ESB/DRW | SUR. PEA | P.M. DJH

ORIGINAL ISSUE DATE: SEPTEMBER 2, 2016
PEA JOB NO. 2016-141
SCALE: NA
DRAWING NUMBER: C-1.1

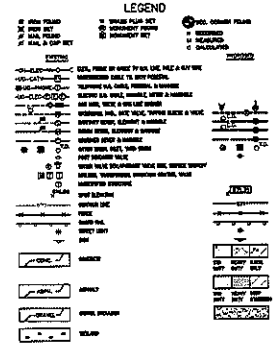
NOT FOR CONSTRUCTION





LOCATION MAP - NOT TO SCALE

LEGEND



Legal Description
(per Arrowhead Surveying, Topographic and Boundary Survey dated 08-020, February 20, 2008)

Part of the Southwest 1/4 Section 32, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan being the North 1/2 of Lot 22 and all of Lots 23-24 of Supervisor's Plat No. 28, As recorded being more particularly described as:

Commencing at the West 1/4 of said Section; Thence S1°04'100"W 383.82 feet along the West line of said Section 32; Thence S89°34'40"E 53.00 feet to Northwest corner of Lot 24 of Supervisor's Plat No. 28, as recorded in Liber 37 POINT OF BEGINNING;

Thence S89°33'48"E 1279.00 feet along the North line of said Lot 24; thence S00°37'00"E 335.83 feet along the East line of said Supervisor's Plat No. 28; thence N89°33'27"W 1294.25 feet along the South line of the North 1/2 of Lot 23 of said Supervisor's Plat No. 28; thence N1°03'40"E 333.75 feet along the West line of said Supervisor's Plat No. 28 and the East line of Livernois Road Right-of-way (53ft. half width) to the POINT OF BEGINNING, containing 9.59 acres of land, subject to easements, conditions, and restrictions, if any.

REVISIONS

STATE OF MICHIGAN
DAVID SUNTZ
DAVID M. SUNTZ
23010844
REGISTERED LANDSCAPE ARCHITECT

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NORTHPOINT DEVELOPMENT
5615 NW CANAL STREET, SUITE 200
RIVERSIDE, MISSOURI 64150

TREE PRESERVATION PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 32, T.2N., R.11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESS.	DR.	ESS / DAW	S.A.	PEA	P.M.	D.H.

S:\PROJECTS\2019\19-141 NORTHPOINT - NEW BOSTON\CAD\Layouts\Revised C1.0 Tree Preservation Plan.dwg

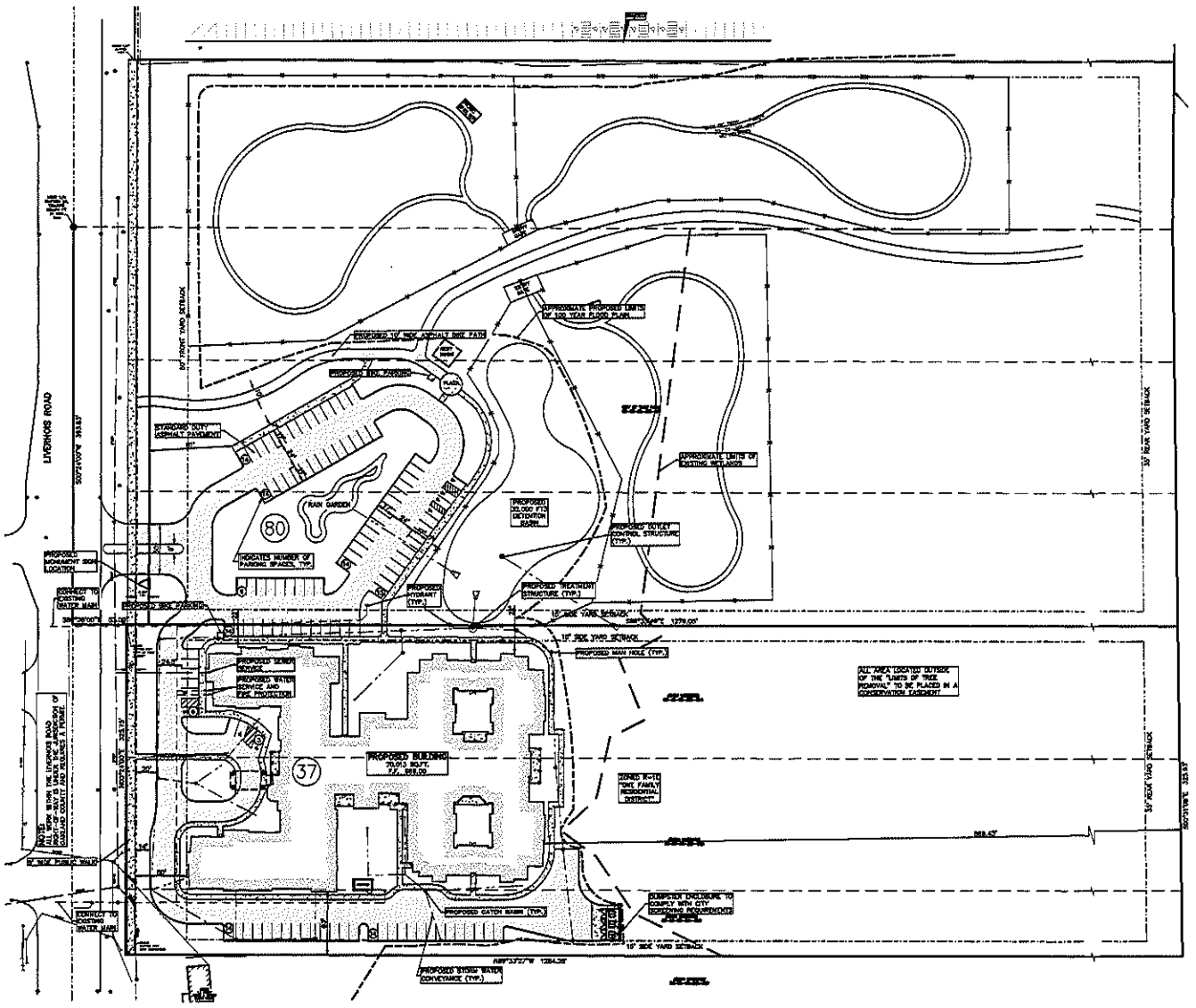
ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2019-141

SCALE:

DRAWING NUMBER:
C-1.2

NOT FOR CONSTRUCTION

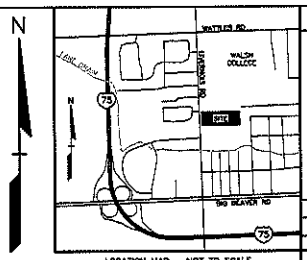


GRAPHIC SCALE

-50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

N



LOCATION MAP – NOT TO SCALE

LEGEND

SITE DATA TABLE:

PER REVISED FINAL ZONING ORDINANCE AND ZONING MAP AS AVAILABLE ON THE CITY OF TROY WEBSITE, DATED OCTOBER 16, 2012.

EXISTING ZONING:
R-1C

SITE AREA:
SITE AREA = 9.59 ACRES

SETBACKS:	REQUIRED	PROVIDED
FRONT YARD:	80'	80'
SIDE YARD:	15'	22'
REAR YARD:	35'	889.43'

BUILDING INFORMATION:
PROPOSED BUILDING AREA = 70,013 SQ.FT.
MAXIMUM ALLOWABLE LOT COVERAGE = 30%
PROPOSED LOT COVERAGE =(91,624 SQ.FT. or 12%
MAX ALLOWABLE BUILDING HEIGHT = 30'
THE PROPOSED BUILDING HEIGHT VARIES TO 35'-6" AT IT'S HIGHEST POINT.

SITE CALCULATIONS:
CONVALESCENT CENTER MINIMUM AREA OF 2,000 SF OF SITE AREA FOR EACH (1) BED = 500 SF OF OPEN SPACE
9.59 ACRES > 100=5000 SF, + 500 SF.

PARKING CALCULATIONS:
100 BEDS, 87 ROOMS.
CONVALESCENT AND NURSING FACILITIES REQUIRE THE LESSON OF 1 SPACE PER EACH 3 BEDS OR 2 ROOMS, + 1 SPACE PER EMPLOYEE.
REQUIRED PARKING = 100/3 + 20 = 54 SPACES
PARKING PROVIDED = 117 SPACES INCLUDING 6 BARRIER FREE SPACES

Project: 20154147 NORTH POINT - TROY SENIOR CARE
Location: Troy, MI
Date: 9/18/2015
Project No: 2015-141

25 YEAR STORM DETENTION DESIGN (OAKLAND COUNTY DESIGN METHOD)

Contributing Area (A):	5.73	AC.
Allowable Discharge (Qa)	1.91	C.F.S. (= 0.2 CFS/AC)
Overburn of Runoff (Qo):	0.29	

Calculation of Required Discharge/Acre

Qo = ((Qa)/(A))(Qo): 0.51

T = -25 + ((2062.5*Qo)/0.5: 100.00

Storage Volume Required:

Vs = (12389(T)(T+25))-490o(T) 9268.74

Vt = (Vs)(A)Cs 31377.4

NOT FOR CONSTRUCTION

REVISIONS

JOEL S. RUHOX
ENGINEER
6201054445

CAUTION!!

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1-800-482-7171 www.missdig.net

PEA

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Troy, MI 48083-1872
Phone: (248) 689-9090
Fax: (248) 689-1044
WEBSITE: WWW.PEINC.COM

NORTHPOINT DEVELOPMENT
6641 ORCHARD LAKE, SUITE 230
RIVERSIDE, MI 01150

PRELIMINARY SITE PLAN
STONECREST
PART OF SECTION 31, T.2N., R.11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

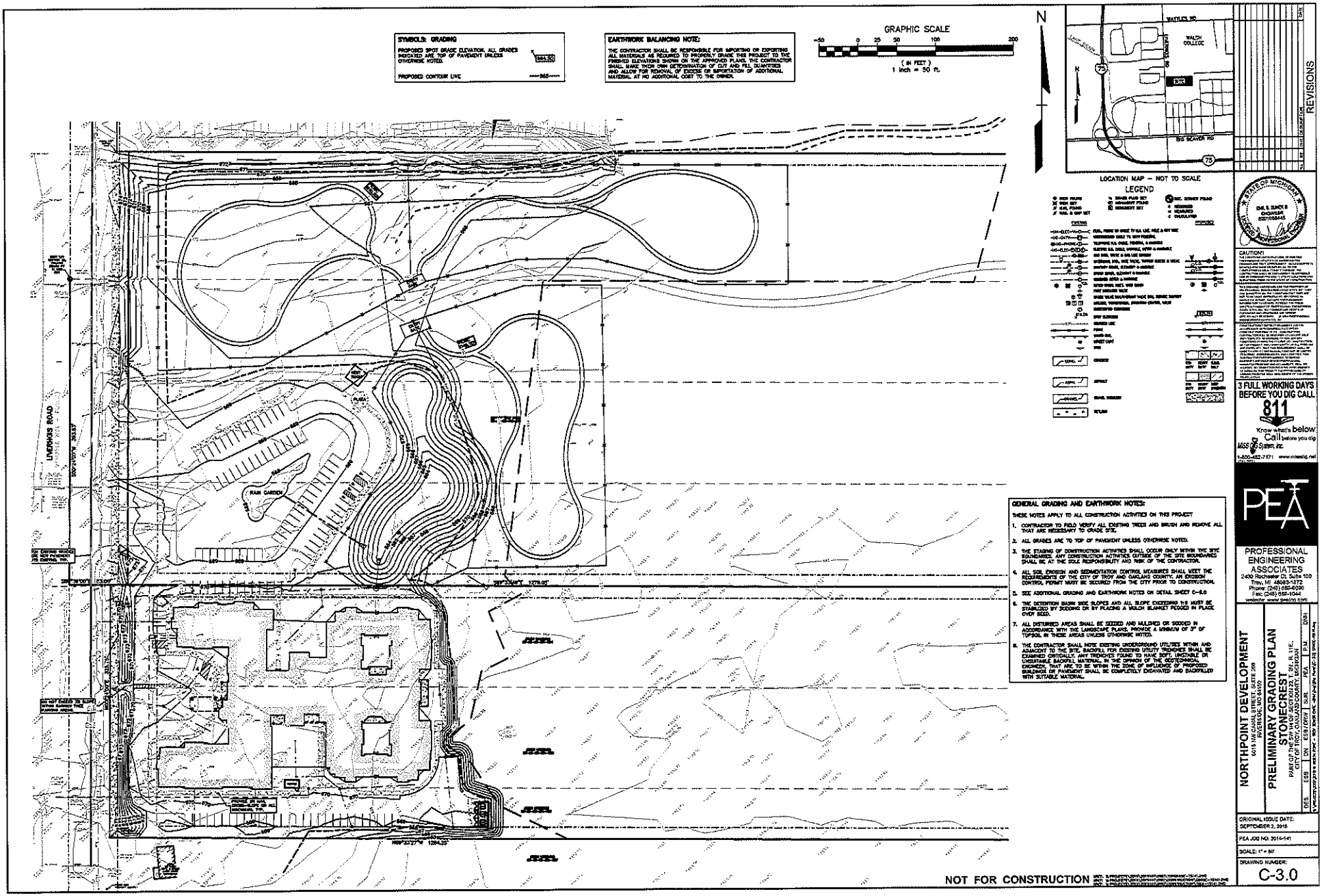
DES.	ESS	DR.	ESS / SRV	SUR.	PEA	P.M.	GAS

ORIGINAL ISSUE DATE:
SEPTEMBER 2, 2015

PEA JOB NO. 2015-141

SCALE: 1" = 50'

