



GRIFFIN FUNERAL HOME JSP17-13

Griffin Funeral Home JSP17-13

Public hearing at the request of Novi Funeral Home, LLC for Special Land Use Permit, Preliminary Site Plan, and Stormwater Management Plan Approval. The subject property is located in section 20, at the southwest corner of Eleven Mile Road and Beck Road and is zoned RA (Residential Acreage). The applicant is proposing to construct a 13,000 sq. ft. building, 98 parking spaces, 23 landbank parking spaces, and associated site improvements for use as a funeral home. A special land use is required for a non-residential use in a residential zoned property.

Required Action

Approve/Deny the Special Land Use Permit, Preliminary Site Plan, and Stormwater Management Plan

REVIEW	RESULT	DATE	COMMENTS
Planning	Approval recommended	03-30-17	<ul style="list-style-type: none"> • Special Land Use for proposing mortuary establishment in Residential Acreage (RA) • Approval of up to 23 landbank parking spaces • Waiver for not providing a noise impact statement • Determination of adequacy of proposed 12 spaces for assembly • Items to be addressed by the applicant prior to Final Site Plan approval
Engineering	Approval recommended	03-31-17	<ul style="list-style-type: none"> • City Council design and construction standards variance for absence of sidewalk along Eleven Mile Road • Items to be addressed by the applicant prior to Final Site Plan approval
Landscaping	Approval recommended	03-23-17	<ul style="list-style-type: none"> • Waiver for not meeting the minimum height required for berm along western property line • Waiver for absence of required berm and buffer along south property line due to future anticipated non-residential use • Waiver for reduction of minimum required street trees along Beck Road • Items to be addressed by the applicant prior to Final Site Plan approval
Traffic	Approval recommended	04-04-17	<ul style="list-style-type: none"> • Items to be addressed by the applicant prior to Final Site Plan approval
Wetlands	Approval recommended		<ul style="list-style-type: none"> • Administrative approval of minor wetland permit • Letter of authorization for encroaching into 25 foot wetland buffers

			<ul style="list-style-type: none"> • Applicant to contact MDEQ for any additional permits • Items to be addressed by the applicant prior to Final Site Plan approval
Woodlands	Not Applicable		
Façade	Approval recommended	03-29-17	
Fire	Approval recommended	03-21-17	<ul style="list-style-type: none"> • Items to be addressed by the applicant prior to Final Site Plan approval

MOTION SHEET

Approval – Special Land Use Permit

In the matter of Griffin Funeral Home JSP17-13, motion to **approve** the Special Land Use Permit based on and subject to the following:

- a. The proposed use will not cause any detrimental impact on existing thoroughfares *(based on Traffic review)*;
- b. The proposed use will not cause any detrimental impact on the capabilities of public services and facilities *(as this area was already planned for development)*;
- c. The proposed use is compatible with the natural features and characteristics of the land *(because the plan has minor impacts on existing natural features)*;
- d. The proposed use is compatible with adjacent uses of land *(because the proposed use conforms to the standards of the district and the requirements of mortuary establishments)*;
- e. The proposed use is consistent with the goals, objectives, and recommendations of the City's Master Plan for Land Use *(the project creates an aesthetically pleasing development, especially in residential areas)*;
- f. The proposed use will promote the use of land in a socially and economically desirable manner *(as the proposed use will provide a service needed in the community)*;
- g. The proposed use is (1) listed among the provision of uses requiring special land use review as set forth in the various zoning districts of this Ordinance, and (2) is in harmony with the purposes and conforms to the applicable site design regulations of the zoning district in which it is located; and
- h. *(additional comments here if any)*

(This motion is made because the plan is otherwise in compliance with Article 3, Article 4, Article 5, and Article 6 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)

- AND -

Approval – Preliminary Site Plan

In the matter of Griffin Funeral Home JSP17-13, motion to **approve** the Preliminary Site Plan based on and subject to the following:

- a. Approval of up to 23 landbank parking (121 required, 98 provided, 23 land banked) due to Planning Commissions finding below, which is hereby granted;
 - i. The applicant has demonstrated through substantial evidence that the specified occupant and building use will require less parking than what is required by the Zoning Ordinance;
 - ii. Parking will not occur on any street or driveway;
 - iii. Parking will not occur on any area not approved and developed for parking;
 - iv. Parking will not occur on that area where parking construction has been landbanked until such time as that area is constructed for such parking;
 - v. The requested parking landbanking will not create traffic or circulation problems on or off site; and
 - vi. The requested parking landbanking will be consistent with the public health, safety and welfare of the City and the purposes of the Zoning Ordinance;
- b. Waiver for absence of noise impact statement due to the nature of use, which is hereby granted;

- c. Landscape waiver from Section 5.5.3.B.ii and iii to permit reduction of required height for berm along western property line (4.5 feet to 6 feet required) provided the minimum required opacity for screening is met along the property line , which is hereby granted;
- d. Landscape waiver from Section 5.5.3.B.ii for absence of required berm along southern property, due to applicants written intent that the property to the south will be developed non-residential and to retrofit the site to provide the required buffer and screening if it is developed residential in future, which is hereby granted;
- e. Landscape waiver from section 5.5.3.E.i.c for reduction of minimum required street trees along Beck Road (13 required, 10 provided) due to conflicts with corner clearance, which is hereby granted;
- f. City Council Variance from Section 11-256.b of Design and Construction Standards Manual for absence of required sidewalk along Eleven Mile Road due to practical difficulties for extension of sidewalk beyond the site boundary, provided the applicant pays the city the current construction cost of the sidewalk, as approved by the City Engineer;
 - a. The findings of compliance with Ordinance standards in the staff and consultant review letters and the conditions and the items listed in those letters being addressed on the Final Site Plan; and
 - b. *(additional conditions here if any)*

(This motion is made because the plan is otherwise in compliance with Article 3, Article 4, and Article 5 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)

- AND -

Approval – Stormwater Management Plan

In the matter of Griffin Funeral Home JSP17-13, motion to **approve** the Stormwater Management Plan based on and subject to the following:

- a. The findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan; and
- b. *(additional conditions here if any)*

(This motion is made because the plan is otherwise in compliance with Chapter 11 of the Code of Ordinances and all other applicable provisions of the Ordinance.)

- OR -

Denial – Special Land Use Permit

In the matter of Griffin Funeral Home JSP17-13, motion to **deny** the Special Land Use Permit...*(because the plan is not in compliance with Article 4, Article 5, and Article 6 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)*

- AND -

Denial – Preliminary Site Plan

In the matter of Griffin Funeral Home JSP17-13, motion to **deny** the Preliminary Site Plan...*(because the plan is not in compliance with Article 3, Article 4, and Article 5 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)*

- AND -

Denial – Stormwater Management Plan

In the matter of Griffin Funeral Home JSP17-13, motion to **deny** the Stormwater Management Plan...*(because the plan is not in compliance with Chapter 11 of the Code of Ordinances and all other applicable provisions of the Ordinance.)*

MAPS

Location

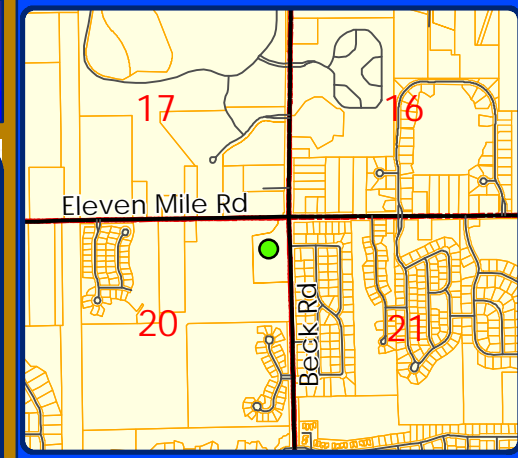
Zoning

Future Land Use

Natural Features

17-13 Griffin Funeral Home (SLU)

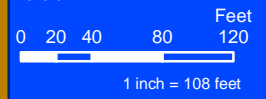
Location Map



LEGEND
 Sections

 **City of Novi**
Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

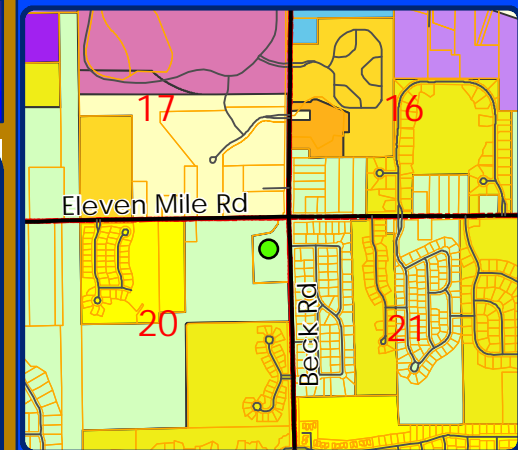
Map Author: Sri Komaragiri
Date: 04/13/17
Project: 17-13 Griffin Funeral Home
Version #: 1



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

17-13 Griffin Funeral Home (SLU)

Zoning Map



LEGEND

- Sections
- R-A: Residential Acreage
- R-1: One-Family Residential District
- R-3: One-Family Residential District
- R-4: One-Family Residential District
- RM-1: Low-Density Multiple Family
- RM-2: High-Density Multiple Family
- I-1: Light Industrial District
- I-2: General Industrial District
- OS-1: Office Service District
- OSC: Office Service Commercial



City of Novi

Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

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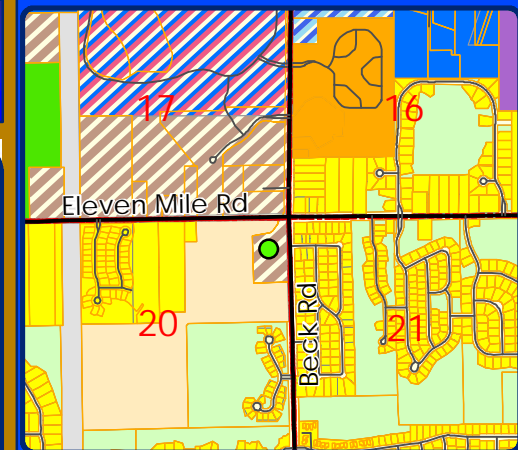


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17-13 Griffin Funeral Home (SLU)

Future Land Use



LEGEND

Sections

FUTURE LAND USE

Single Family

Multiple Family

Suburban Low-Rise

Community Office

Office RD Tech

Office Commercial

Industrial RD Tech

Educational Facility

Public Park

Private Park

Utility



City of Novi

Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
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1 inch = 108 feet

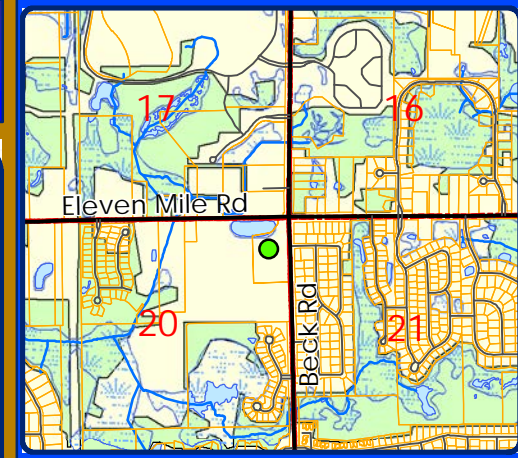


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17-13 Griffin Funeral Home (SLU)

Natural Features



- LEGEND**
- Sections
 - WETLANDS
 - WOODLANDS

 **City of Novi**
Dept. of Community Development
City Hall / Civic Center
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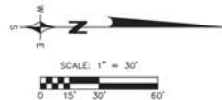
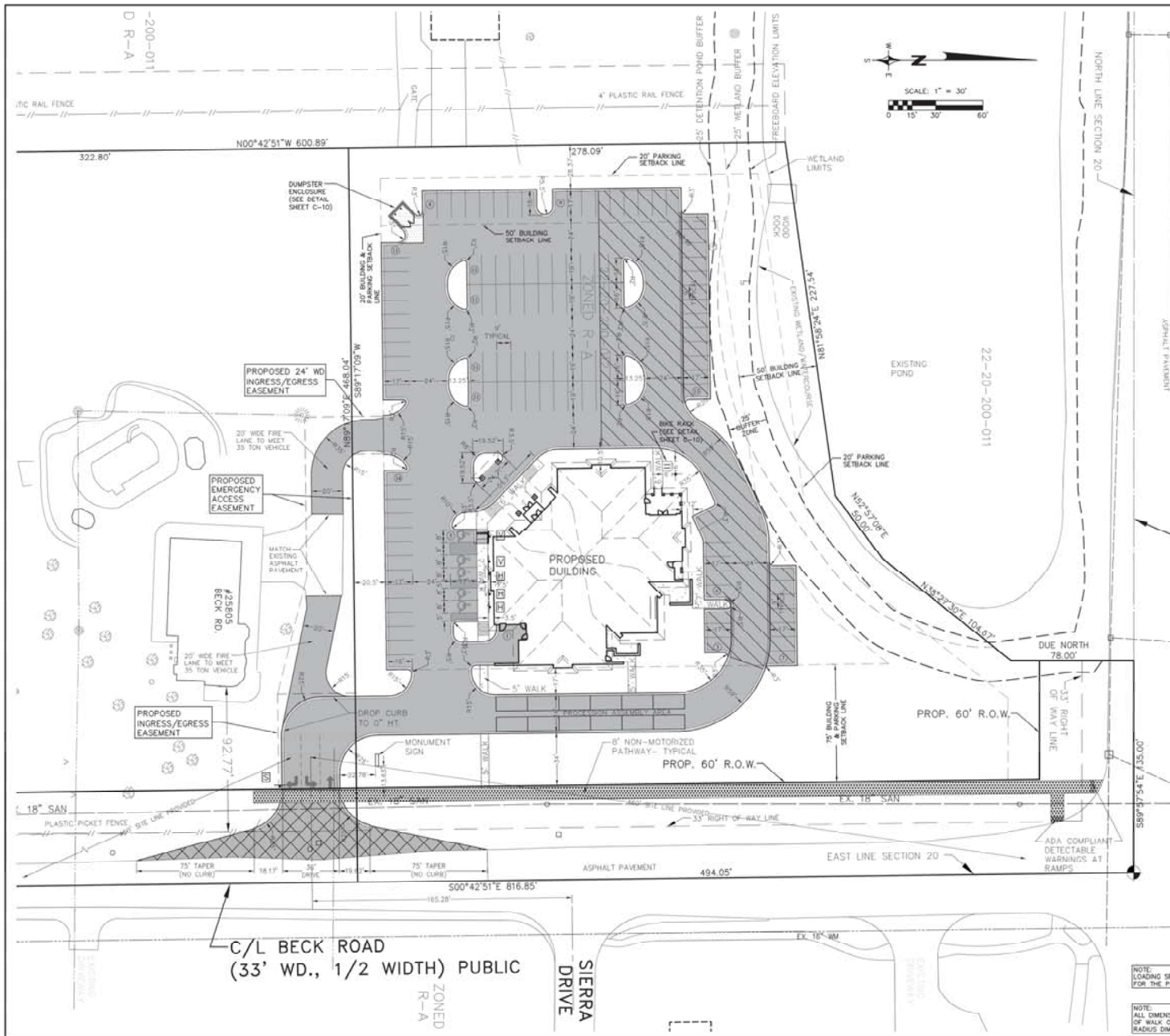
0 20 40 80 120 Feet
1 inch = 108 feet

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SITE PLAN

(Full plan set available for viewing at the Community Development Department.)



C/L ELEVEN MILE ROAD
 (33' WD., 1/2 WIDTH) PUBLIC
 ZONED R-3
 22-17-400-028

- 4.0" NON-REINFORCED CONCRETE (MOOT P1-3500 PSI MK) WITH 6.0" MOOT 21AA LIMESTONE PREPARED SUBGRADE +
PROPOSED NON-MOTORIZED PATHWAY
- 6.0" CONCRETE (MOOT P1-3500 PSI MK) WITH #4 @ 20" X 20" WIRE MESH 4.0" COMPACTED MOOT CL # SAND PREPARED SUBGRADE +
PROPOSED CONCRETE DUMPSTER PAD
- 2.0" MOOT BITUMINOUS MIXTURE 1100L, 20AA BEARING COURSE 2.0" MOOT BITUMINOUS MIXTURE 1100L, 20AA LEVELING COURSE 8.0" MOOT 21AA AGGREGATE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT PREPARED SUBGRADE +
PROPOSED BITUMINOUS PARKING LOT AND DRIVES
- 2.0" MOOT BITUMINOUS MIXTURE 1100L, 20AA BEARING COURSE 2.0" MOOT BITUMINOUS MIXTURE 1100L, 20AA LEVELING COURSE 8.0" MOOT 21AA LIMESTONE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT PREPARED SUBGRADE +
PROPOSED BITUMINOUS PARKING LOT AND DRIVES (WITH LIMESTONE BASE)
- 1.5" MOOT BITUMINOUS MIXTURE SE1, BEARING COURSE 2.5" MOOT BITUMINOUS MIXTURE 3C, LEVELING COURSE 8.0" MOOT 21AA AGGREGATE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT PREPARED SUBGRADE +
PROPOSED BITUMINOUS BECK ROAD R.O.W.
- 4.0" CONCRETE (3,000 PSI MK) 4.0" COMPACTED MOOT CL # SAND PREPARED SUBGRADE +
PROPOSED WALK

NOTE: SUBGRADE SHALL BE PREPARED COMPACTED TO USE MAXIMUM UNIT WEIGHT BEFORE PLACING CURB AND OUTLET AND AGGREGATE BASE IN ACCORDANCE WITH THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER.