DRAWING NUMBER:
C-2.0


SYMBOLS: GRADING
PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
PROPOSED CONTOUR LINE
EARTHWORK BALANCING NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
N
LOCATION MAP – NOT TO SCALE
LEGEND
LIVERNOIS ROAD
RAIN GARDEN
GENERAL GRADING AND EARTHWORK NOTES:
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT
1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CITY OF TROY AND OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE CITY PRIOR TO CONSTRUCTION.
5. SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C-8.0
6. THE DETENTION BASIN SIDE SLOPES AND ALL SLOPE EXCEEDING 1:3 MUST BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
7. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.
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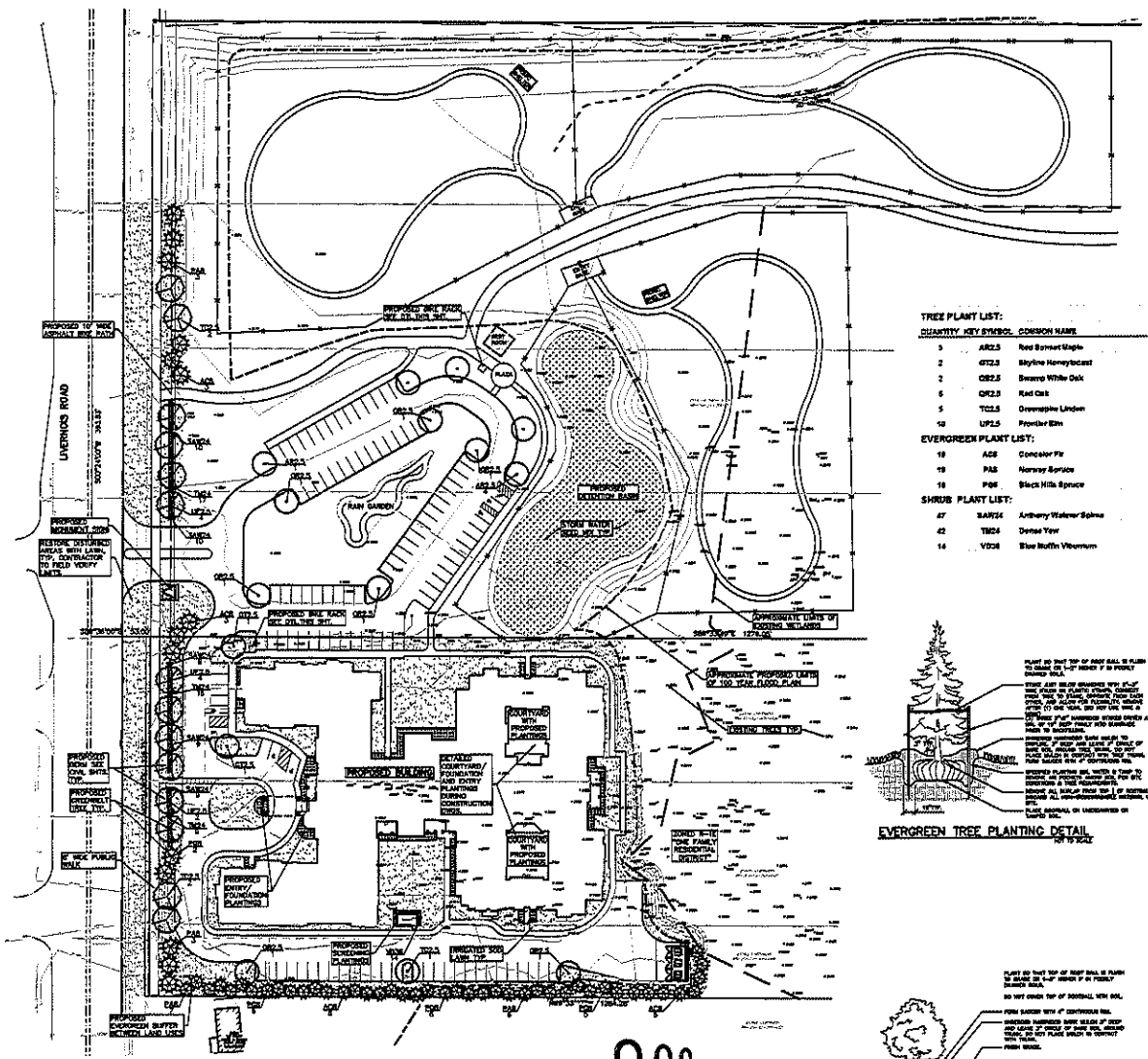
Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.peainc.com
NORTHPOINT DEVELOPMENT
6015 HAGGERTY, SUITE 200
WEST BLOOMFIELD, MI 48322
PRELIMINARY GRADING PLAN
STONECREST
PART OF THE NW 1/4 OF SECTION 27, T2N, R11E,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN
DES. ESB DN ESB/DMV SUR. PEA PJ DN/I
ORIGINAL ISSUE DATE: SEPTEMBER 2, 2015
PEA JOB NO. 2015-141
SCALE: 1" = 50'
DRAWING NUMBER:
C-3.0



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

N

KEY:

- = GREENBELT FRONTAGE TREES
- = PARKING LOT TREES
- = GREENBELT BUFFER TREE
- = EXISTING TREES
- = SHRUB SCREENING HEDGE
- = ENTRYWAY FOUNDATION PLANTINGS SHRUBS/ PERENNIALS - NOT SITE PLAN REQUIRED
- = IRRIGATED SOD LAWN
- = STORMWATER SEED MIX BY: DARIENO NATIVE PLANT NURSERY 630-556-7417

NOTE: SOD LAWN AND PLANT BEDS TO BE IRRIGATED WITH IN-GROUND SPRINKLER SYSTEM

LOCATION MAP – NOT TO SCALE

TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC.
5	AR2.5	Red Sunset Maple	*Acer rubrum 'Red Sunset'*	2.5" Cal.	B&B
2	GT2.5	Skyline Honeylocust	*Gleditsia triacanthos 'Skyline' inermis*	2.5" Cal.	B&B
2	QB2.5	Swamp White Oak	*Quercus bicolor*	2.5" Cal.	B&B
5	QR2.5	Red Oak	*Quercus rubra*	2.5" Cal.	B&B
5	TC2.5	Greenspire Linden	*Tilia cordata 'Greenspire'*	2.5" Cal.	B&B
10	UP2.5	Frontier Elm	*Ulmus 'Frontier'*	2.5" Cal.	B&B

EVERGREEN PLANT LIST:

19	ACE	Concolor Fir	*Abies concolor*	8' Ht.	B&B
19	PAB	Norway Spruce	*Picea abies*	8' Ht.	B&B
19	PGE	Black Hills Spruce	*Picea glauca 'Densata'*	8' Ht.	B&B

SHRUB PLANT LIST:

67	SAW24	Anthony Waterer Spirea	*Spirea x bum 'Anthony Waterer'*	24" Ht.	Cont.
42	TB24	Dense Yew	*Taxus x media 'Densiformis'*	24" Ht.	Cont.
14	VD36	Blue Muffin Viburnum	*Viburnum dentatum 'Ericsoom'*	36" Ht.	Cont.

LANDSCAPE CALCULATIONS:
PER CITY OF TROY ZONING ORDINANCE

GENERAL SITE LANDSCAPE
REQUIRED: 20% OF SITE AREA SHALL BE COMPRISED OF LANDSCAPE MATERIAL

9.99 AC.(417,740) SQ FT x 20% = 83,548 SQ FT

PROVIDED: 333,240 SQ FT OF SOFT-SCAPE, 77% (LAWN, PLANT BEDS AND EAST UNDISTURBED WOODLANDS)

PARKING LOT LANDSCAPE
REQUIRED: 1 TREE / 8 PARKING SPACES
3' HT BERM OR SHRUB HEDGE FOR PARKING ADJ. TO A PUBLIC ROAD

CITY PARK–80 SHARED SPACES: 80/8 = 10 TREES AND HEDGE REQ'D
SENIOR HOUSING–37 SPACES: 35/8 = 5 TREES AND HEDGE REQ'D

PROVIDED: 10 TREES & SHRUB HEDGE ALONG LIVERNOIS RD. AT CITY PARK AREA
5 TREES & SHRUB HEDGE ALONG LIVERNOIS RD. AT SENIOR HOUSING

GREENBELT FRONTAGE
REQUIRED: 1 TREE / 30 LF OF FRONTAGE

LIVERNOIS RD. – 718.5 LF FRONTAGE / 30 = 24 TREES
PROVIDED: LIVERNOIS RD.– 28 TREES

GREENBELT BUFFER BETWEEN LAND USES; SOUTH PROPERTY LINE (LIMITS OF PROJECT)
REQUIRED: 1 EVERGREEN TREE / 10 LF; 430 LF / 10 = 43 EVERGREEN TREES

PROVIDED: 43 EVERGREEN TREES

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS AND/OR PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1–800–482–7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1, GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE, AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH. SEE SPECIFICATIONS FOR SHREDDED PALETTE AND SHOD MULCH. WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

BIKE RACK DETAIL
NOT TO SCALE

SHRUB PLANTING DETAIL
NOT TO SCALE

TREE PROTECTION DETAIL
NOT TO SCALE

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Fax: (248) 689-1044
www.peainc.com

NORTHPOINT DEVELOPMENT
6015 N. ORCHARD LAKE ROAD, SUITE 200
RIVERSIDE, MI 48140

PRELIMINARY LANDSCAPE PLAN
STONECREST
PART OF THE SW 1/4 OF SECTION 21, T2N, R.11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

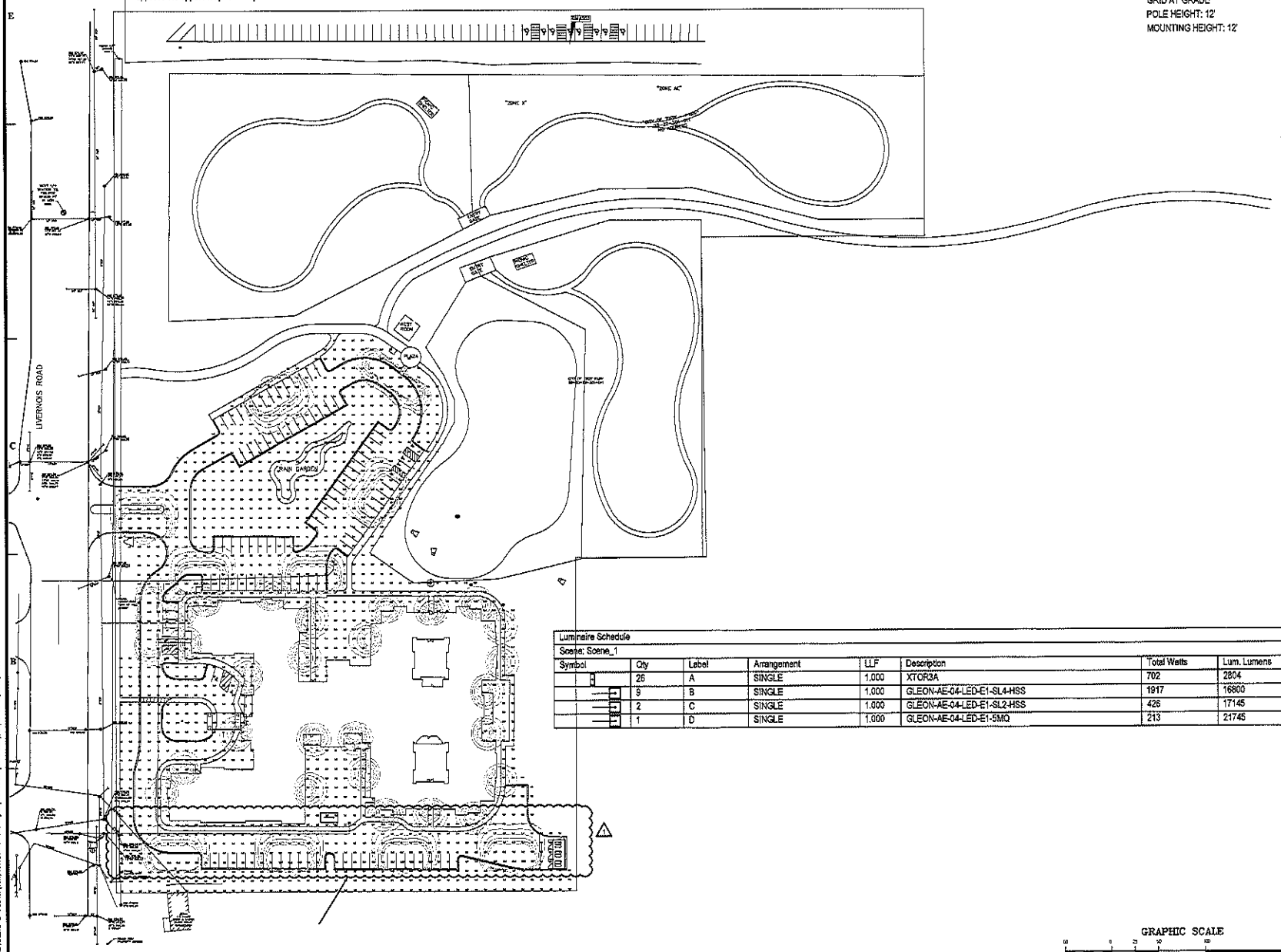
DES.	AJE	DR.	AJE	SUR.	PEA	F.H.	DWN.

ORIGINAL ISSUE DATE: SEPTEMBER 2, 2015
PEA JOB NO. 2015-141
SCALE: 1" = 50'
DRAWING NUMBER: L-1.0

Design Control Document Only - (Not for Construction)
Recommended location and positioning is based on information provided. Illumination levels are calculated by laboratory data in accordance with IES approved methods. Performance may vary due to job specific variables. Calculations do not account for the influence of obstructions unless otherwise noted. An engineer and/or architect must approve the applicability of the layout for final construction documents.

Calculation Summary							
Scene: Scene_1							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE LIGHTING_Planar	Illuminance	Fc	1.61	18.1	0.0	N.A.	N.A.

GRID AT GRADE
POLE HEIGHT: 12'
MOUNTING HEIGHT: 12'



Luminaire Schedule							
Scene: Scene_1							
Symbol	Qty	Label	Arrangement	LLF	Description	Total Watts	Lum. Lumens
	25	A	SINGLE	1.000	XTOR3A	702	2804
	9	B	SINGLE	1.000	GLEON-AE-04-LED-E1-SL4-HSS	1917	16800
	2	C	SINGLE	1.000	GLEON-AE-04-LED-E1-SL2-HSS	426	17145
	1	D	SINGLE	1.000	GLEON-AE-04-LED-E1-5MQ	213	21745

GRAPHIC SCALE
(IN FEET)

pi architects
3600 Jefferson St. Suite 305
Austin, TX 78731
P: (512)231-1919
F: (512)231-1885
www.pi-arch.com

Pearland Image 845_jpg

PRELIMINARY
NOT FOR CONSTRUCTION

NORTHPOINT DEVELOPMENT
ASSISSTED LIVING & MEMORY CARE
TROY, MI

CONCEPTUAL PLANNING

REVISIONS
Rev 1 11/05/2015

DATE 09/25/2015
PROJECT NUMBER RES-150209
SHEET TITLE PHOTOMETRIC

SHEET E0.0

EM Server: Serv2012-EM Server (1)\01\15\12 Northfield, Troy MI\Vw: 1800\11\Wednesday, September 16, 2015 3:08 PM

NOT FOR CONSTRUCTION
N
25' FRONT YARD SETBACK
1 FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"
SK1
NORTHPOINT DEVELOPMENT
TROY, MI
ASSISTED LIVING & MEMORY CARE
PART OF THE SW 1/4 OF SECTION 23, T.2N.,R.11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN
PROFESSIONAL ENGINEERING ASSOCIATES
PEA
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REVISIONS
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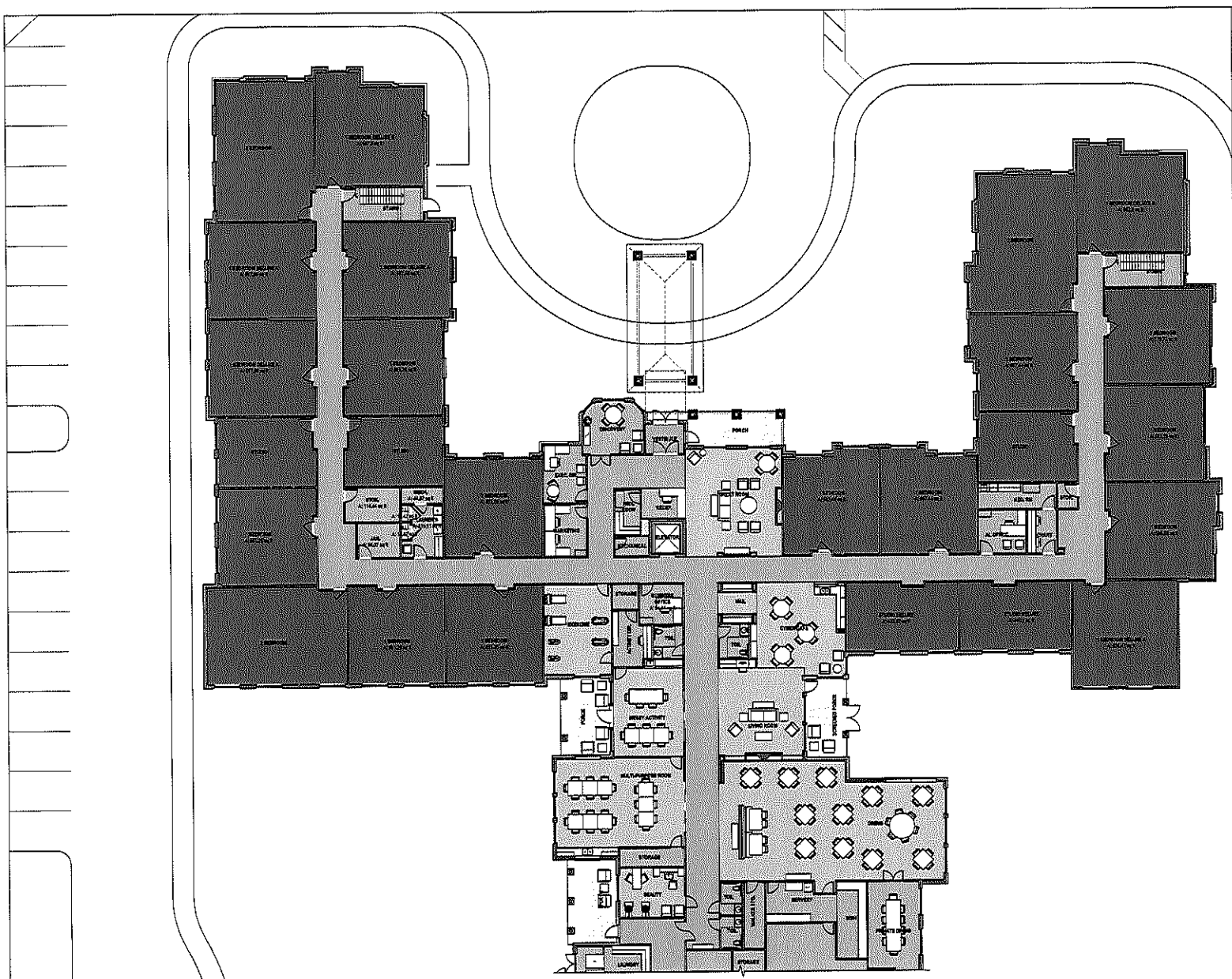

1 FIRST FLOOR PLAN - WEST HALF

SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

N

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website: www.peainc.com

NORTHPOINT DEVELOPMENT

TROY, MI

ASSISTED LIVING & MEMORY CARE

PART OF THE SW 1/4 OF SECTION 23, T.2N., R.11E.

CITY OF TROY, OAKLAND COUNTY, MICHIGAN

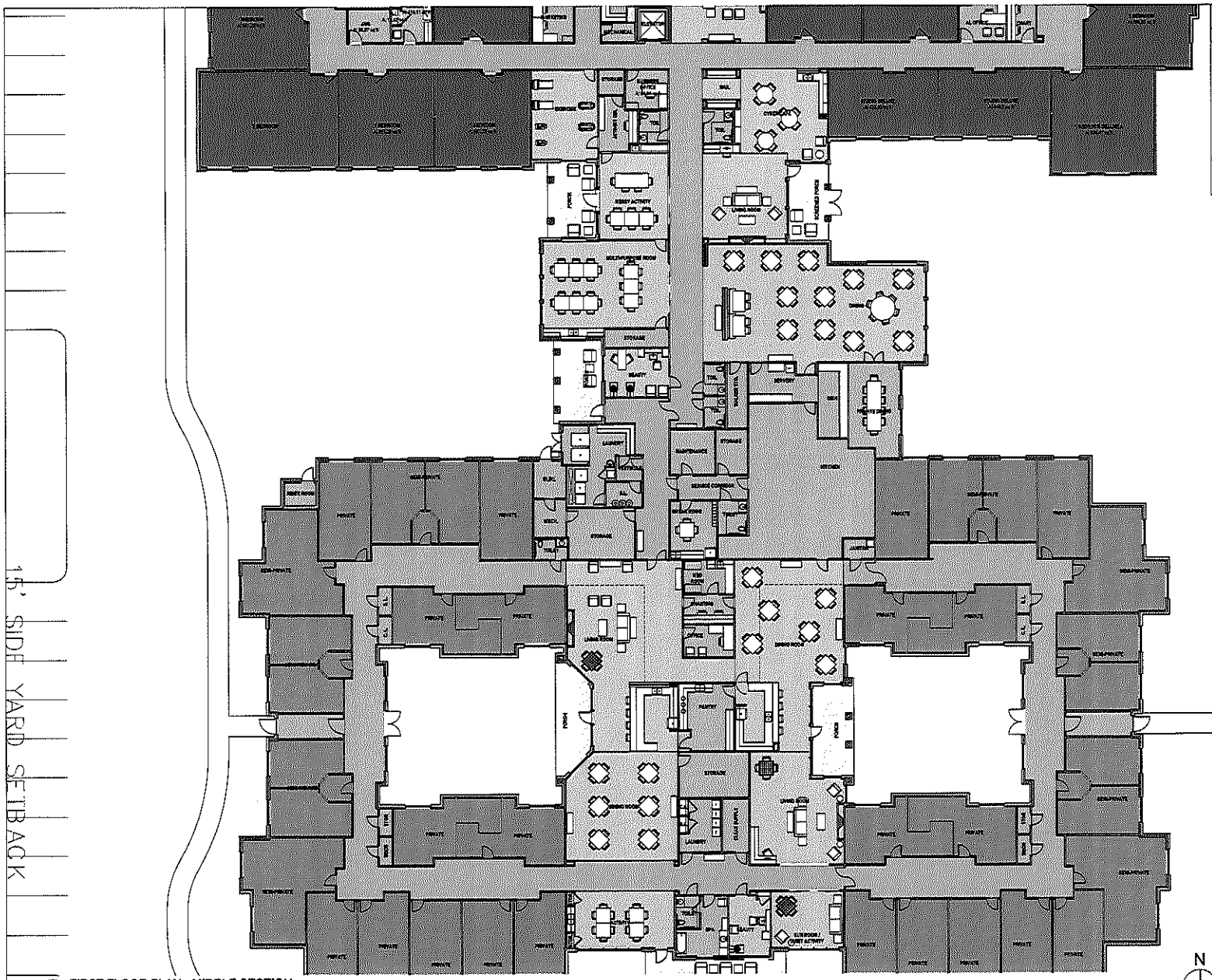
DES.	ESS	DAL	ESS / DRW	SUR.	PEA	P.M.	DRAFT

ORIGINAL ISSUE DATE: 09/01/2015

PEA JOB NO. 2015-141

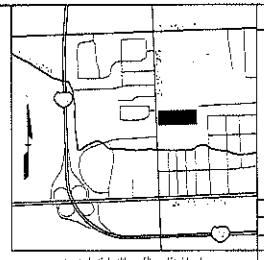
SCALE:

DRAWING NUMBER: SK2



1 FIRST FLOOR PLAN - MIDDLE SECTION

NOT FOR CONSTRUCTION



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NORTHPOINT DEVELOPMENT

TROY, MI

ASSISSTED LIVING & MEMORY CARE

PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

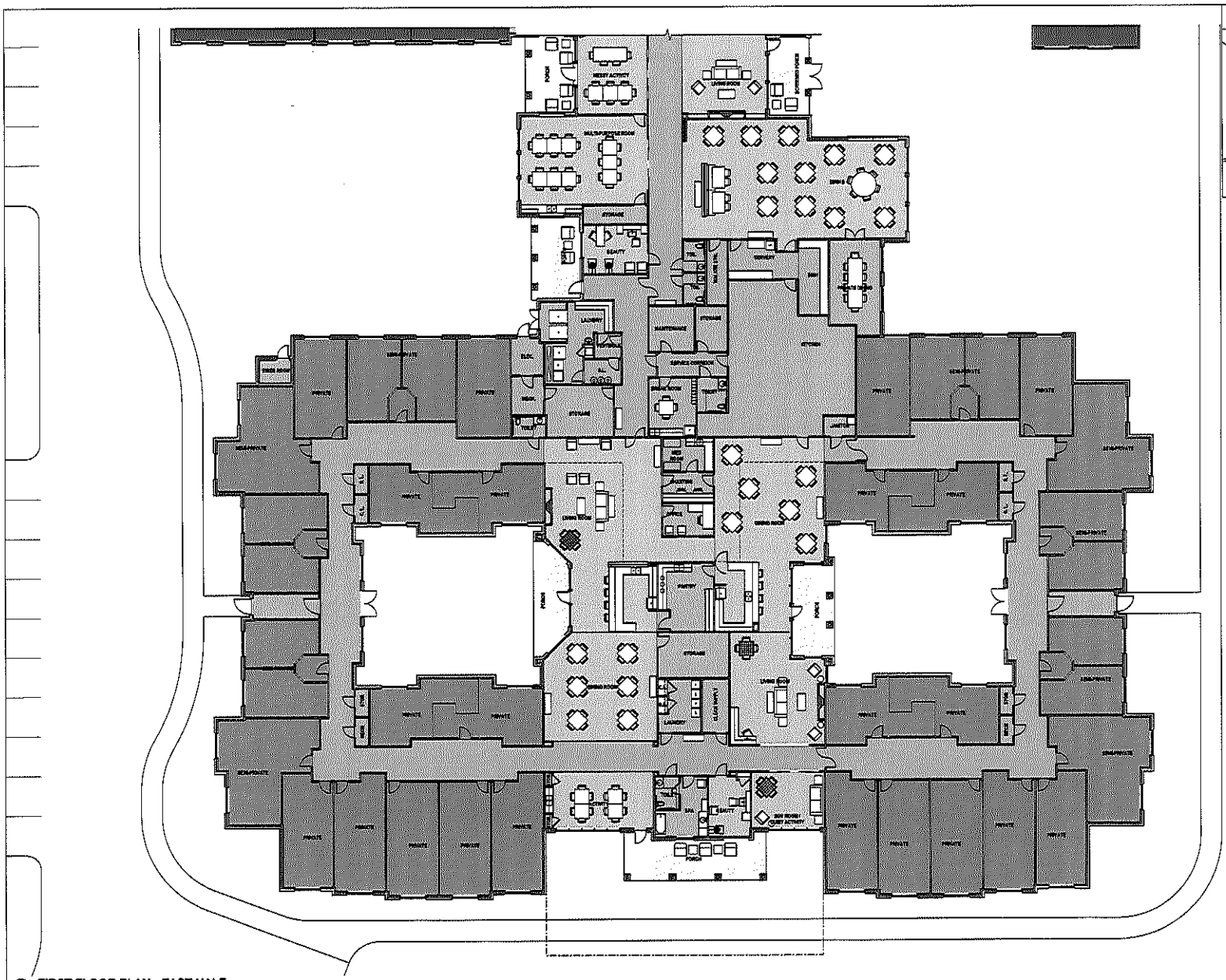
DES.	ESB	DR.	ESB / DEW	SUR.	PEA	PJM	DNH

ORIGINAL ISSUE DATE: 09/31/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER: SK3

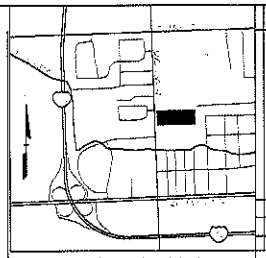


1 FIRST FLOOR PLAN - EAST HALF

SCALE: 3/32" = 1'-0"

N

NOT FOR CONSTRUCTION



REVISIONS

NO.	BY	DESCRIPTION	DATE

SEAL

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website: www.peaiac.com

NORTHPOINT DEVELOPMENT

TROY, MI

ASSISSTED LIVING & MEMORY CARE

PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DR.	ESB / DSW	SUR.	PEA	P.M.	DN1

ORIGINAL ISSUE DATE

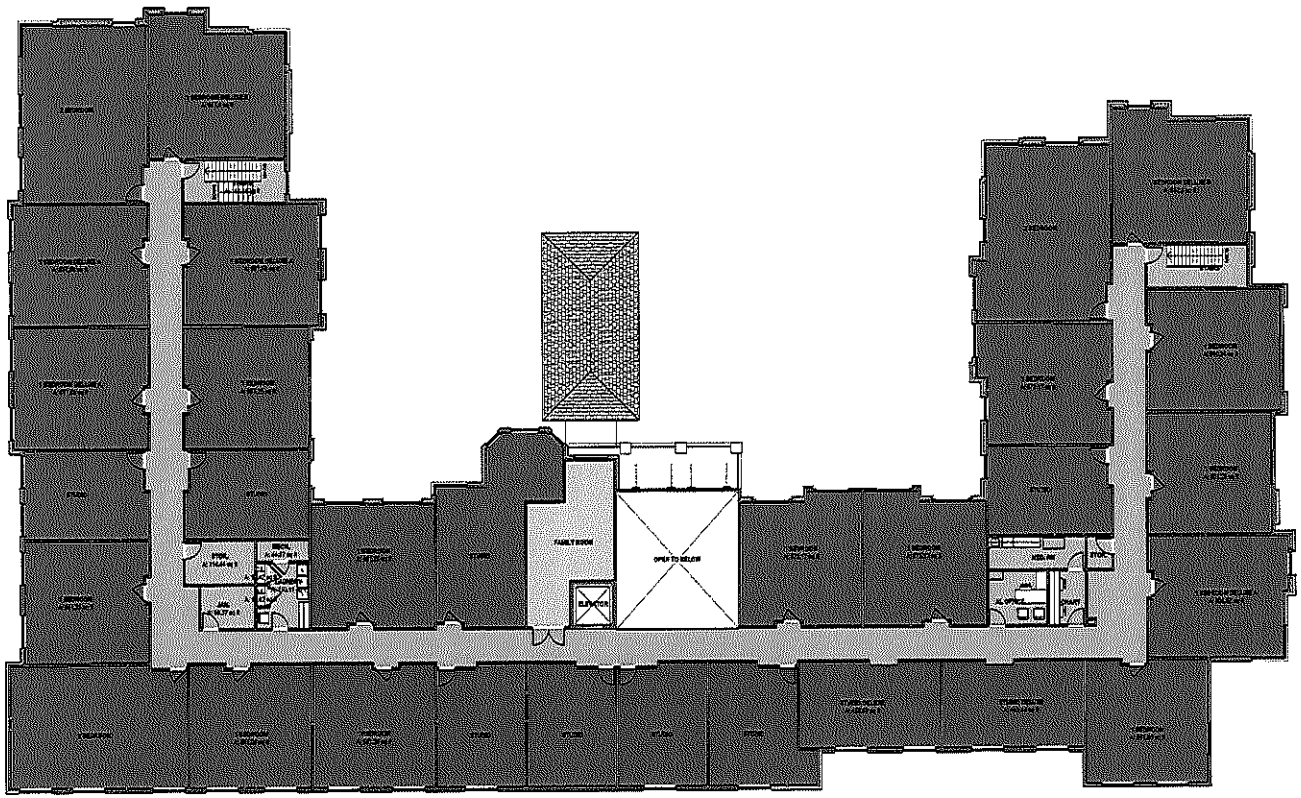
09/01/2015

PEA JOB NO. 2015-141

SCALE:

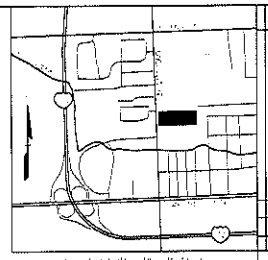
DRAWING NUMBER:

SK4



1 SECOND FLOOR PLAN

SCALE: 3/32" = 1'-0"



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website: www.pea-eng.com

NORTHPOINT DEVELOPMENT

TROY, MI

ASSISSTED LIVING & MEMORY CARE

PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DIN.	ESB / DRW.	SMR.	PEA	P.M.	DKH

ORIGINAL ISSUE DATE: 09/01/2016

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER: SK5

N

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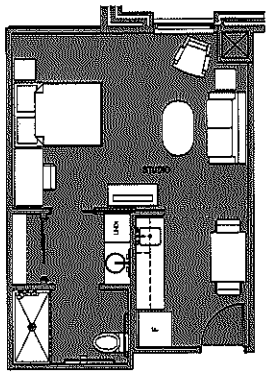
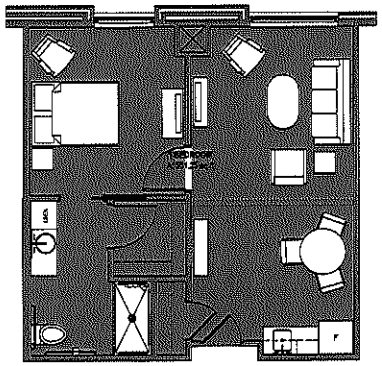
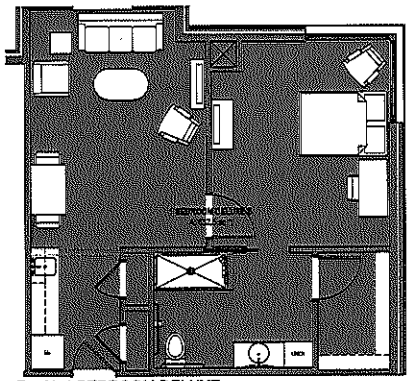


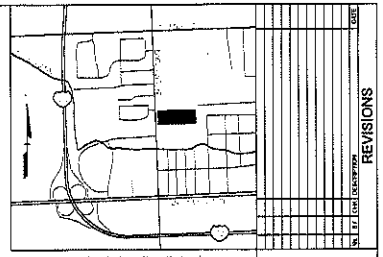
6 AL STUDIO
SCALE: 1/4" = 1'-0"

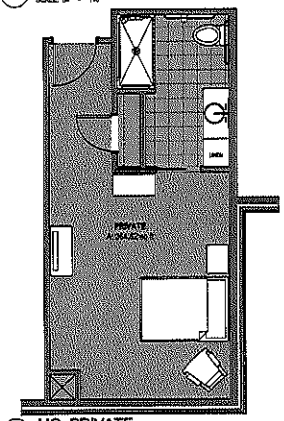


7 AL 1 BEDROOM
SCALE: 1/4" = 1'-0"

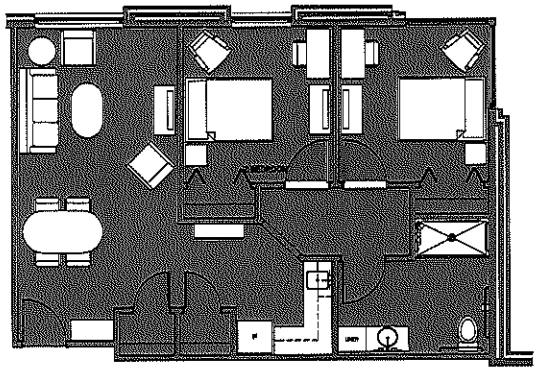


9 AL 1 BEDROOM DELUXE
SCALE: 1/4" = 1'-0"

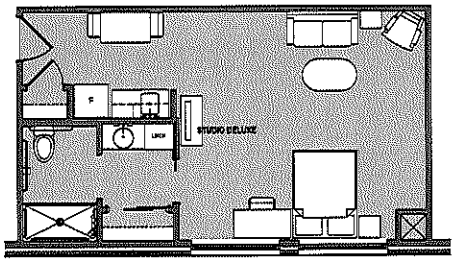




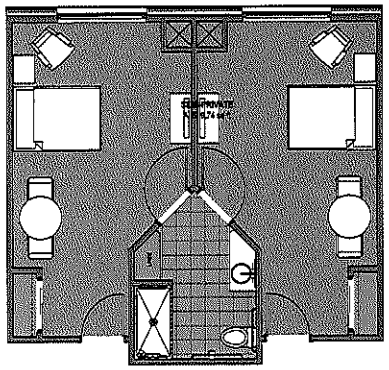
5 MC PRIVATE
SCALE: 1/4" = 1'-0"



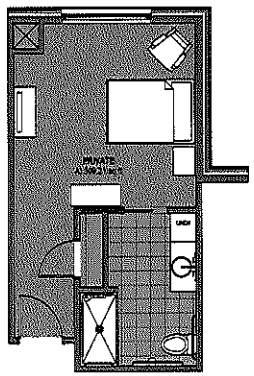
8 AL 2 BEDROOM
SCALE: 1/4" = 1'-0"



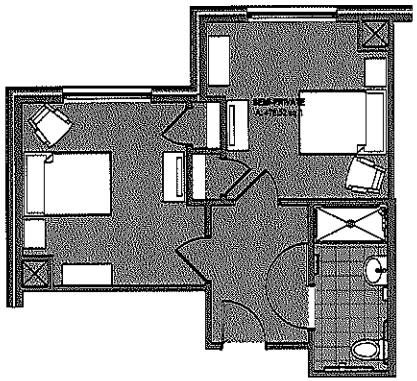
10 AL STUDIO DELUXE
SCALE: 1/4" = 1'-0"



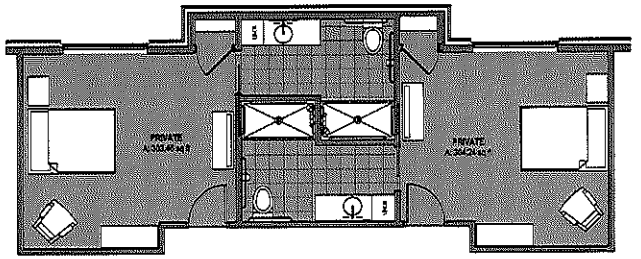
1 MC SEMI-PRIVATE
SCALE: 1/4" = 1'-0"



2 MC PRIVATE
SCALE: 1/4" = 1'-0"



3 MC SEMI-PRIVATE
SCALE: 1/4" = 1'-0"



4 MC PRIVATE(S)
SCALE: 1/4" = 1'-0"

NOT FOR CONSTRUCTION

REVISIONS

SEAL

CAUTION:

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net

PROFESSIONAL ENGINEERING ASSOCIATES
2430 Rochester Ct. Suite 100
Troy, MI 48083-1872
Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.peainc.com

NORTHPOINT DEVELOPMENT
TROY, MI

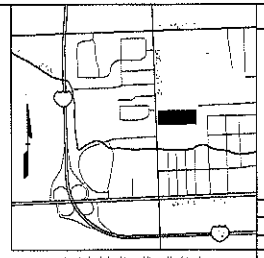
ASSISTED LIVING & MEMORY CARE
PART OF SECTION 35
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

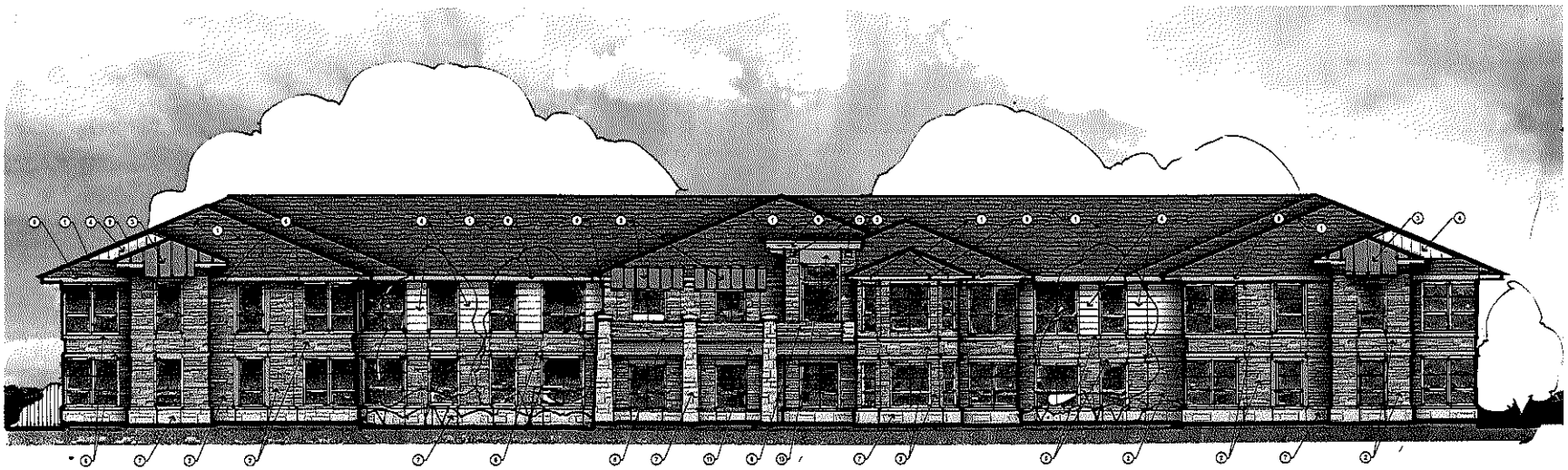
DES.	ESS	DRL	ESS	DRV	SMR	PEA	PJL	DNH

ORIGINAL ISSUE DATE: 09/01/2015
PEA JOB NO. 2015-141
SCALE:
DRAWING NUMBER: SK6

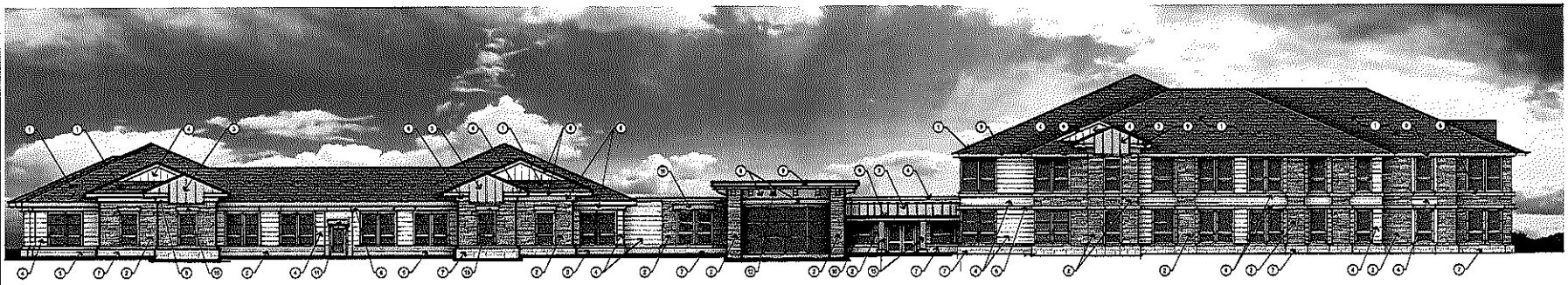
ELEVATION KEYED NOTES

1. ARCHITECTURAL ASPHALT SHINGLE
2. CULTURED STONE VENEER, COLOR MIX 1
3. ALUMINUM STANDING SEAM ROOF
4. HARDIE SIDING, COLOR 1
5. HARDIE SIDING WAINSCOT, COLOR 2
6. HARDIE TRIM, PAINTED
7. CULTURED STONE VENEER, COLOR MIX 2
8. METAL RAILING
9. HARDIE TRIM, FASCIA
10. CULTURED STONE VENEER HEADER
11. HARDIE TRIM HEADER
12. WOOD CORBEL, PAINTED TO MATCH
13. HARDIE PANEL, PAINTED





2 FRONT ELEVATION



1 SIDE ELEVATION

NOT FOR CONSTRUCTION

NO.	BY	CHK	DESCRIPTION	DATE

REVISIONS

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PEA

PROFESSIONAL ENGINEERING ASSOCIATES

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Troy, MI 48083-1872
Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.pea-inc.com

NORTHPOINT DEVELOPMENT

TROY, MI

ASSISSTED LIVING & MEMORY CARE

PART OF THE SW 1/4 OF SECTION 22, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

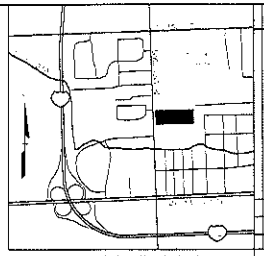
DES.	ESB	DN.	ESB / DRW	SUR.	PEA	P.M.	DNH

ORIGINAL ISSUE DATE: 09/01/2015

PEA JOB NO. 2015-141

SCALE:

DRAWING NUMBER: SK7



NO.	BY	DATE	DESCRIPTION

REVISIONS

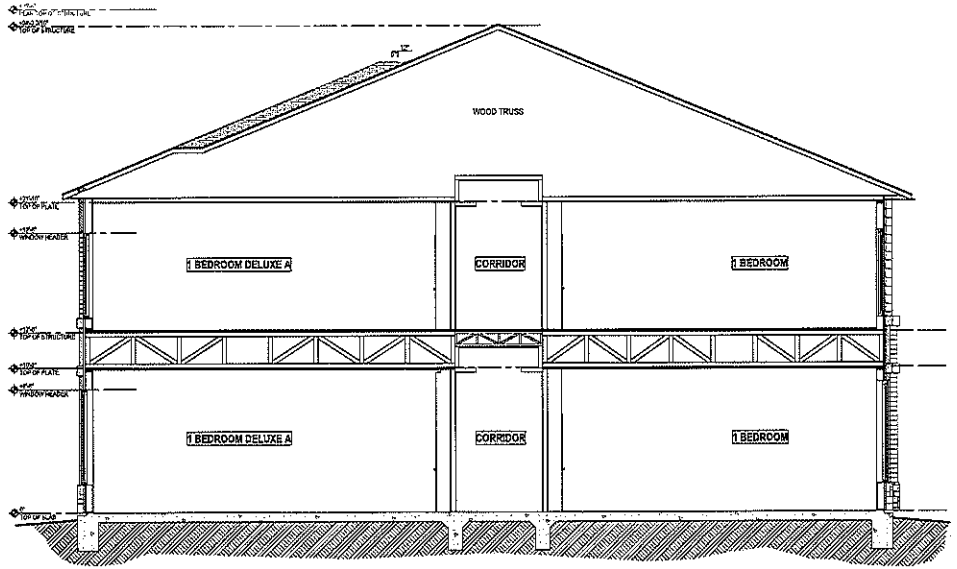
SEAL

CAUTION!!!