SIGN TABLE

TYPE	MMUTCD	DESCRIPTION	QUANTITY
STOP SIGN	R1-1	24"x36" OCTAGON WITH WHITE LEGEND & BORDER ON RED BACKGROUND	1
BARRIER FREE PARKING	R7-8	12"x18" GREEN LEGEND & BORDER ON WHITE BACKGROUND WITH BLUE WHEELCHAIR SYMBOL AND WORD "ONLY" IN THE WHITE SPACE BELOW THE WHEELCHAIR	5
VAN ACCESSIBLE (PLAQUE)	R7-8P	12"x18" GREEN LEGEND & BORDER ON WHITE BACKGROUND	2

NOTE: ALL TRAFFIC CONTROL SIGNAGE SHALL COMPLY WITH CURRENT MAINT CONTROL STANDARDS.

SIGN LEGEND:

- STOP SIGN (R1-1)
- BARRIER FREE PARKING (R7-8)
- BARRIER FREE PARKING (R7-8) WITH VAN ACCESSIBLE (PLAQUE) (R7-8P)



NOTE: THE OWNER OF THE PROPERTY SHALL REPORT ANY PROPOSED CHANGE IN USE OCCUPANCY FOR FURTHER EVALUATION OF LAND BANK PARKING, LAND BANK SPACES MAY BE INSTALLED PRIOR TO CHANGE IN USE OR OCCUPANCY IF DETERMINED.

Julian J. Wargo, Jr.

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/15/17	JAW									
PSP REVIEW	03/20/17	JAW									

ZEIMET WOZNAK
 CIVIL ENGINEER & LAND SURVEYOR
 1000 GRAND BYWAY EAST, SUITE 100
 NEW BRIDGES, MICHIGAN 48163
 P: (313) 467-4800 F: (313) 467-8222 www.zw-engineers.com

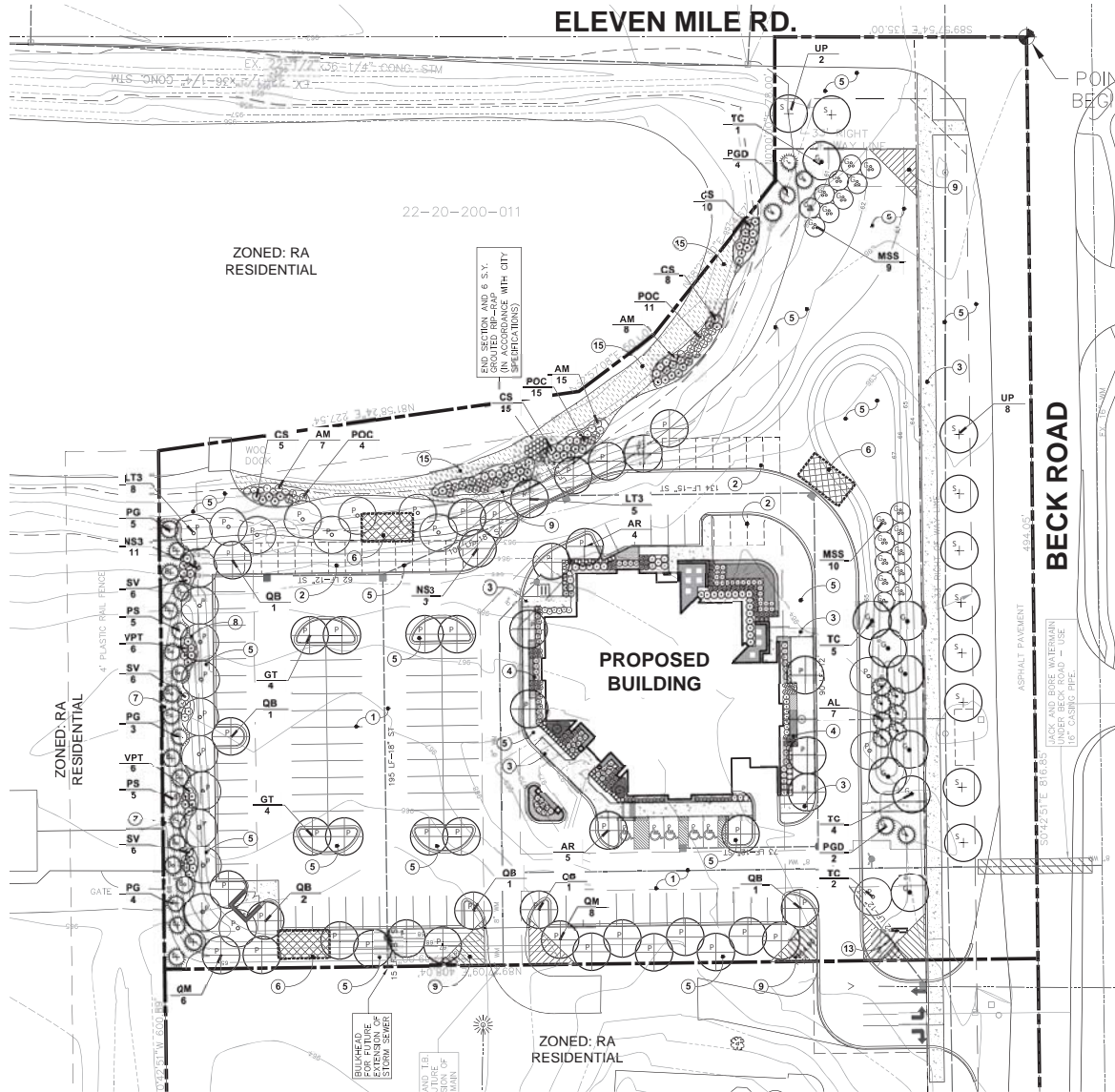
MISS DIG SYSTEM, INC.
 THREE FILL, WINDING ROAD, REPAIR TUN DRILL, 674 THE MEADOW, HOLLAND, MI 48423
 1-800-842-7174

PROJECT SPONSOR:
 NOV FUNERAL HOME, L.L.C.
 7707 MIDDLEBELT RD.
 WESTLAND, MI 48185

(734) 968-9401

BANKED PAVING AND DIMENSION PLAN
GRiffin FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

DATE: 2-16-17 SCALE: HOR: 1" = 30'
 DESIGNED BY: JAW JOB NO.: 16121
 DRAWN BY: JAW SHEET: C-3.1



SITE PLANTING PLAN
SCALE 1" = 30'

NOTE KEY:

- ① ASPHALT PARKING LOT
- ② LAND BANKED PARKING, SEE CIVIL ENGINEERING DRAWINGS
- ③ CONCRETE SIDEWALK - SEE CIVIL DWGS
- ④ PROPOSED FOUNDATION PLANTING, SEE SHEET LP-2
- ⑤ EXISTING LAWN OVER MINIMUM 4" DEPTH TOPSOIL, SEE TOPSOIL NOTE BELOW, ALL DISTURBED AREAS
- ⑥ SNOW DEPOSIT AREA
- ⑦ CONTINUOUS MULCH BED
- ⑧ SHOVEL CUT BED EDGE TYPICAL
- ⑨ 25' CLEAR VISION TRIANGLE
- ⑩ 2" DIA. SIGSTONE OVER FILTER MAT
- ⑪ 4" RYERSON STEEL EDGING, 2" THICK
- ⑫ 2 FT. X 2 FT. CONC. PATIO STEPPING STONE
- ⑬ PROJECT SIGN - SEE ARCH. DRAWINGS
- ⑭ PROPOSED BIRD RACKS
- ⑮ NATIVE SEEDING, SEED TO EDGE OF WATER, SEE MIX SHEET

LANDSCAPE DATA

R.O.W. Frontage	
Eleven Mile Road Frontage:	76 in. ft.
Beck Road Frontage:	434 in. ft.
Total Frontage:	510 in. ft.
Canopy/Evergreen Trees Req.:	15 Trees
Canopy/Evergreen Trees Prov.:	15 Trees
Sub-Canopy Trees Req.:	15 Trees
Sub-Canopy Trees Prov.:	15 Trees
Total Trees Provided:	30 Trees
Street Trees	
Eleven Mile Road Frontage:	51 in. ft.
(Measured From Sign Date Triangles)	
(1 Tree/45 in. ft.)	
Trees Required:	1 Trees
Beck Road Frontage:	385 in. ft.
(Measured From Sign Date Triangles)	
(1 Tree/45 in. ft.)	
Trees Required:	9 Trees
Total Trees Provided:	10 Trees
PARKING LOT INTERIOR PARKING LOT LANDSCAPING	
Total Square Footage of Parking Spaces:	16,316 s.f.
Required Landscape Area:	1,832 s.f.
(Parking space s.f. x 0.10 x 1)	
Additional Paved Vehicular Use Area:	34,711 s.f.
Required Landscape Area:	1,736 s.f.
(V.U.A. x 0.05 x 1)	
Total s.f. of Landscape Area Req.:	3,568 s.f.
Total s.f. of Landscape Area Prov.:	3,622 s.f.
Parking Lot Tree Requirement:	
Total Trees Required (1 per 75 s.f.):	45 Trees
Total Trees Provided:	45 Trees
PARKING PERIMETER LANDSCAPING	
Parking Lot Perimeter:	789 L.F.
Canopy/Evergreen Trees Req.:	23 Trees
(1 Tree/35 in. ft.)	
Total Trees Provided:	23 Trees
BUILDING FOUNDATION PERIMETER LANDSCAPING	
Building Perimeter:	477 L.F.
Landscape Area Req.:	3,816 s.f.
(Building Perimeter x 8.0')	
Landscape Area Prov.:	4,002 s.f.

PLANTING KEY

- GREENBELT TREES
- STREET TREES
- BUFFER TREES
- PARKING LOT TREES

GENERAL PLANTING REQ.:

- A THE WORK SHALL CONSIST OF PROVIDING ALL NECESSARY MATERIAL, LABOR, EQUIPMENT, TOOLS, AND SUPERVISION REQUIRED FOR THE COMPLETION AS SHOWN ON THE DRAWING.
- B ALL PLANT MATERIALS SHALL CONFORM TO THE TYPE STATED ON THIS PLAN SET. SPECIES SHALL BE THE NUMBER LISTED ON THE PLANT LIST SET LARGER. ALL DIMENSIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "A.L.N. STANDARDS FOR NURSERY STOCK."
- C 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.
- D ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER, TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED. ALL SINGLE TRUNK SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- E ALL MULTI-STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SHEDDING TREE ON THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- F ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FALL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST DORMANT SEASON.
- G THE CONTRACTOR IS RESPONSIBLE FOR PLANTING THE MATERIALS AT THE CORRECT GRADES AND SPACING. THE PLANTS SHALL BE ORIENTED AS TO GIVE THE BEST APPEARANCE.
- H WHEN THE PLANT HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED WITH A TOPSOIL AND NATIVE SOIL MIXTURE. GROUNDSIDE FILLING, PATTING AND SETTLING WITH WATER.
- I ALL PLANT MATERIALS SHALL BE PRUNED AND INJURIES REPAIRED. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE REMOVAL OF DEAD OR INJURED TWIGS AND TO COMPENSATE FOR THE LOSS OF ROOTS FROM TRANSPORTING. CUTS SHOULD BE MADE, LEAVING NO STUBS.
- J THE CONTRACTOR AGREES TO GUARANTEE ALL PLANT MATERIALS FOR THE PERIOD OF ONE YEAR, AT THAT TIME THE OWNER'S REPRESENTATIVE SHALL BE PERMITTED TO INSPECT AND PLANT MATERIAL WITH 20% DIE BACK, AS DETERMINED BY THE OWNER'S REPRESENTATIVE SHALL BE REJECTED. THIS GUARANTEE INCLUDES THE FURNISHING OF NEW PLANTS, LABOR AND MATERIALS. THESE NEW PLANTS SHALL ALSO BE GUARANTEED FOR THE PERIOD OF ONE YEAR.
- K TOPSOIL SHALL BE FINE GRADE FORTIFIED TOPSOIL OF CLAY LOAM CHARACTER CONTAINING AT LEAST 5% BUT NOT MORE THAN 20% BY WEIGHT OF ORGANIC MATTER. 1/2" FINE SAND, 1/4" TO 5/16" FINE SAND, 1/8" TO 1/4" FINE SAND, 1/16" TO 1/8" FINE SAND, PLANT MOULDS, STICKS AND OTHER FOREIGN MATERIALS.
- L NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITH DRIP LINE OF EXISTING TREES.
- M IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS, SHADES AND WINDS AREAS.
- N ALL PLANTING BEDS SHALL RECEIVE 4" SHREDDED BARK MULCH. SEE SPECIFICATIONS.
- O SOIL SHALL BE TWO YEAR OLD "BANDONCHERAZELLE" KENTUCKY BLUE GRASS GROWN IN A SOIL NURSERY ON LOAM SOIL.

PLANT MIX

- ALL PLANTING PERENNIAL BEDS TO RECEIVE:**
- 1 - 4" GUY BLUE CANTONIA PLANT
 - 1 - 4" LB BIR DRUMMAHER
 - 1 - 1.8" BAG SHIMENS 13-13
 - MULTI PURPOSE FERTILIZER
- PER 100 SQ FT BED AREA.**
- HAND TILL INTO SOIL TO A DEPTH OF 12" MINIMUM**

MULCH

- MULCH TO BE DOUBLE SHREDDED HARDWOOD BARK MULCH**
- NO GROUND WOOD PALLETTE MULCH PERMITTED**

TOPSOIL

- CONTRACTOR TO TILL OR DISK SUBGRADE TO 4" DEPTH AND INSTALL 4" COMPACTED DEPTH TOPSOIL IN ALL LAWN AREAS. TOPSOIL SHALL BE PROVIDED BY CONTRACTOR

IRRIGATION

- ALL LANDSCAPE AREAS WILL BE IRRIGATED WITH A FULLY AUTOMATIC IRRIGATION SYSTEM.

NOT TO BE USED AS CONSTRUCTION DRAWING

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY

CLIENT:
NOVI GRIFFIN FUNERAL HOME, LLC
7707 MIDDLEBELT RD.
WESTLAND, MI 48185

LANDSCAPE PLAN
GRIFFIN FUNERAL HOME
NOVI, MICHIGAN, SEC 20

DATE: 12/10/17 SCALE: HOR: 1" = 30'
REVISION: 01 SCALE: VER: 1" = 30'
JOB NO: ODPD-121702
DRAWN BY: SD SHEET LP-1
desiplanningdesign.com

PLANNING REVIEW



PLAN REVIEW CENTER REPORT

March 30, 2017

Planning Review GRIFFIN FUNERAL HOME

JSP 17-13

Petitioner

David Griffin

Review Type

Preliminary Site Plan and Special Land Use

Property Characteristics

Section	20	
Site Location	Southwest corner of Beck Road and Eleven Mile Road	
Site School District	Novi Community School District	
Site Zoning	RA: One Family Residential with a PSLR: Planned Suburban Low Rise Overlay	
Adjoining Zoning	North	R-3 with PSLR Overlay
	East	RA: One Family Residential
	West	RA: One Family Residential
	South	RA with PSLR Overlay
Current Site Use	Bosco Farm and Homestead	
Adjoining Uses	North	Vacant/Daycare/Senior Housing/Hospital
	East	Residential
	West	Novi Community School District/Park
	South	Bosco Homestead/Novi Community School District/Park
Site Size	3.93 acres (parent parcel is 7.40 acres)	
Plan Date	March 10, 2017	

Project Summary

The applicant is proposing to construct a 12,176 sq. ft. building, 98 parking spaces (plus 23 landbank parking spaces), and associated site improvements for use as a funeral home. The large parcel is proposed to be split with the north section for the funeral home business (being considered in this site plan review) and the south section for future development (to be determined during a future site plan review). The applicant has chosen to develop the north section under the RA zoning as a special land use.

Recommendation

Approval of the ***Preliminary Site Plan is recommended.*** The plan mostly conforms to the requirements of the Zoning Ordinance, with a few deviations listed in this and other review letters. **Planning Commission's approval for Special Land Use, Preliminary Site Plan, Landbank Parking, and Storm Water Management Plan is required.**

Special Land Use Considerations

The applicant is proposing a funeral home (Sec. 4.17 Mortuary Establishment) in RA: One Family Residential zoning, which requires special land use approval and must meet use standards outlined in Section 4.17.