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below Call before you dig

MISS DIG System, Inc. 1-800-482-7171 www.missdig.net



1 SECTION @ LEFT WING

SCALE: 1/4" = 1'-0"

NOT FOR CONSTRUCTION

PEA

PROFESSIONAL ENGINEERING ASSOCIATES

2430 Rochester Ct. Suite 100
Troy, MI 48083-1872
Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.peainc.com

NORTHPOINT DEVELOPMENT

TROY, MI

ASSISSTED LIVING & MEMORY CARE

PART OF THE SW 1/4 OF SECTION 22, T.2N, R.11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DR.	ESB/TMW	SUR.	PEA	P.M.	DKH

ORIGINAL ISSUE DATE
09/10/2015

PEA JOB NO. 2015-048

SCALE:

DRAWING NUMBER
SK9

EASEMENT FOR WATER DETENTION/RETENTION AND FOR JOINT DETENTION/RETENTION FACILITIES (APPROVED FORM)

EASEMENT FOR WATER DETENTION/RETENTION AND FOR JOINT DETENTION/RETENTION FACILITIES

THIS EASEMENT FOR WATER DETENTION/RETENTION AND FOR JOINT DETENTION/RETENTION FACILITIES (the "Detention/Retention Facilities Easement") is made and entered into as of this _____ day of _____, 20____, by and between **THE CITY OF TROY**, a Michigan municipal corporation, whose address is 500 West Big Beaver Road, Troy, Michigan 48084 ("Grantor") and **NP TROY, LLC**, a Missouri limited liability company, whose address is 5015 NW Canal Street, Suite 200, Riverside, Missouri 64150 ("Grantee").

RECITALS:

A. Grantor is the owner of the real property legally described in **Exhibit "A"** attached hereto ("Grantor Property"), and Grantee is the owner of the real property legally described in **Exhibit "B"** attached hereto ("Grantee Property"), which property is adjacent to Grantor Property.

B. Each of the Grantor Property and Grantee Property is presently unimproved property, but it is currently intended by the parties that a portion of the Grantee Property will be developed as senior living and memory care residences complex with related parking areas, driveways, utilities and other improvements to be constructed thereon.

C. As part of a Development Agreement for the Stonecrest Senior Living and Memory Care Residences on the Grantee Property, the Grantor and Grantee intend to jointly cooperate, plan, participate in and share in the cost of certain improvements, including this Detention/Retention Facilities Easement and other easements to be located on the Grantor Property as a City Park in accordance with the City of Troy Planned Unit Development provisions of its Zoning Ordinance.

D. As part of the simultaneous development of the Grantor Property and Grantee Property, Grantor has agreed to grant Grantee a perpetual easement for the construction of storm water detention/retention facilities and related water features, landscaping and an electrically operated fountain on the Grantor Property, at Grantee's cost for construction of the referenced improvements in the areas depicted and in the manner approved and specified in detailed engineering drawings attached to a certain PUD Development Agreement for Stonecrest Senior Living and Memory Care Residences and Jointly Developed city Park Planned Unit Development Agreement to which this Detention/Retention Facilities Easement is attached and made a part of as though fully set forth herein.

NOW, THEREFORE, for value received and in consideration of One ($1.00) Dollar, the receipt of which is hereby acknowledged, Grantor agrees and declares that the Detention/Retention Facilities Easement to be located on the Grantor Property shall be held, transferred, sold, conveyed, mortgaged, leased, occupied, and used subject to the terms, provisions and easements set forth in this Detention/Retention Facilities Easement as follows:

1. **Easements.** Grantor does hereby remise, release and forever grant unto Grantee, a perpetual non-exclusive easement for the installment, construction, and improvement, of storm water detention/retention facilities with water features, fountain and landscaping (the "Detention/Retention Facilities") in, under, upon, over and through the Detention/Retention Facilities Easement. The Detention/Retention Facilities Easement herein granted and reserved is for use by and the benefit of both Grantee and Grantor, and their respective successors and assigns, as the record fee owners from time to time, of all or any portion of the Grantor Property and/or the Grantee Property. It will provide necessary water detention/retention of surface water designed to serve the needs and requirements of both the Grantor and Grantee Properties. The Detention/Retention Facilities and all incidental improvements thereto are to be constructed as

part of the PUD Development Agreement and will at all times serve the needs and requirements of both the Grantor and Grantee Properties. The legal description and survey of the area of the Grantee Property on which the Detention/Retention Facilities Easement is located is attached hereto as **Exhibit "C".**

2. **Development and Operation.** Grantor and Grantee have jointly participated in the design and engineering of the Detention/Retention Facilities Easement and the engineering detention/retention plans. Grantor and Grantee will not interfere with or jeopardize the construction, operation, reconstruction, preservation, and use of the Detention/Retention Facilities Easement for the use and benefit of both the Grantor Property and Grantee Property. Grantor and Grantee shallot erect, install or place any structures, materials, devices, things or matters which obstruct or impede the normal flow and design of surface water to, over, or within or from the Detention/Retention Facilities Easement in accordance with the engineering detention/retention plans as described in the PUD Development Agreement without obtaining the prior written consent of the other Party, which approval shall not be unreasonably withheld or delayed. Additionally, the Parties agree that after completion and installation of the Detention/Retention Facilities Easement, upon prior written notice to Grantee, Grantor may, at its reasonable election, further improve, or expand the Detention/Retention Facilities (the "Grantor Improvements"), at Grantor's sole cost, to facilitate further development of the Grantor Property into a City Park, provided, however, that at all times, such Detention/Retention Facilities Easement shall be maintained to adequately handle the surface water from and storm and surface water storage needs of the Grantee Property and any other properties flowing naturally into such Detention/Retention Facilities Easement.

3. **Rights of Grantee to Install Storm Water Drainage Pipe From Grantee Property into the Detention/Retention Facilities Easement and to Remove or Relocate Soils Located Within the Detention/Retention Facilities Easement to Areas of Grantor Property Where Needed or to Relocate Soils to Grantee Property or to Remove Soils from the Detention/Retention Facilities Easement to Other Locations if Not Required to be Retained for Grantor Property.** Grantee shall have the right, pursuant to the engineering detention/retention plans described in the PUD Development Agreement, to remove soils from the Detention/Retention Facilities Easement and to place them on Grantee's Property as additional land fill or land balancing or to remove any excess soils from the Detention/Retention Facilities Easement or Grantor's Property, all at Grantee's sole cost, except that if the Grantor elects to retain any of such excess soils for Grantor's own use on other areas of the Grantor Property or elsewhere, it can do so at its sole cost. Grantee can also install storm and/or surface water pipe installations or drainage from Grantee Property to the Detention/Retention Facilities Easement and install a water fountain connected electrically to the parking lot light system on Grantor Property and construct and install all other improvements required of Grantee under the engineering detention/retention plans which are a part of the PUD Development Agreement.

4. **Maintenance During Construction of Detention/Retention Facilities.**

4.1 Maintenance During Construction of Detention/Retention Facilities by Grantee in Accordance with engineering detention/retention plans. Prior to the earlier of (i) the start of construction by Grantee of any improvements permitted or required by Grantee on all or any portion of the Grantor Property which utilize the Detention/Retention Facilities for storm water or surface water drainage or detention/retention from the Grantor or Grantee Properties, or (ii) the date Grantee performs any action to improve, alter or relocate all or any portion of the

Detention/Retention Facilities pursuant to the engineering detention/retention plans. Grantee, at Grantee's sole expense, shall be responsible for the construction, maintenance, repair and restoration, if necessary, of the Detention/Retention Facilities within or in proximity of the Detention/Retention Facilities Easement, including, without limitation, keeping the Detention/Retention Facilities Easement open during such Detention/Retention Facilities construction, and keeping the Detention/Retention Facilities in good working conditions or repair, if necessary, during construction, and shall obtain all necessary improvement or repair permits from the City of Troy prior to performing any construction work on the construction and installation of the Detention/Retention Facilities and the fountain to be placed in accordance with the engineering detention/retention plans. During such construction, excess sediment, if any, shall be removed and disposed of at an offsite approved disposal location when and if the elevation of sediment in the Detention/Retention Facilities Easement is equal to the sediment removal elevation shown and required on the engineering detention/retention plans. Grantee and Grantor, their respective agents, employees, contractors, suppliers and equipment shall have access to Grantor Property as necessary to complete work under the engineering detention/retention plans attached to the PUD Development Agreement.

4.2 Completion of Construction of the Detention/Retention Facilities in Accordance with Engineering Detention/Retention Plans. From and after the completion by Grantee of all work required under the engineering detention/retention plans, the Detention/Retention Facilities shall be maintained, repaired, revised and corrected, if necessary, in accordance with the separate Reciprocal Easement Maintenance Agreement entered into between the Grantor and Grantee of even date herewith, as it may be modified in writing from time to time by the Parties, their successors and assigns.

5. **Duration.** The Detention/Retention Facilities Easement granted herein is for the benefit of, shall inure to, and shall be appurtenant to, the Grantee Property. The Detention/Retention Facilities Easement shall bind and inure to the benefit of all of the Parties hereto and their respective heirs, successors and assigns, including, without limitation, all subsequent owners of the Detention/Retention Facilities Easement and the Grantor Property and the Grantee Property, and all persons or entities claiming under or through them, and shall continue in perpetuity provided that both Grantor and Grantee Properties are used for the purposes contemplated in the PUD Development Agreement. Any person or entity acquiring an interest in the Grantee Property or the Grantor Property shall be bound by this Detention/Retention Facilities Easement, but only as to the Grantor Property or the Grantee Property, or portion of either such Property acquired by such person or entity and only to the extent such Property utilizes the Detention/Retention Facilities Easement for the water detention/retention or surface drainage from or to its Property. Although persons and entities may be released under this Paragraph if they are no longer Owners of portions of the Grantor Property or Grantee Property, the easements, covenants and restrictions set forth herein shall continue to be a benefit to and a servitude upon said Grantor Property and Grantee Property as set forth in this Detention/Retention Facilities Easement running with the land in perpetuity, except as provided above.

IN WITNESS WHEREOF, Grantor and Grantee have executed this Detention/Retention Facilities Easement as of the date first above written.

[Signatures on Following Page]

"GRANTEE":

NP TROY, LLC
a Missouri limited liability company,

By:_____

Its: _____

"GRANTOR":

THE CITY OF TROY,
a Michigan municipal corporation

By:_____
Dane Slater
Its: Mayor

And By:_____
Aileen Dickson
Its: City Clerk

STATE OF _____)
) SS
COUNTY OF _____)

On this _____ day of _____, 20___, before me appeared _____, personally known, and who, being by me duly sworn, did say that he is the Manager of NP Troy, LLC, a _____ limited liability company, and that the instrument was signed in behalf of said entity by authority duly conferred upon him and acknowledged said instrument to be the free act and deed of said entity.

_____
Print Name:_____
Notary Public, _____ County, _____
My Commission Expires:_____
Acting in the County of _____

STATE OF MICHIGAN)
) SS.
COUNTY OF OAKLAND)

On this _____ day of _____, 20___, before me appeared Dane Slater, to me personally known, and who, being by me duly sworn, did say that he is the Mayor of the City of Troy, Michigan, a Michigan municipal corporation and Aileen Dickson, to me personally known, and who, being by me duly sworn, did say that she is the City Clerk of the City of Troy, a Michigan municipal corporation, and that the instrument was signed in behalf of said municipal corporation by authority duly conferred upon them and acknowledged said instrument to be the free act and deed of said municipal corporation.

_____
Print Name:_____
Notary Public, Oakland County, Michigan
My Commission Expires:_____
Acting in the County of Oakland

COOPERATIVELY DRAFTED BY:
Thomas G. Sawyer, Esq.
Hutson, Sawyer, Rupp & Schroeder
292 Town Center Dr., Troy, MI 48084
AND
Allan T. Motzny, Assistant City Attorney
City of Troy
500 W. Big Beaver Rd., Troy, MI 48084
Troy, MI 48084

WHEN RECORDED RETURN TO:
Aileen Dickson, City Clerk
City of Troy
500 W. Big Beaver Rd.
Troy, MI 48084

EXHIBIT "A"

LEGAL DESCRIPTION: GRANTOR PROPERTY

EXHIBIT "B"

LEGAL DESCRIPTION: GRANTEE PROPERTY

EXHIBIT "C"

LEGAL DESCRIPTION AND SURVEY OF AREA OF GRANTOR PROPERTY ON WHICH DETENTION/RETENTION FACILITIES EASEMENT IS LOCATED

EXHIBIT "D"

THE PUD DEVELOPMENT AGREEMENT AND ITS ATTACHMENTS RELATING TO THIS DETENTION/RETENTION FACILITIES EASEMENT ARE NOT ATTACHED TO THIS EASEMENT, BUT ARE INCORPORATED HEREIN BY THIS REFERENCE AS THOUGH FULLY SET FORTH HEREIN

TEMPORARY GRADING, SLOPE, LAND BALANCING, EXCAVATION, SOIL REMOVAL, CONSTRUCTION LANDSCAPING AND INSTALLATION EASEMENT (APPROVED FORM)

TEMPORARY GRADING, SLOPE, LAND BALANCING, EXCAVATION, SOIL REMOVAL, CONSTRUCTION, LANDSCAPING AND INSTALLATION EASEMENT

THIS TEMPORARY GRADING, SLOPE, LAND BALANCING, EXCAVATION, SOIL REMOVAL, CONSTRUCTION, LANDSCAPING AND INSTALLATION EASEMENT (the "Temporary Easement") is made and entered into as of this _____ day of _____, 20____, by and between **NP TROY, LLC**, a Missouri limited liability company, whose address is 5015 NW Canal Street, Suite 200, Riverside, Missouri 64150 ("Grantee") and **THE CITY OF TROY**, a Michigan municipal corporation, whose address is 500 West Big Beaver Road, Troy, Michigan 48084 ("Grantor").

RECITALS:

A. Grantee owns the real property in the City of Troy, Oakland County, Michigan, legally described in **Exhibit "B"** attached hereto (the "Grantee Property"), on which Grantee Property Grantee intends to construct a facility for senior living and memory care residences and related improvements (collectively the "Grantee Property Improvements").

B. Grantor owns the real property which abuts the Grantee Property immediately to the north and is legally described in **Exhibit "A"** attached hereto (the "Grantor Property"), a portion of which Grantor Property the Grantee has requested and Grantor has agreed may be used by Grantee on a temporary basis for the construction and installation by Grantee of certain improvements which Grantee has agreed to make on the Grantor Property for the benefit of Grantor and which will also benefit the Grantee Property as more fully set forth in the detailed series of plans and drawings attached hereto and made a part hereof, as well as being set forth in substantial detail in a certain Development Agreement for Stonecrest Senior Living and Memory Care Residence and Jointly Developed Troy City Park Planned Unit Development dated

November 23, 2015 (the "PUD Development Agreement"), to which this Temporary Easement is attached and made a part thereof.

NOW, THEREFORE, in consideration of mutual covenants and the sum of One Dollar ($1.00), the receipt of legal sufficiency of which the parties hereto do hereby acknowledge, the parties hereto agree as follows:

1. **Grant of Easement.** Grantor hereby grants to Grantee, upon and subject to the terms, conditions and provisions herein set forth, a Temporary Easement over and upon and across the Grantor Property as necessary for the following purposes, which work and ultimate uses benefit both Grantor and Grantee and their respective Properties: grading, sloping, removal of trees and shrubbery, placing and relocation of engineered fill soil, cutting out and removal of certain fill and soil from necessary parts of Grantor Property to a part of Grantee Property, the operation of various equipment and installation of construction and related materials to complete the specified work, the construction, installation and operation of temporary and permanent detention/retention facilities and a detention/retention pond with electrically operated fountain, construction of a mutual access entryway from Livernois Road, a cross-access roadway extending from Livernois Road to the Grantee Property, construction of a parking lot with water detention facilities and water feature, extensive landscaping to be installed by Grantee, construction of sidewalks, walking paths, a trailhead, and other improvements to be placed by Grantee on both the Grantor Property and the Grantee Property, with temporary access across and use of the Grantor Property for such work, and the utilization of a work force, equipment, supplies and materials for all such improvements over, upon and across the Grantor Property and onto the Grantee Property pursuant to this Temporary Easement, the PUD Development Agreement and various other plans, specifications and details attached to and/or described in the PUD Development Agreement and made a part hereof by this reference, in connection with the

construction, installation and development of the Grantee Improvements on the Grantee Property and in connection with the construction, installation and improvements being made by Grantee on the Grantor Property, all of which are specifically referenced in and/or attached to the PUD Development Agreement, which is or will be recorded with the Oakland County Register of Deeds and is incorporated herein by this specific reference.

2. **Term.** The easement herein granted shall automatically terminate effective as of that date hereinafter specified in Section 7, entitled "Duration of Temporary Easement".

3. **Liability Insurance.** Grantee shall maintain or cause its general contractor to maintain a policy or policies of commercial general liability insurance against claims and liability on account of bodily injury, death and property damage incurred upon the Grantor Property arising out of the exercise of the Temporary Easement rights herein granted or otherwise caused by Grantee, its contractors or subcontractors or their respective agents or employees during the term of this Temporary Easement. Such insurance shall be carried in a financially responsible company or companies authorized to do business in Michigan, shall have combined single limits of not less than $1,000,000.00 per occurrence, and shall designate Grantor as an additional insured. Upon written request from Grantor, Grantee shall provide Grantor a certificate of insurance evidencing compliance with the insuring obligations set forth in this Section 3.

4. **Indemnification.** Grantee shall indemnify, defend and hold harmless Grantor from and against any and all liabilities, damages, expenses (including reasonable attorneys' fees), causes of action, suits, claims and judgments arising from loss of life, bodily injury and/or property damage on the Grantor Property, other than damages for lost profits, to the extent

caused by the acts or omissions of Grantee, its contractors or subcontractors, or their respective agents or employees during the term of this Temporary Easement.

5. **Restoration and Completion of Improvements by Grantee on Grantor Property.** Not later than sixty (60) days following the Termination Date specified in Section 7 hereof, Grantee shall, without cost to Grantor (except to the extent that Grantor has elected, by separate writing delivered to Grantee, to undertake certain simultaneous work relating to completion of the City Park on the Grantor Property) cause the Grantor Property to be completed as to the improvements, work and other matters permitted to be performed on the Grantor Property as specified in this Temporary Easement and in accordance with the various agreements relating to the work, improvements, landscaping and other matters as detailed in the PUD Development Agreement and its attachments relating to this Temporary Easement incorporated herein by this reference.

6. **General Provisions.** In the exercise of the Temporary Easement rights herein granted, Grantee shall comply with the requirements of all laws, ordinances and regulations of governmental authorities affecting the Grantor Property. All questions with respect to interpretation and construction of this Temporary Easement and the rights and liabilities of the parties hereunder shall be determined in accordance with the laws of the State of Michigan. Nothing contained in this Temporary Easement shall be deemed to create a partnership, joint venture or other joint enterprise between Grantor and Grantee, except that they agree to cooperate and coordinate their efforts and supervision in completing the construction work and improvements to be carried out on the Grantor Property and Grantee Property as referenced in this Temporary Easement and the PUD Development Agreement and its attachments relating to this Temporary Easement. All notices and other communications given hereunder shall only be effective if in writing and if served by registered or certified mail, return receipt requested and all

postage and charges prepaid, or by the U.S. Post Office Express Mail, FedEx or similar overnight courier which delivers only upon signed receipt of the addressee, addressed to Grantor at the address set forth above, and addressed to Grantee at the address set forth above. Subject to the term limitation provisions in Section 2 and Section 7 hereof, this Temporary Easement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Duration of Temporary Easement.** The Temporary Easement is for the benefit of, and shall be appurtenant to, the Grantee Property and the Grantor Property, since the improvements, earth moving, engineered soil relocation and other matters referenced in this Temporary Easement or the PUD Development Agreement are to be constructed, installed, performed and placed on both the Grantor Property and Grantee Property, and shall bind and inure to the benefit of the parties hereto and their respective heirs, successors and assigns, including, without limitation, all subsequent owners of the Grantor Property and the Grantee Property, respectively, and all persons or entities claiming under or through them during the term of this Temporary Easement. Any person or entity acquiring an interest in the Grantee Property or the Grantor Property shall be bound by this Temporary Easement during the term of this Temporary Easement, but only as to the portions of the Grantor Property or Grantee Property acquired by such person or entity. In addition, notwithstanding anything contained herein to the contrary, such person or entity shall be bound by this Temporary Easement only during the period such person or entity has an interest in such Grantor Property or Grantee Property or portions thereof, except as to obligations, liabilities or responsibilities that accrue during the period such interest is held. Although persons and entities may be released under this Section, the easements, covenants, restrictions, rights and obligations set forth herein shall continue to be a servitude upon the Grantor Property and a benefit to the Grantee Property running with the land until termination of this Temporary Easement in accordance with its terms. This Temporary

Easement shall terminate sixty (60) days after Grantee, its agents, employees and contractors have completed the work and improvements specified and required by Grantee under the terms, conditions and exhibits contained in the PUD Development Agreement.

IN WITNESS WHEREOF, the parties have executed this Temporary Easement Agreement effective as of the date first above written.

"GRANTEE":

NP TROY, LLC, a _____ limited liability company,

By:_____

Its: _____

"GRANTOR":

THE CITY OF TROY,

a Michigan municipal corporation

By:_____
Dane Slater
Its: Mayor

And By:_____
Aileen Dickson
Its: City Clerk

STATE OF _____)

) SS

COUNTY OF _____)

On this _____ day of _____, 20___, before me appeared _____, personally known, and who, being by me duly sworn, did say that he is the Manager of Troy, LLC, a Missouri limited liability company, and that the instrument was signed in behalf of said entity by authority duly conferred upon him and acknowledged said instrument to be the free act and deed of said entity.

_____

Print Name:_____

Notary Public, _____ County, _____

My Commission Expires:_____

Acting in the County of _____

STATE OF MICHIGAN)

) SS.

COUNTY OF OAKLAND)

On this _____ day of _____, 20___, before me appeared Dane Slater, to me personally known, and who, being by me duly sworn, did say that he is the Mayor of the City of Troy, Michigan, a Michigan municipal corporation and Aileen Dickson, to me personally known, and who, being by me duly sworn, did say that she is the City Clerk of the City of Troy, a Michigan municipal corporation, and that the instrument was signed in behalf of said municipal corporation by authority duly conferred upon them and acknowledged said instrument to be the free act and deed of said municipal corporation.

_____

Print Name:_____

Notary Public, Oakland County, Michigan

My Commission Expires:_____

COOPERATIVELY DRAFTED BY:
Thomas G. Sawyer, Esq.
Hutson, Sawyer, Rupp & Schroeder
292 Town Center Dr., Troy, MI 48084
AND
Allan T. Motzny, Assistant City Attorney
City of Troy
500 W. Big Beaver Rd., Troy, MI 48084
Troy, MI 48084

WHEN RECORDED RETURN TO:
Aileen Dickson, City Clerk
City of Troy
500 W. Big Beaver Rd.
Troy, MI 48084

EXHIBIT "A"

GRANTOR PROPETY

EXHIBIT "B"

GRANTEE PROPERTY

EXHIBIT "C"

THE PUD DEVELOPMENT AGREEMENT AND ITS ATTACHMENTS RELATING TO THIS TEMPORARY EASEMENT ARE NOT ATTACHED TO THIS TEMPORARY EASEMENT, BUT ARE INCORPORATED HEREIN BY THIS REFERENCE AS THOUGH FULLY SET FORTH HEREIN

MONUMENT SIGN EASEMENT AGREEMENT (APPROVED FORM)

MONUMENT SIGN EASEMENT AGREEMENT

THIS MONUMENT SIGN EASEMENT AGREEMENT (the "Sign Easement") is made and entered into as of this _____ day of _____, 20____, by and between **NP TROY, LLC**, a Missouri limited liability company, whose address is 5015 NW Canal Street, Suite 200, Riverside, Missouri 64150 ("Grantee") and **THE CITY OF TROY**, a Michigan municipal corporation, whose address is 500 West Big Beaver Road, Troy, Michigan 48084 ("Grantor").

W I T N E S S E T H:

WHEREAS, Grantor is the owner of certain real estate described on **Exhibit "A"** attached hereto and incorporated by reference (the "Grantor Property"); and

WHEREAS, Grantee desires to install and maintain a monument sign to be placed on a Sign Easement to be located on the Grantor Property which monument sign will identify the name, address and location of the Grantee senior living and memory care residences to be located on the Grantee Property. Both the Monument Sign and the Sign Easement are to be located on the Grantor Property; and

WHEREAS, the real property benefitted by the Sign Easement and the Monument Sign as hereafter more fully described, is the Grantee Property described on **Exhibit "B"** attached hereto ("Grantee Property"); and

WHEREAS, the Monument Sign and the Sign Easement will be located on that portion of the Grantor Property legally described and surveyed on **Exhibit "C"** attached hereto and

incorporated herein by this reference (the "Sign Easement"), which Sign Easement property is the servitude property under this Sign Easement..

NOW, THEREFORE, in consideration of the sum of One Dollar ($1.00), the receipt and legal sufficiency of which is hereby acknowledged by the parties hereto, Grantor and Grantee agree as follows:

1. Grantor hereby grants and conveys to the Grantee and Grantee's employees, agents, contractors, suppliers, successors and assigns, without payment of any fee or other charge being made therefor, the perpetual right and easement for installing, erecting, maintaining, replacing, repairing, removing, altering, and operating a Monument Sign, and any and all other necessary appurtenances respecting the Monument Sign now or hereafter located upon the Sign Easement, including a non-exclusive perpetual easement for public utility access, pedestrian, worker and vehicular access, equipment access, placement of construction materials and ingress and egress over, through and across the Sign Easement from public streets and over, through and across other easement access ways granted by Grantor to Grantee and providing for access to the Monument Sign and Sign Easement. The Monument Sign specifications, engineering, description and details are as set forth on Exhibit "D" attached hereto and incorporated herein by this reference (the "Monument Sign").

2. Grantor shall not create, suffer or permit at any time any obstruction to or interference with the access, ingress or egress over, across or upon the Sign Easement nor interfere with the use of the easement granted hereunder.

3. Grantee, at its sole expense, agrees to construct the Monument Sign as shown and described on the Sign Easement Property legally described and surveyed on **Exhibit "C"** attached hereto. Grantee shall, at its sole expense, be responsible to erect, install and place all stone, brick, steel, concrete, installation, structure materials, and covering and lettering on such Monument Sign. Grantee, at its sole expense, shall maintain the Monument Sign and the Sign Easement at all times in first class condition and repair.

4. Grantee shall, at its expense, continuously maintain a broad-form policy or policies of comprehensive public liability insurance providing coverage against claims and liability on account of bodily injury, death and property damage incurred upon or about the Sign Easement. Such insurance shall have a combined single limit of not less than $1,000.000.00 per occurrence, shall designate Grantor as an additional insured, and shall be carried in a company licensed in the State of Michigan. Upon request, Grantee will provide Grantor a certificate of insurance evidencing compliance with the insuring obligations set forth in this Section.

5. The rights, easements and covenants provided in this Sign Easement shall constitute a servitude on the Sign Easement Property, and shall run with the land. The provisions of this Sign Easement shall be binding upon and inure to the benefit of the parties hereto, their heirs, legal representatives, successors and assigns, and this Sign Easement shall be construed as a perpetual easement, provided that both the Grantor and Grantee Properties are used for the purposes contemplated in the PUD Development Agreement entered into between the parties on November 23, 2015, and not as a license or a lease. This Sign Easement shall be governed by and construed in accordance with the laws of the State of Michigan.

IN WITNESS WHEREOF, Grantor and Grantee have executed this Monument Sign Easement Agreement as of the date first above written.

[Signatures on Following Page]

"GRANTEE":

NP TROY, LLC, a Missouri limited liability company,

By:_____

Its: _____

"GRANTOR":

THE CITY OF TROY, a Michigan municipal corporation

By:_____
Dane Slater
Its: Mayor

And By:_____
Aileen Dickson
Its: City Clerk

STATE OF _____)
) SS
COUNTY OF _____)

On this _____ day of _____, 20___, before me appeared _____, personally known, and who, being by me duly sworn, did say that he is the Manager of NP Troy, LLC, a _____ limited liability company, and that the instrument was signed in behalf of said entity by authority duly conferred upon him and acknowledged said instrument to be the free act and deed of said entity.