Section 6.1.2.C of the Zoning Ordinance outlines specific factors the Planning Commission shall consider in the review of any Special Land Use:

- i. Whether, relative to other feasible uses of the site, the proposed use will cause any detrimental impact on existing thoroughfares in terms of overall volumes, capacity, safety, vehicular turning

- patterns, intersections, view obstructions, line of sight, ingress and egress, acceleration/deceleration lanes, off-street parking, off-street loading/unloading, travel times and thoroughfare level of service.
- ii. Whether, relative to other feasible uses of the site, the proposed use will cause any detrimental impact on the capabilities of public services and facilities, including water service, sanitary sewer service, storm water disposal and police and fire protection to service existing and planned uses in the area.
 - iii. Whether, relative to other feasible uses of the site, the proposed use is compatible with the natural features and characteristics of the land, including existing woodlands, wetlands, watercourses and wildlife habitats.
 - iv. Whether, relative to other feasible uses of the site, the proposed use is compatible with adjacent uses of land in terms of location, size, character, and impact on adjacent property or the surrounding neighborhood.
 - v. Whether, relative to other feasible uses of the site, the proposed use is consistent with the goals, objectives and recommendations of the City's Master Plan for Land Use.
 - vi. Whether, relative to other feasible uses of the site, the proposed use will promote the use of land in a socially and economically desirable manner.
 - vii. Whether, relative to other feasible uses of the site, the proposed use is
 - a. Listed among the provision of uses requiring special land use review as set forth in the various zoning districts of this Ordinance, and
 - b. Is in harmony with the purposes and conforms to the applicable site design regulations of the zoning district in which it is located.

Ordinance Requirements

This project was reviewed for conformance with the Zoning Ordinance with respect to Article 3 (Zoning Districts), Article 4 (Use Standards), Article 5 (Site Standards), and any other applicable provisions of the Zoning Ordinance. **Deviations from the Zoning Ordinance are listed below.**

Ordinance Deviations

1. Planning Commission waivers/approval/Consideration
 - I. Special land use request for proposing Funeral home in RA-One Family Residential district
 - II. Determine whether 12 spaces as indicated on the plan are sufficient for assembly area
 - III. Waive the requirement of Noise impact analysis
 - IV. Approve the request for Landbank parking, up to 23 spaces of the required 121 spaces
2. City Council DCS Variances
 - I. None required
3. Zoning Board of Appeals Variances
 - I. None required

Please see the attached chart for information pertaining to ordinance requirements. Items in **bold** below must be addressed and incorporated as part of the Final Site Plan submittal:

1. Adequate Assembly Area (Sec 4.17.1.A) The ordinance requires the site plan to show adequate area for off-street vehicles to be used in funeral processions, in addition to required off-street parking. The site plan shows 12 spaces indicated in the front yard. **The Planning Commission may wish to discuss whether 12 spaces will be adequate.**
2. Noise Impact Statement (Sec. 4.17.2.C): A noise impact statement is required as part of the special land use approval. **The applicant is requesting a waiver from the Planning Commission.**
3. Landbank Parking (Sec. 5.2.14): Landbanking may be permitted on the request of the applicant if the applicant can demonstrate that the number of parking spaces required under this section are in excess of the actual requirements for the functional use of the building for up to 25% of the required number of parking spaces. **The applicant has provided a narrative justifying the landbank request. The applicant is requesting a reduction of 23 spaces or 18% of the required parking spaces.**

4. Dumpster Enclosure (Sec. 21-145.(c) of City Code): Dumpster enclosures are regulated by the City Code and require screening and only certain materials are allowed. **The applicant has proposed a wire fabric with vinyl slats as the gates, which is not permitted. Only masonry, wood, or evergreen shrubbery are allowed as screening for the enclosure.**
5. Lighting and Photometric Plan (Sec. 5.7): All proposed developments require a photometric plan and exterior lighting details at time of Final Site Plan. **The applicant is encouraged to provide those prior to Planning Commission in order to address any waivers that may be needed, otherwise the plan will need to return to Planning Commission at Final Site Plan review, in the event the plan does not conform to the code.**
6. Property Split: The applicant is proposing to split the parent parcel into two parcels once Preliminary Site Plan is approved by the Planning Commission. **The property split needs to be recorded prior to Stamping Set Approval.**

Other Reviews

- a. Engineering Review: Additional comments to be addressed with Final Site Plan. Engineering recommends approval.
- b. Landscape Review: Landscape review has identified waivers that may be required. Refer to review letter for more comments. Landscape recommends approval.
- c. Wetlands Review: A City of Novi Wetland Minor Permit and Buffer Authorization are required for the proposed impacts to wetlands and regulated wetland setbacks. Additional comments to be addressed with Final Site Plan. Wetlands recommend approval.
- d. Woodlands Review: The proposed project limits do not contain regulated trees. Woodland review is not required this site plan.
- e. Traffic Review: Additional information to be provided with Final site plan submittal. Traffic recommends approval.
- f. Traffic Study Review: None required.
- g. Facade Review: A section 9 waiver would be required. Façade recommends approval.
- h. Fire Review: Additional comments to be addressed with Final Site Plan. Fire recommends approval.

NEXT STEP: Planning Commission Meeting

This Site Plan is scheduled to go before Planning Commission for **public hearing** on April 19, 2017. Please provide the following **no later than 9:00am, April 12, 2017** if you wish to keep the schedule.

1. Original Site plan submittal in PDF format. **NO CHANGES MADE. Provided with the initial submittal.**
2. A response letter addressing ALL the comments from ALL the review letters.
3. A color rendering of the Site Plan, if any. **OPTIONAL.**
4. A sample board of building materials if requested by our Façade Consultant. (Required for projects with Section 9 waiver request).

Final Site Plan Submittal

After receiving the Preliminary Site Plan approval, please submit the following for Final site plan review and approval

1. Seven copies of Final Site Plan addressing all comments from Preliminary review
2. Response letter **addressing all comments and refer to sheet numbers where the change is reflected.**
3. [Final Site Plan Application](#)
4. [Final Site Plan Checklist](#)
5. Engineering Estimate
6. Landscape Estimate
7. [Other Agency Checklist](#)
8. [Hazardous Materials Packet](#) (Non-residential developments)
9. [Non-Domestic User Survey](#) (Non-residential developments)
10. [No Revision Façade Affidavit](#) (if no changes are proposed for Façade)

11. Legal Documents (If required per the attached Planning and Engineering Legal Transmittals)

Electronic Stamping Set Submittal and Response Letter

After receiving Final Site Plan approval, please submit the following for Electronic stamping set approval:

1. Plans addressing the comments in all of the staff and consultant review letters in PDF format.
2. Response letter addressing all comments in ALL letters and ALL charts and **refer to sheet numbers where the change is reflected.**

Stamping Set Approval

Stamping sets are still required for this project. After having received all of the review letters from City staff the applicant should make the appropriate changes on the plans and submit **10 size 24" x 36" copies with original signature and original seals**, to the Community Development Department for final Stamping Set approval. Plans addressing the comments in all of the staff and consultant review letters should be submitted electronically for informal review and approval prior to printing Stamping Sets.

Site Addressing

A new address is required for this project. The applicant should contact the Building Division for an address prior to applying for a building permit. Building permit applications cannot be processed without a correct address. The address application can be found by clicking on this [link](#). Please contact Jeannie Niland [248.347.0438] in the Community Development Department with any specific questions regarding addressing of sites.

Signage

Exterior Signage is not regulated by the Planning Division or Planning Commission. Please contact Jeannie Niland (248.347.0438) for information regarding sign permits.

Parcel Split/Combination:

At this time, no property split has been submitted to the Assessing Department. The applicant must create this parcel prior to Stamping Set approval and/or applying for new site address. Plans will not be stamped until the parcel is created.

Pre-Construction Meeting

A Pre-Construction meeting is required for this project. Prior to the start of any work on the site, Pre-Construction (Pre-Con) meetings must be held with the applicant's contractor and the City's consulting engineer. Pre-Con meetings are generally held after Stamping Sets have been issued and prior to the start of any work on the site. There are a variety of requirements, fees and permits that must be issued before a Pre-Con can be scheduled. If you have questions regarding the checklist or the Pre-Con itself, please contact Sarah Marchioni [248.347.0430 or smarchioni@cityofnovi.org] in the Community Development Department.

Chapter 26.5

Chapter 26.5 of the City of Novi Code of Ordinances generally requires all projects be completed within two years of the issuance of any starting permit. Please contact Sarah Marchioni [248.347.0430 or smarchioni@cityofnovi.org] for additional information on starting permits. The applicant should review and be aware of the requirements of Chapter 26.5 before starting construction.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.735.5607 or skomaragiri@cityofnovi.org.