_____
Print Name:_____
Notary Public, _____ County, _____
My Commission Expires:_____
Acting in the County of _____

STATE OF MICHIGAN)
) SS.
COUNTY OF OAKLAND)

On this _____ day of _____, 20___, before me appeared Dane Slater, to me personally known, and who, being by me duly sworn, did say that he is the Mayor of the City of Troy, Michigan, a Michigan municipal corporation and Aileen Dickson, to me personally known, and who, being by me duly sworn, did say that she is the City Clerk of the City of Troy, a Michigan municipal corporation, and that the instrument was signed in behalf of said municipal corporation by authority duly conferred upon them and acknowledged said instrument to be the free act and deed of said municipal corporation.

_____
Print Name:_____
Notary Public, Oakland County, Michigan
My Commission Expires:_____
Acting in the County of Oakland

COOPERATIVELY DRAFTED BY:
Thomas G. Sawyer, Esq.
Hutson, Sawyer, Rupp & Schroeder
292 Town Center Dr., Troy, MI 48084
AND
Allan T. Motzny, Assistant City Attorney
City of Troy
500 W. Big Beaver Rd., Troy, MI 48084
Troy, MI 48084

WHEN RECORDED RETURN TO:
Aileen Dickson, City Clerk
City of Troy
500 W. Big Beaver Rd.
Troy, MI 48084

EXHIBIT "A"

GRANTOR PROPERTY

EXHIBIT "B"

GRANTEE PROPERTY

EXHIBIT "C"

SIGN EASEMENT PROPERTY DESCRIPTION AND SURVEY

EXHIBIT "D"

MONUMENT SIGN SPECIFICATIONS, ENGINEERING PLANS AND DETAILS

RECIPROCAL EASEMENT MAINTENANCE AGREEMENT (APPROVED FORM)

RECIPROCAL EASEMENT AND MAINTENANCE AGREEMENT

THIS RECIPROCAL EASEMENT AND MAINTENANCE AGREEMENT (the "REMA") is made and entered into as of this _____day _____of, 20_____, by and between **THE CITY OF TROY**, a Michigan municipal corporation, whose address is 500 West Big Beaver Road, Troy, Michigan 48084 ("City of Troy) and **NP TROY, LLC**, a Missouri limited liability company, whose address is 5015 NW Canal Street, Suite 200, Riverside, Missouri 64150 ("Developer").

RECITALS:

A. City of Troy is the owner of the real property legally described in **Exhibit "A"** attached hereto ("City Property"). Developer is the owner of the real property legally described in **Exhibit "B"** attached hereto ("Developer Property"), which Developer Property is adjacent to the City Property.

B. The City Property and Developer Property is presently unimproved property, but it is currently intended by the Parties that a portion of the Developer Property will be developed as senior living and memory care residences complex with related parking areas, entrance way, driveways, landscaping, detention/retention pond, lights, utilities, signage and other improvements to be constructed on the Developer Property and/or on the City Property.

C. As part of a Development Agreement for the Stonecrest Senior Living and Memory Care Residences on the Developer Property, the City and Developer intend to jointly cooperate, plan, participate in and share certain improvements, and the ongoing maintenance,

upkeep, replacement and repair thereof, including certain perpetual easements to be located on the City Property as part of a City Park to be developed on the City Property in ac ordance with the City of Troy Planned Unit Development provisions of its Zoning Ordinance.

D. As part of the simultaneous development of the City Property and Developer Property, the City of Troy has agreed to grant and share with the Developer certain perpetual easements across the City Property, including the following described specific perpetual easements (the "Perpetual Easements"):

1. Parking Facilities Easement dated of even date herewith;
2. Entrance Drive and Cross-Access Driveway Easement dated of even date herewith;
3. Monument Sign Easement dated of even date herewith;
4. Detention/Retention Facilities Easement dated of even date herewith.

These Perpetual Easements will be constructed and installed on the City Property at Developer's cost for construction and installation of the referenced easement improvements in the areas depicted in the above referenced Perpetual Easements and pursuant to detailed engineering plans and drawings described in a certain PUD Development Agreement for Stonecrest Senior Living and Memory Care Residences and Jointly Developed City Park Planned Unit Development dated November 23, 2015 (the "PUD Development Agreement"), to which this REMA is attached and made a part thereof. In addition thereto, the Developer has agreed, in accordance with the PUD Development Agreement, to place certain landscaping, public sidewalks, asphalt pathways, electric lighting, a fountain, underground utilities and other improvements on the City Property both within and outside of the Perpetual Easements and to install, construct and erect significant facilities and improvements on the Developer Property.

E. In addition thereto, the City of Troy has the express right, but not the obligation, to construct and install on the City Property, both within and outside of the Perpetual Easements areas, at the sole cost of the City of Troy, such other improvements and betterments as the City of Troy may determine from time to time in its sole discretion.

F. This REMA is intended to set forth the terms, conditions and agreements between the City of Troy and the Developer with respect to the respective maintenance, upkeep, repair and replacement obligations of the City of Troy and the Developer, both within (a) the Perpetual Easements, and (b) as to other improvements and betterments which the Developer has agreed and is required to erect and install on the City Property pursuant to the PUD Development Agreement; and (c) as to improvements and betterments which the City of Troy may in the future elect to construct or install at its own cost and/or with funds granted by the Developer to the City of Troyforthe City of Troy's sole use in constructing and installing other improvements on the City of Troy City Park Property from time to time; and (d) facilities, utilities and other improvements which the Developer is required to construct, erect and install on the Developer's Property pursuant to the PUD Development Agreement.

NOW, THEREFORE, for value received, and in consideration of One ($1.00) Dollar, the receipt of which is hereby acknowledged, the City of Troy andthe Developer do hereby agree that the separate responsibility of each of them with respect to the maintenance, upkeep, repair and replacement and payment of the cost thereof relating to the following: (a)improvements and betterments within the Perpetual Easements and improvements on the City Property; (b)other improvements to be made by the Developer to other parts of the City of Troy City Park Property; (c) other improvements which the City of Troy erects or installs from time to time to other parts of the City Property as part of its development of the City Park Property; and (d) the responsibility of the Developer, only, as to any improvements installed or placed on the

Developer Property pursuant to the PUD Development Agreement are hereafter set forth as follows:

1. Attachment "1" to the REMA, which is attached hereto and made a part hereof, contains a detailed outline of maintenance, upkeep, repair and replacement responsibilities of the City of Troy and the Developer on the Grantor Property (including the Perpetual Easements and other areas of the City Property) and by the Developer on the Developer Property.

2. The full approved engineering drawings and other specific details of the construction of the improvements and betterments to be made by the Developer within the Perpetual Easements; to be made by the Developer on other areas of the City Property; and the improvements, facilities and betterments to be placed by the Developer on the Developer Property, are described in the PUD Development Agreement incorporated herein by reference. The respective responsibilities of the City of Troy and the Developer are detailed in Attachment 1. The responsibility for maintenance, upkeep, repair and replacement of improvements and betterments which the City of Troy hereafter elects to make to the City Park Property are totally the ongoing responsibility of the City of Troy.

3. This Paragraph sets forth a more detailed narrative explanation of the installation and construction of improvements being made, maintenance, upkeep, repair and replacement by the City of Troy and the Developer on the City Property. In the event of any conflict between Attachment 1 and this Paragraph 3, this Paragraph 3 shall control:

(a) Sidewalks, pathways, drives and parking lot:

The City of Troy will be responsible for maintenance, upkeep, repair and replacement of all pathways andasphalt or concrete sidewalks on the City of Troy Property. The Developer will be responsible for maintenance, upkeep, repair and replacement of all drives and parking areas on the City of Troy Property and will be responsible for snow removal on all concrete sidewalks, parking and drive areas and for repair of any sidewalks, parking areas and drive areas that are damaged as a result of the snow removal. The City of Troy will allow the Developer to designate certain areas of the parking lot or City of Troy Property for piling of snow. The City of Troy shall include the shared parking lot and drive lanes in its regular street sweeping schedule.

(b) Landscaping and lawn maintenance:

The City of Troy shall be responsible for all landscaping and plant maintenance on the City of Troy Property except for any planting beds surrounding the Developer Monument Sign Easement on the City of Troy Property. The Developer will extend the irrigation system to the landscaping areas within the Entrance Drive and Cross Access Driveway Easement and will be responsible for all costs associated with the irrigation system repair and upkeep in that area.

(c) Fountain/Water feature:

The Fountain/Water Feature fountain within the Detention/Retention Facilities Easement will include a single floating fountain with a decorative spray pattern with a height no less than 8' and an appropriately sized pump to accommodate flow to provide adequate aeration to the detention/retention pond. The Developer will provide and install the fountain feature. The power circuiting for the water feature will be fed from a panel located within the Developer Property facility, and will be run on a continuous basis. Fountain will be removed and stored by Developer during the winter months where freezing temperatures do not allow for the operation of pump. TheDeveloper will be responsible for all maintenance, upkeep, repair and replacement of this Fountain/Water Feature.

(d) Site Lighting:

The Developer will install site lighting over the parking and drive cross-access lane areas on the City of Troy Property and shall pay for the ongoing utility cost, repair, maintenance, upkeep or replacement of the lighting improvements. The circuiting for the lighting will be fed from lighting circuits located on a panel within the Developer facility. Lighting will be controlled by a photocell controller.

(e) Other Park Amenities/Underground improvements:

The Developer will provide underground infrastructure for water, sewer, and electric utilities to one designated location on the City of Troy Property for future improvements to be made by the City of Troy. The Developer will have no ongoing maintenance, upkeep, repair or replacement obligations for any improvements constructed or installed by theCity of Troy, including improvements installed with funds from the $50,000 grant provided by the Developer. Upon connection to the water and sewer improvements for public use, the City of Troy will assume all maintenance, upkeep, repair and replacement responsibility of those lines. Electric Utility Infrastructure will include 1 pathway installed per DTE Energy Standards for small service buried primary power conduit.

(f) Storm Water Improvements:

The Developer will maintain all underground structures and underground pipes, to ensure proper functionality and flow of water. The Developer will keep the pipes, structures, and area in the immediate vicinity of all inlet and outlet structures reasonably clear of all silt and debris to allow for sufficient drainage of the stormwater facilities.

The City of Troy will perform all landscaping, planting, and general clean up maintenance of the detention/retentionfacilities within the Perpetual Easements on the City of Troy Property.

4. The City of Troy and the Developer do hereby agree to use their reasonable best efforts at all times to perform their duties and obligations under this REMA to high quality standard of care in a diligent manner. Both Parties acknowledge and recognize that the timing of

the performance of their respective duties and obligations under this REMA will depend upon weather conditions, planting seasons and the availability of materials to perform their duties and obligations under this REMA.

5. The City of Troy Property shall be maintained in a manner consistent with the condition of the Property upon completion of the improvements. All lawns shall be mowed regularly, plantings shall be maintained appropriately, and grounds are to be kept in a clean and presentable manner to ensure public safety. If either Party believes that the other is failing to meet its duties and obligations hereunder in a timely and appropriate manner, it will notify the other Party in writing, identifying therein the details of its objection to the performance by the other Party. The written notice shall be given in accordance with the Notice provisions of Paragraph 10 of this REMA.

The Party receiving the written notice shall have fifteen (15) days to (a) cure such duty or obligation; (b) explain in writing why it cannot be done in fifteen (15) days and indicate in writing the projected time period to complete the duty or obligation; or (c) explain in writing to the other Party why it does not believe it is in violation of its duties and obligations under this REMA. In the event the parties have any disagreement as to whether they are meeting their duties or obligations under this REMA, they agree to meet through their designated representatives and make a good faith effort to resolve the dispute. If the Parties are unable to resolve the dispute within thirty-five (35) days of the original notice to cure, they may submit the matter or matters in dispute to final and binding arbitration before a single arbitrator at the nearest local office of the American Arbitration Association ("AAA") in accordance with AAA rules of commercial arbitration. In that event, the costs of the arbitration will be equally shared by both Parties, but if the matter must be decided by a written decision of the selected arbitrator,

as opposed to a settlement resolution, the arbitrator may award arbitration costs and reasonable attorney fees to the prevailing party as determined by the arbitrator in his/her sole discretion. In the alternative, this REMA can be enforced in accordance with the terms of the PUD Development Agreement.

If the duty or obligation referenced in the written notice is deemed by the complaining Party providing such written notice to be an emergency, the Party shall explain the detailed nature of the emergency in such written notice to the Party alleged to be in violation. In that event, if the emergency matter is not resolved within two (2) business days after the notice to correct is sent, the complaining Party providing such written notice may elect to correct the alleged emergency duty or obligation and submit a detailed invoice for its costs of correction to the Party alleged to be in violation of its duty or obligation.

If the Party claimed to owe the cost of correction fails or refuses to pay such sums, either Party may submit a claim for the invoice amount to binding and final arbitration in the same manner as specified above in this Paragraph 5. In the alternative, this REMA can be enforced in accordance with the terms of the PUD Development Agreement.

6. This REMA can be amended or modified in writing at any time by written agreement of the Parties hereto, their respective successors or assigns.

7. This REMA shall continue in full force and effect as long as the PUD Development Agreement is in force and effect, except as it may be modified or amended in accordance with Paragraph 6 above.

8. In the event the Developer or its successors and/or assigns discontinues the use of the Developer Property for the purposes contemplated in the PUD Development Agreement and/or the maintenance obligations of the Developer as set forth in this REMA are discontinued for any reason, the City of Troy may notify Developer, its successors or assigns, setting forth the reason or reasons for the City of Troy claimed discontinuance by the Developer of its obligations under this Paragraph, which prior written notice shall be given in accordance with the Notice provision in Paragraph 10 of this REMA, that the City intends to assume such obligations and assess the costs incurred by the City of Troy in doing so as a lien on the Developer Property to be collected in the same manner as provided by law for the collection of real property taxes. If Developer, its successors or assigns, believes in good faith that it has not discontinued its obligations under this Paragraph 8, it shall have fifteen (15) days to (a) cure such discontinued obligation; or (b) explain in writing to the City of Troy why it cannot correct the discontinued obligation in fifteen (15) days and indicate in writing the projected time period to complete the correction of the discontinued obligation; or (c) explain in writing to the City of Troy why it does not believe it is in violation of its duties and obligations under this Paragraph 8 of the REMA. In the event the Parties continue to have any disagreement as to whether Developer has discontinued its duties or obligations under this REMA, the Parties agree to meet through their designated representatives and make a good faith effort to resolve the dispute. If the Parties are unable to resolve the dispute by written agreement within thirty-five (35) days of the original Notice from the City of Troy, the City of Troy may then exercise all of its rights under this Paragraph 8 including the assumption of maintenance obligations and the imposition of a lien to cover the costs in doing so.