PLANNING REVIEW CHART: RA-One Family Residential & Special Land Use

Review Date: March 17, 2017
Review Type: Preliminary Site Plan
Project Name: JSP17-13 GRIFFIN FUNERAL HOME
Plan Date: March 10, 2017
Prepared by: Sri Komaragiri, Planner
Contact: E-mail: skomaragiri@cityofnovi.org; Phone: (248) 735-5607

Bold	To be addressed with the next submittal
<u>Underline</u>	To be addressed with final site plan submittal
<u>Bold and Underline</u>	Requires Planning Commission and / or City Council Approval
<i>Italics</i>	Notes to be noted

Item	Required Code	Proposed	Meets Code	Comments
Zoning and Use Requirements				
Master Plan <i>(adopted August 25, 2010)</i>	Single Family	Funeral Home	Yes	
Area Study	The site does not fall under any special category	NA	Yes	
Zoning <i>(Effective December 25, 2013)</i>	Residential Acreage (RA) Article 3	RA	Yes	
Uses Permitted (Sec 3.1.1.B & C)	Sec 3.1.1.B Principal Uses Permitted. Sec 3.1.1.C Special Land Uses	Mortuary Establishments	Yes	<u>Special Land Use approval required</u>
Use Standards: Mortuary Establishments Sec 4.17				
Adequate Assembly Area <i>(Sec 4.17.1.A)</i>	Area for off-street vehicles to be used in funeral processions, in addition to required off-street parking	12 spaces indicated in the front yard	Yes	<u>Planning Commission to determine if 12 spaces is adequate.</u>
Caretakers Residence <i>(Sec 4.17.1.B)</i>	Residence may be within the main building or the establishment	None proposed	NA	
Site Location <i>(Sec 4.17.2.A)</i>	Located on Major Thoroughfare	Located on Eleven Mile and Beck Road	Yes	
Planning Commission Consideration <i>(Sec 4.10.5)</i>	When reviewing such uses, the Planning Commission shall take into consideration the provisions of Section 7.12 of this Ordinance.	The applicant is notified of Special Land Use requirements including public hearing	Yes	
Noise Impact	A noise impact	None provided	No	<u>Applicant is seeking a</u>

COMMENTS	To be addressed with the next submittal	To be addressed with final site plan submittal	Requires Planning Commission and / or City Council Approval	Notes to be noted
Item	Required Code	Proposed	Meets Code	Comments
Statement (Sec 4.17.2.C)	statement is required subject to the standards of Section 5.14.10.B			<u>waiver from Planning Commission for noise analysis.</u>
Height, bulk, density and area limitations (Sec 3.1.1.E)				
Maximum % of Lot Area Covered (By All Buildings)	25%	7.1 %	Yes	
Building Height (Sec. 3.1.1.E)	35 feet or 2 ½ stories	21 ft. 6 inches	Yes	
Building Setbacks (Sec 3.1.1.E)				
Front @ Beck Road (Sec. 3.6.2.B)	75 ft.	75 ft.	Yes	
Exterior Side @ Eleven Mile (3.6.2.C)	75 ft. <i>(This applies to only to the 135 ft. frontage along 11 Mile Road)</i>		Yes	
Side (south & part North)	20 ft. one side, 50 ft. two sides		Yes?	
Rear (wes)	50ft.		Yes?	
Parking Setback (Sec 3.1.1.E)Refer to applicable notes in Sec 3.6.2				
Front @ Beck Road (Sec. 3.6.2.B)	75 ft.		Yes	
Exterior Side @ Eleven Mile (3.6.2.C)	75 ft. <i>(This applies to only to the 135 ft. frontage along 11 Mile Road)</i>		Yes	
Side (south & part North)	20 ft.		Yes	
Rear	20 ft.		Yes	
Note To District Standards (Sec 3.6.2)				
Area Requirements (Sec 3.6.2.A)	NA	Non-residential use	NA	
Parking Setbacks (Sec 3.6.2.B)	Refer to Sec 3.6.2 for more details	Minimum required setbacks are modified accordingly	Yes	
Building Setbacks (Sec 3.6.2.C)	Refer to Sec 3.6.2 for more details	Minimum required setbacks are modified accordingly	Yes	
Wetland/Watercourse Setback (Sec 3.6.2.M)	Refer to Sec 3.6.2 for more details	Wetland setbacks are shown	Yes	
Parking, Loading and Dumpster Requirements				

COMMENTS	To be addressed with the next submittal	To be addressed with final site plan submittal	Requires Planning Commission and / or City Council Approval	Notes to be noted
Item	Required Code	Proposed	Meets Code	Comments
Number of Parking Spaces Mortuary establishments (Sec. 5.2.12.C)	One (1) for each fifty (50) square feet of usable floor area For 6,030 SF of usable floor area, total required: 121 Spaces Usable floor area excludes lobby area	Regular parking: 98 Landbank Parking: 23 Total: 121 The applicant provided the usable floor area calculations and a letter requesting modification of the counts.	Yes	Staff agrees with the justification. Please revise the parking counts and usable floor area plan accordingly in the next submittal
Landbank Parking (Sec.5. 2.14) Land banking may be permitted on the request of the applicant if an applicant can demonstrate that the number of parking spaces required under this Section are in excess of the actual requirements for the functional use of the building, for up to twenty five (25) percent of the required number of parking spaces on the site, subject to the following conditions:	Maximum number of Landbank spaces: 25% of required parking 25 % *121 = 30 spaces	Proposed land banking = 23 spaces	Yes	<i>The narrative explains the reasons for landbank clearly. Proposed parking spaces would be adequate based on the counts provided per the existing funeral homes</i>
	Minimum number of spaces required prior to request for land banking: 45 spaces	Minimum required spaces: 126 Spaces	Yes	
	Alternative layout plan showing land bank parking	An alternate plan is overlaid onto existing plan	Yes	
	All areas designated for land banking shall be landscaped open space and may not be used for any other purposes	Proposed landbank area is open lawn	Yes	
	Planning Commission grants the request based on certain conditions	To be determined	Yes?	Refer to Section 5.2.14 for the conditions
	The owner of the property shall report any proposed change in use or occupancy for further evaluation	To be determined	Yes?	Add a note to the site plan
	Land bank spaces may be installed prior to change in use or occupancy, if determined	To be determined	Yes	<i>Note provided, but spelling error.</i>
Parking Space Dimensions and Maneuvering Lanes (Sec. 5.3.2)	- 90° Parking: 9 ft. x 19 ft. - 24 ft. two way drives - 9 ft. x 17 ft. parking spaces allowed along 7 ft. wide interior sidewalks as long as detail indicates a 4"	- 90° Parking: - 9 ft. x 17 ft. with 7ft. sidewalk - 9 ft. x 19 ft. - 24 ft., driveway	Yes	

COMMENTS	To be addressed with the next submittal	To be addressed with final site plan submittal	Requires Planning Commission and / or City Council Approval	Notes to be noted
	curb at these locations and along landscaping			
Parking stall located adjacent to a parking lot entrance (public or private) <i>(Sec. 5.3.13)</i>	Shall not be located closer than twenty-five (25) feet from the street right-of-way (ROW) line, street easement or sidewalk, whichever is closer	NA	Yes	
End Islands <i>(Sec. 5.3.12)</i>	<ul style="list-style-type: none"> - End Islands with landscaping and raised curbs are required at the end of all parking bays that abut traffic circulation aisles. - The end islands shall generally be at least 8 feet wide, have an outside radius of 15 feet, and be constructed 3' shorter than the adjacent parking stall as illustrated in the Zoning Ordinance 	End Islands are proposed	Yes	Refer to Traffic review
Barrier Free Spaces <i>Barrier Free Code</i>	For 101 to 150 = 5 spaces including 1 van accessible space	2 van accessible and 3 regular	Yes	
Barrier Free Space Dimensions <i>Barrier Free Code</i>	<ul style="list-style-type: none"> - 8' wide with an 8' wide access aisle for van accessible spaces - 5' wide with a 5' wide access aisle for regular accessible spaces 	Two types of accessible spaces are provided	Yes	
Barrier Free Signs <i>Barrier Free Code</i>	One sign for each accessible parking space.	One sign is proposed for each space	Yes	
Minimum number of Bicycle Parking <i>Sec. 5.16.1</i>	Two spaces	Two spaces	Yes	
Bicycle Parking General requirements <i>Sec. 5.16</i>	<ul style="list-style-type: none"> - No farther than 120 ft. from the entrance being served - When 4 or more spaces are required for a building with multiple entrances, the spaces shall be provided in multiple locations 	Yes NA	Yes	