9. The Developer, its successors and assigns, shall indemnify and hold harmless the City of Troy, from and against any and all claims for injuries and/or damages, excluding

therefrom claimed loss of profits, arising out of the Developer's duties and obligations under this REMA, except those claims arising from the negligence or willful misconduct of the City of Troy, its agents, employees, licensees or invitees; provided, however, that in no event is the Developer required to indemnify and hold harmless the City of Troy from and against any and all claims for injuries and/or damages arising out of the duties and obligations of the City of Troy under this REMA.

Likewise, the City of Troy, its successors and assigns, shall indemnify and hold harmless the Developer, its successors and assigns, from and against any and all claims for injuries and/or damages, excluding therefrom claimed loss of profits, arising out of the City of Troy's duties and obligations under this REMA, except those claims arising from the negligence or willful misconduct of the Developer, its agents, employees, licensees or invitees; provided, however, that in no event is the City of Troy required to indemnify and hold harmless the Developer from and against any and all claims for injuries and/or damages arising out of the duties and obligations of the Developer under this REMA.

10. All notices, demands, requests and other communications required or permitted hereunder ("Notices") shall be in writing, addressed to the City of Troy and the Developer at their respective addresses set forth on the first page of this REMA, or at such other address as any Party may designate by notice delivered in accordance with this Paragraph. Each Notice shall be given by registered or certified mail, return receipt requested, with all postage and charges prepaid, or by U.S. Post Office Express Mail, FedEx, or similar overnight courier which delivers only upon signed receipt of the addressee.

All provisions of this REMA shall be covenants running with the land pursuant to applicable Laws. All exhibits referred to herein and attached hereto are incorporated herein by this reference. Any paragraph headings and captions in this REMA are for reference and convenience only and shall not enter into the interpretation hereof. Whenever the context so

requires, the singular shall be deemed to include the plural and the plural the singular, and the masculine, feminine or neuter gender shall be deemed to include any other gender. The terms "hereof", "herein", "hereunder" and similar terms shall be deemed to refer to this REMA. The terms "include", "includes" and "including" shall be deemed to be followed by the words "without limitation".

This REMA shall be interpreted in accordance with the Laws of the State of Michigan.

[Signatures on Following Pages]

IN WITNESS WHEREOF, Developer has caused this Reciprocal Easement Maintenance Agreement to be executed the day and year first above written

"Developer"

NP TROY, LLC
a Missouri limited liability company

By:_____
Name:
Its: Manager

Dated:_____

STATE OF MICHIGAN)
) SS
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this ____ day of _____, 2015, by _____, the Manager of NP Troy, LLC, a Missouri limited liability company, on behalf of the company.

_____
Print Name:_____
Notary Public, Oakland County, Michigan
My Commission Expires:_____

Acting in the County of Oakland

IN WITNESS WHEREOF, the City of Troy has caused this Reciprocal Easement Maintenance Agreement to be executed the day and year first above written.

"City of Troy"

CITY OF TROY, a Michigan Municipal Corporation

By:_____
Name: Dane Slater
Its: Mayor

Dated:_____

By:_____
Name: Aileen Dickson
Its: City Clerk

Dated:_____

STATE OF MICHIGAN)
) SS.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2015, by Dane Slater, Mayor and Aileen Dickson, City Clerk of the City of Troy, a Michigan municipal corporation, on behalf of the Corporation.

_____
Print Name:_____
Notary Public, Oakland County, Michigan

My Commission Expires:_____
Acting in the County of Oakland

COOPERATIVELY DRAFTED BY:
Thomas G. Sawyer, Esq.
Hutson, Sawyer, Rupp & Schroeder
292 Town Center Dr., Troy, MI 48084
AND
Allan T. Motzny, Assistant City Attorney
City of Troy
500 W. Big Beaver Rd., Troy, MI 48084
Troy, MI 48084

WHEN RECORDED RETURN TO:
Aileen Dickson, City Clerk
City of Troy
500 W. Big Beaver Rd.
Troy, MI 48084

ATTACHMENT 1 to REMA

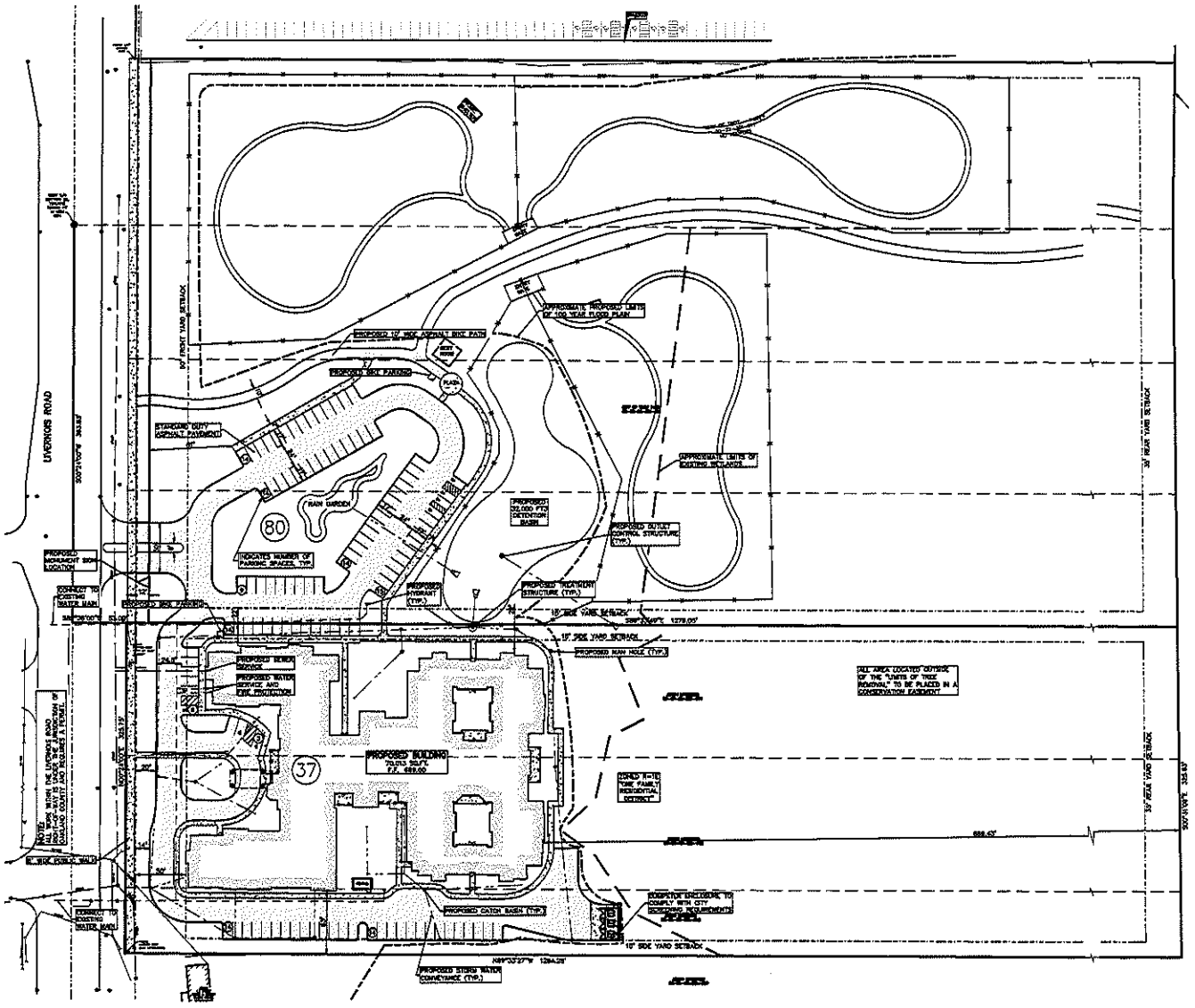
DETAILED OUTLINE OF MAINTENANCE, UPKEEP, REPAIR AND REPLACEMENT RESPONSIBILITIES OF GRANTOR (CITY OF TROY) AND GRANTEE (DEVELOPER) ON GRANTOR PROPERTY (INCLUDING THE PERPETUAL EASEMENTS AND OTHER AREAS OF THE CITY PARK PROPERTY) AND BY GRANTEE (DEVELOPER) ON THE GRANTEE PROPERTY

ITEM	GRANTOR/CITY OF TROY RESPONSIBLE FOR MAINTENANCE, UPKEEP, REPLACEMENT AND REPAIR	GRANTEE/DEVELOPER RESPONSIBLE FOR MAINTENANCE, UPKEEP, REPLACEMENT AND REPAIR
GRANTOR/CITY PARK PROPERTY PERPETUAL EASEMENT AND OTHER LOCATIONS		
Concrete Sidewalks – Snow Removal (including along Livernois Road and connecting sidewalks from parking lot to Developer assisted living facility, but *excluding* asphalt or concrete pathways)		X
Concrete Sidewalks – Slab Replacement/Repairs	X	
Asphalt Pathways – Snow Removal	X	
Asphalt Pathways – Surface Repairs	X	
Parking Lot/Entry Drive Easement – Repair and Resurfacing/Restriping		X

Parking Lot/Entry Drive Easement Sweeping	X	
Parking Lot/Entry Drive Easement – Snow Removal		X
Parking Lot Easement Lighting – Electricity Cost		X
Parking Lot Easement Lighting - Repair/replace Fixtures Bulbs, electrical conduit and wires as necessary		X
City Park Lighting (Non Parking Lot Easement) – Electricity Cost	X	
City Park Lighting (Non Parking Lot Easement) - Repair/replace Fixtures Bulbs, electrical conduit and wires as necessary	X	
Storm Water Detention/Retention Easement (Including Bio Swales) – Grass cutting, weed removal, bank stabilization, general cleanup, dredging and repair	X	
Storm Water Detention/Retention Easement - Keep pipes and drains reasonably clear of debris		X
Fountain – Mechanical Maintenance, Repair and Replacement and Storage		X
City Park Amenities (All Buildings, Structures, Fences/Gates) – Maintenance, Repair and Replacement	X	
City Park Amenities – Electricity Cost	X	
City Park Trash Pickup/Dog Waste Pick-up and Bag Replacement	X	
Ancillary City Park Amenities (including but not limited to Benches, Trash Cans, Bicycle Racks) – Maintenance, Repair and Replacement	X	

Turf Grass – Grass Cutting, Sod Replacement, Weed Maintenance, Repairs and Replacement on City of Troy Property	X	
City Park Landscaping (All non-turf grass Plant Materials including trees, shrubs, flowers) – Pruning, Watering, Replacement	X	
Assisted Living Facility Ground Sign Easement – Maintenance/Repair/Replacement		X
Signage for City Park, Wayfinding Signage, Traffic Signage – Maintenance/Repair/Replacement	X	
Underground Utilities included in the PUD improvements by Developer – Water, Sanitary Sewer, Storm Sewer, etc. – Maintenance and Repair		X
All Future Improvements to City Park not included in the PUD Agreement improvements by Developer – Maintenance, Repair, Replacement and Utility Costs	X	
GRANTEE/DEVELOPER/GRANTEE PROPERTY		
All Facilities, Utilities and Improvements on Grantee Property, Maintained by Grantee/Developer		X

EXHIBIT E
PRELIMINARY SITE PLAN

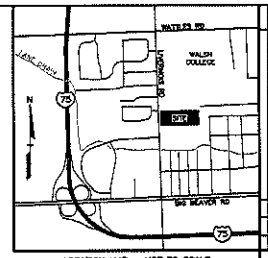


GRAPHIC SCALE

-50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

N



LOCATION MAP – NOT TO SCALE

LEGEND

SITE DATA TABLE:

PER REVISED FINAL ZONING ORDINANCE AND ZONING MAP AS AVAILABLE ON THE CITY OF TROY WEBSITE, DATED OCTOBER 16, 2012.

EXISTING ZONING:
R-1E

SITE AREA:
SITE AREA = 8.59 ACRES

SETBACKS:	REQUIRED	PROVIDED
FRONT YARD:	50'	50'
SIDE YARDS:	15'	15'
REAR YARD:	35'	888.43'

BUILDING INFORMATION:
PROPOSED BUILDING AREA = 70,000 SQ.FT.
MAXIMUM ALLOWABLE LOT COVERAGE = 30%
PROPOSED LOT COVERAGE =(91,624 SQ.FT. or 12%
MAX ALLOWABLE BUILDING HEIGHT = 30'
THE PROPOSED BUILDING HEIGHT VARIES TO 35'-6" AT IT'S HIGHEST POINT.

SITE CALCULATIONS:
CONVALESCENT CENTER MINIMUM AREA OF 2,000 SF OF SITE AREA FOR EACH (1) BED + 500 SF OF OPEN SPACE
8.59 ACRES > 100+2000 SF. + 500 SF.

PARKING CALCULATIONS:

100 BEDS, 87 ROOMS.
CONVALESCENT AND NURSING FACILITIES REQUIRE THE LESSOR OF 1 SPACE PER EACH 3 BEDS OR 2 ROOMS + 1 SPACE PER EMPLOYEE.
REQUIRED PARKING = 100/3 + 20 = 54 SPACES
PARKING PROVIDED = 117 SPACES INCLUDING 6 BARRIER FREE SPACES

Project:	20151-01 NORTH POINT - TROY SENIOR CARE	
Location:	Troy, MI	
Date:	9/15/2015	
Project No:	2015-1-01	

25 YEAR STORM DETENTION DESIGN (OAKLAND COUNTY DESIGN METHOD)

Contributing Area (A):	9.73	AC.
Allowable Discharge (Qa)	1.95	C.F.S. (=0.2 CFS/AC)
Coefficient of Runoff (Cr):	0.39	

Calculation of Required Discharge/Acre

Qa = ((Qa)/(A)(Cr): 0.51

T = .25 + ((8(0.5)/Qa))0.5: 100.29

Storage Volume Required:

Vs = (15999)(Cr)(T-25)) +450a(T): 0259.74

Vt = (Vs)(A)(Cs 31377.4

NOT FOR CONSTRUCTION

STATE OF MICHIGAN
CIVIL & DUNKIS
ENGINEER
0201044A5

CAUTION!

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net

PEA

PROFESSIONAL ENGINEERING ASSOCIATES
2430 Rochester Ct. Suite 100
Troy, MI 48083-1672
Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.peainc.com

NORTHPOINT DEVELOPMENT
5895 NEW CENTRE DR. SUITE 200
TROY, MI 48098

PRELIMINARY SITE PLAN
STONECREST
PART OF THE SW. 1/4 OF SEC. 26, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	ESB	DR.	ESB / SWR	PEA	P.M.	DES.

V:\PROJECTS\2015\2015-1-01\CAD\Dwg\Site Plan\2015-1-01 SP-PRELIM.dwg

NO.	DESCRIPTION	DATE
	REVISIONS	

ORIGINAL ISSUE DATE: SEPTEMBER 2, 2015

PEA JOB NO. 2015-1-01

SCALE: 1" = 50'

DRAWING NUMBER:
C-2.0