COMMENTS	To be addressed with the next submittal	To be addressed with final site plan submittal	Requires Planning Commission and / or City Council Approval	Notes to be noted
Item	Required Code	Proposed	Meets Code	Comments
	<ul style="list-style-type: none"> - Spaces to be paved and the bike rack shall be inverted "U" design - Shall be accessible via 6 ft. paved sidewalk 	Yes Yes		
Bicycle Parking Lot layout Sec 5.16.6	Parking space width: 6 ft. One tier width: 10 ft. Two tier width: 16 ft. Maneuvering lane width: 4 ft. Parking space depth: 2 ft. single, 2 ½ ft. double	Proposed	Yes	
Loading Spaces Sec. 5.4.1	Required on all premises where receipt or distribution of materials or merchandise occurs and shall be separate from parking areas	Loading Spaces are not proposed; Applicant provided note that proposed use does not require one.	NA	
Dumpster Sec. 4.19.2.F	<ul style="list-style-type: none"> - Located in rear yard - Attached to the building or - No closer than 10 ft. from building if not attached - Not located in parking setback - If no setback, then it cannot be any closer than 10 ft, from property line. - Away from Barrier free Spaces 	Located in rear yard Away from building Not in the setback Away from barrier free	Yes	Refer to Traffic comments with regards to conflicts with the parking spaces
Dumpster Enclosure Sec. 21-145. (c)	<ul style="list-style-type: none"> - Screened from public view - A wall or fence 1 ft. higher than height of refuse bin - And no less than 5 ft. on three sides - Posts or bumpers to protect the screening - Hard surface pad. - Screening Materials: Masonry, wood or evergreen shrubbery 	Screened 8.25 ft. proposed Proposed to be 8.25 ft. Bollards proposed Concrete slab Screening is wire fabric with vinyl slats	No	Gates are not made of an approved material.
Lighting and Other Equipment Requirements				
Exterior lighting Sec. 5.7	Photometric plan and exterior lighting details needed at time of Final	A lighting plan is not provided at this time	No	

COMMENTS	To be addressed with the next submittal	To be addressed with final site plan submittal	Requires Planning Commission and / or City Council Approval	Notes to be noted
Item	Required Code	Proposed	Meets Code	Comments
	Site Plan submittal			
Roof top equipment and wall mounted utility equipment Sec. 4.19.2.E.ii	All roof top equipment must be screened and all wall mounted utility equipment must be enclosed and integrated into the design and color of the building	Roof top equipment is not proposed	NA	Provide a note on the site plan that no rooftop equipment is proposed.
Roof top appurtenances screening	Roof top appurtenances shall be screened in accordance with applicable facade regulations, and shall not be visible from any street, road or adjacent property.	Roof top equipment is not proposed	NA	
Sidewalk Requirements				
Article XI. Off-Road Non-Motorized Facilities	8 foot pathway is required along Eleven Mile and Beck Road	8 ft. sidewalk proposed along Beck Road; Payment into Sidewalk Escrow fund for 11 Mile	Yes	
Pedestrian Connectivity	Assure safety and convenience of both vehicular and pedestrian traffic both within the site and in relation to access streets	Sidewalks are proposed at all building exits and a connection to Beck Road is provided	Yes	
Building Code and Other Legal Requirements				
Building Code	Building exits must be connected to sidewalk system or parking lot.	All exist are connected to the parking lot	Yes	
Design and Construction Standards Manual	Land description, Sidwell number (metes and bounds for acreage parcel, lot number(s), Liber, and page for subdivisions).	Legal descriptions for all parcels are provided	Yes	

COMMENTS	To be addressed with the next submittal	To be addressed with final site plan submittal	Requires Planning Commission and / or City Council Approval	Notes to be noted
General layout and dimension of proposed physical improvements	Location of all existing and proposed buildings, proposed building heights, building layouts, (floor area in square feet), location of proposed parking and parking layout, streets and drives, and indicate square footage of pavement area (indicate public or private).	Provided	Yes	Refer to all review letters for additional information requested
Economic Impact	<ul style="list-style-type: none"> - Total cost of the proposed building & site improvements - Number of anticipated jobs created (during construction & after building is occupied, if known) 	The family of L.J. Griffin Funeral Homes currently has four locations in Westland, Canton, Livonia, and Northville. As owner operators they are imbedded in their neighborhoods and are active members in the business communities and will continue this tradition with the proposed facility in Novi. The initial investment for building and site improvements will be many millions of dollars and will create dozens of jobs during construction. A handful of employees will be required to operate the funeral home on a daily basis as well as services for the upkeep and maintenance of the building and grounds.	Yes	
Development/ Business Sign & Street addressing	<ul style="list-style-type: none"> - Signage if proposed requires a permit. - The applicant should contact the Building Division for an address prior to applying for a building permit. 	<p>Ground sign proposed at Beck Road entrance</p> <p>Site address will not be issued without a Site plan permit</p>	Yes	<p><u>For further information contact Jeannie Niland 248-347-0438.</u></p> <p><i>Apply for lot addressing prior to stamping set approval.</i></p>

COMMENTS	To be addressed with the next submittal	To be addressed with final site plan submittal	Requires Planning Commission and / or City Council Approval	Notes to be noted
Item	Required Code	Proposed	Meets Code	Comments
Project and Street naming	Some projects may need approval from the Street and Project Naming Committee.	This project does not need approval of the Project Name	NA	<u>For approval of project and street naming contact Richelle Leskun at 248-735-0579</u>
Property Split	All property splits and combination must be submitted to the Assessing Department for approval.	The site plan indicates one split; applicant has indicated they will split once they receive PSP approval	No	<u>Property split needs to be recorded prior to stamping set approval</u>
Lighting and Photometric Plan (Sec. 5.7)				
Intent (Sec. 5.7.1)	Establish appropriate minimum levels, prevent unnecessary glare, reduce spillover onto adjacent properties & reduce unnecessary transmission of light into the night sky	A lighting and photometric plan is not provided at this time		<u>One would be required at the time of final site plan that conforms to the requirements listed in this section</u>
Lighting Plan (Sec. 5.7.A.i)	Site plan showing location of all existing & proposed buildings, landscaping, streets, drives, parking areas & exterior lighting fixtures			
Building Lighting (Sec. 5.7.2.A.iii)	Relevant building elevation drawings showing all fixtures, the portions of the walls to be illuminated, illuminance levels of walls and the aiming points of any remote fixtures.			
Lighting Plan (Sec.5.7.2.A.ii)	Specifications for all proposed & existing lighting fixtures			
	Photometric data			
	Fixture height			
	Mounting & design			
	Glare control devices			
	Type & color rendition of lamps			
	Hours of operation			
	Photometric plan illustrating all light sources that impact the subject site, including spill-over information from neighboring properties			
Maximum Height	Height not to exceed			

COMMENTS	To be addressed with the next submittal	To be addressed with final site plan submittal	Requires Planning Commission and / or City Council Approval	Notes to be noted
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Item	Required Code	Proposed	Meets Code	Comments
(Sec. 5.7.3.A)	maximum height of zoning district (or 25 ft. where adjacent to residential districts or uses			
Standard Notes (Sec. 5.7.3.B)	<ul style="list-style-type: none"> - Electrical service to light fixtures shall be placed underground - Flashing light shall not be permitted - Only necessary lighting for security purposes & limited operations shall be permitted after a site's hours of operation 			
Security Lighting (Sec. 5.7.3.H) Lighting for security purposes shall be directed only onto the area to be secured.	<ul style="list-style-type: none"> - All fixtures shall be located, shielded, and aimed at the areas to be secured. - Fixtures mounted on the building and designed to illuminate the facade are preferred 			
Average Light Levels (Sec.5.7.3.E)	Average light level of the surface being lit to the lowest light of the surface being lit shall not exceed 4:1			
Type of Lamps (Sec. 5.7.3.F)	Use of true color rendering lamps such as metal halide is preferred over high & low pressure sodium lamps			
Min. Illumination (Sec. 5.7.3.k)	Parking areas: 0.2 min			
	Loading & unloading areas: 0.4 min			
	Walkways: 0.2 min			
	Building entrances, frequent use: 1.0 min			
	Building entrances, infrequent use: 0.2 min			
Max. Illumination adjacent to Non-Residential (Sec. 5.7.3.K)	When site abuts a non-residential district, maximum illumination at the property line shall not exceed 1 foot candle			

COMMENTS	To be addressed with the next submittal	<u>To be addressed with final site plan submittal</u>	<u>Requires Planning Commission and / or City Council Approval</u>	<i>Notes to be noted</i>
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Item	Required Code	Proposed	Meets Code	Comments
Cut off Angles (Sec. 5.7.3.L)	When adjacent to residential districts - All cut off angles of fixtures must be 90° - maximum illumination at the property line shall not exceed 0.5 foot candle			

NOTES:

1. This table is a working summary chart and not intended to substitute for any Ordinance or City of Novi requirements or standards.
2. The section of the applicable ordinance or standard is indicated in parenthesis. Please refer to those sections in Article 3, 4 and 5 of the zoning ordinance for further details
3. Please include a written response to any points requiring clarification or for any corresponding site plan modifications to the City of Novi Planning Department with future submittals.

ENGINEERING REVIEW



PLAN REVIEW CENTER REPORT

03/31/2017

Engineering Review

JSP17-0013

Griffin Funeral Home

Applicant

Novi Funeral Home

Review Type

Preliminary Site Plan

Property Characteristics

- Site Location: South of Eleven Mile Road, West of Beck Road
- Site Size: 3.93 acres
- Plan Date: 03/10/2017
- Design Engineer: Zeimet Wozniak & Associates

Project Summary

- Construction of an approximately 12,176 square-foot funeral home building and associated parking. Site access would be provided by an existing driveway off of Beck Road.
- Water service would be provided by an 8-inch extension from the existing 16-inch water main on the east side of Beck Road.
- Sanitary sewer service would be provided from an existing sanitary sewer along the east side of Beck Road.
- Storm water would be collected by a single storm sewer collection system and detained in adjacent existing detention pond.

Recommendation

Approval of the Preliminary Site Plan and Preliminary Storm Water Management Plan is recommended.

Comments:

The Preliminary Site Plan meets the general requirements of the design and construction standards as set forth in Chapter 11 of the City of Novi Codified Ordinance, the Storm Water Management Ordinance and the Engineering Design Manual with the following items to be addressed at the time of Final Site Plan submittal (further engineering detail will be required at the time of the final site plan submittal):

Additional Comments (to be addressed prior to the Final Site Plan submittal):

General

1. The City standard detail sheets are not required for the Final Site Plan submittal. They will be required with the Stamping Set submittal. They can be found on the City website (www.cityofnovi.org/DesignManual).
2. The Non-Domestic User Survey form is required for this development. Submit this form to the City, and the City will forward the completed form to the Oakland County Water Resources Commissioner.

Water Main

3. Provide a tapping sleeve, valve and well at the connection to the existing water main.
4. The water main stub shall terminate with a hydrant followed by a valve in well. If the hydrant is not a requirement of the development for another reason the hydrant can be labeled as temporary allowing it to be relocated in the future.
5. Provide three (3) signed and sealed sets of revised utility plans along with the MDEQ permit application (1/07 rev.) for water main construction. The Streamlined Water Main Permit Checklist should be submitted to the Engineering Division for review, assuming no further design changes are anticipated. Utility plan sets shall include only the cover sheet, any applicable utility sheets and the standard detail sheets.

Sanitary Sewer

6. Provide a sanitary sewer monitoring manhole, unique to this site, within a dedicated access easement. Provide a 20-foot wide access easement to the monitoring manhole from the right-of-way (rather than a public sanitary sewer easement).

Storm Sewer

7. Provide a site drainage area map and storm sewer sizing calculations.
8. Include information for how roof drainage will be handled on site.
9. Provide a four-foot deep sump and an oil/gas separator in the last storm structure prior to discharge off- site/to the storm water basin.

Storm Water Management Plan

10. Clarify the pond and lawn areas in the c factor calculations.

11. Provide release rate calculations for the three design storm events (first flush, bank full, 100-year).

Paving & Grading

12. Clearly label the existing, proposed and master planned right-of-way lines on each of the parcels. Where the sidewalk and driveway are proposed outside of proposed right-of-way, easements will be required.
13. The sidewalk in the Eleven Mile Road right-of-way is required. The ordinance allows for an administrative variance when there are no existing pathways within 300-feet of the property if the applicant provides payment to the City equal to the cost of the pathway (as approved by the City Engineer) for City use to construct pathways elsewhere in the City. Complete this variance request and submit a cost estimate for the portion of sidewalk that would be built per the requirement.

Soil Erosion and Sediment Control

14. A SESC permit is required. A full review has not been done at this time. The review checklist detailing all SESC requirements is attached to this letter. An informal review will be completed with the Final Site Plan if SESC plans are included in the submittal.

Off-Site Easements

15. Any off-site utility easements anticipated must be executed **prior to final approval of the plans**. Drafts of these documents are under review and must be approved by the Engineering Division and the City Attorney prior to executing the easements.

The following must be provided at the time of Final Site Plan resubmittal:

16. A letter from either the applicant or the applicant's engineer must be submitted with the Final Site Plan highlighting the changes made to the plans addressing each of the comments listed above and indicating the revised sheets involved.

The following must be submitted at the time of Final Site Plan submittal:

17. An itemized construction cost estimate must be submitted to the Community Development Department at the time of Final Site Plan submittal for the determination of plan review and construction inspection fees. This estimate should only include the civil site work and not any costs associated with construction of the building or any demolition work. **The cost estimate must be itemized** for each utility (water, sanitary, storm sewer), on-site paving, right-of-way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pretreatment structure and restoration).
18. Draft copies of any off-site easements, a recent title search, and legal escrow funds must be submitted to the Community Development Department for review and approved by the Engineering Division and the City Attorney prior to getting executed.

The following must be submitted at the time of Stamping Set submittal:

19. A draft copy of the 20-foot wide easement for the water main to be constructed on the site must be submitted to the Community Development Department.
20. A draft copy of the 20-foot wide access easement for the sanitary sewer monitoring manhole to be constructed on the site must be submitted to the Community Development Department.
21. Executed copies of any required off-site easements must be submitted to the Community Development Department.

The following must be addressed prior to construction:

22. A pre-construction meeting is required prior to the commencement of any site work. Please contact Sarah Marchioni in the Community Development Department to setup a meeting (248-347-0430).
23. A City of Novi Grading Permit will be required prior to any grading on the site. This permit will be issued at the pre-construction meeting. There is no fee for this permit.
24. A Soil Erosion Control Permit must be obtained from the City of Novi. Contact Sarah Marchioni in the Community Development Department (248-347-0430) for forms and information.
25. A permit for work within the right-of-way of Beck Road must be obtained from the City of Novi. The application is available from the City Engineering Division and should be filed at the time of Final Site Plan submittal. Please contact the Engineering Division at 248-347-0454 for further information.
26. A permit for water main construction must be obtained from the MDEQ. This permit application must be submitted through the Water and Sewer Senior Manager after the water main plans have been approved.
27. Construction Inspection Fees, to be determined once the construction cost estimate is submitted, must be paid prior to the pre-construction meeting.
28. A storm water performance guarantee, equal to 1.2 times the amount required to complete storm water management and facilities as specified in the Storm Water Management Ordinance, must be posted at the Treasurer's Office.
29. A street sign financial guarantee in an amount to be determined (\$400 per traffic control sign proposed) must be posted at the Treasurer's Office.

To the extent this review letter addresses items and requirements that require the approval of or a permit from an agency or entity other than the City, this review shall not be considered an indication or statement that such approvals or permits will be issued.

Please contact Darcy Rechten at 248/735-5695 with any questions.

Darcy N. Rechten

cc: Theresa Bridges, Engineering
George Melistas, Engineering
Sri Komaragiri, Community Development
Tina Glenn, Treasurers
Kristen Pace, Treasurers
Ben Croy, Water and Sewer



CITY OF NOVI ENGINEERING DIVISION SOIL EROSION AND SEDIMENTATION CONTROL PLAN CHECKLIST

PROJECT: _____ SESC Application #: SE -

Contact Name: _____ DATE COMPLETED: _____

Phone Number: _____ DATE OF PLAN: _____

Fax Number: _____ **STATUS:**

General Requirements – Following the initial Soil Erosion and Sedimentation Control permit application to the Community Development Department, all SESC plan revisions shall be submitted directly to the Engineering Department for further review and/or permit approval. One (1) copy of revised soil erosion plans, including response letter addressing the comments below, shall be submitted for each subsequent review until the plan has been given approval by the Engineering Department, at which point five (5) copies will be required for permit approval. Plans shall be signed and sealed, and the bond must be submitted to the Treasurer's Office prior to permit issuance.

ITEM NO.	ITEM	Provided on Plans	COMMENTS
1.	Plan shall be at scale of not more than 1" = 200', include legal description, location, proximity to lakes, streams or wetlands, slopes, etc.	<input type="checkbox"/>	
2.	Plan shall include a soil survey or a written description of soil types of the exposed land area.	<input type="checkbox"/>	
3.	Plan shall show the limits of earth disruption.	<input type="checkbox"/>	
4.	Plan shall show tree protection fencing and location of trees to be protected.	<input type="checkbox"/>	
5.	Plan shall show all existing and proposed on-site drainage and dewatering facilities (i.e. structure details, rim elev., etc.)	<input type="checkbox"/>	
6.	Detailed sequence of construction shall be provided on plans structured similar to the following, supplemented with site specific items: 1) Install tracking mat, 2) Install temp. SESC measures, 3) Construct storm water basins and install treatment structures, if applicable, 4) Install storm sewer, with inlet protection to follow immediately, 5) Remove all temp. SESC measures once site is stabilized.	<input type="checkbox"/>	
7.	Plan must address maintenance of soil erosion and sedimentation control measures (temporary and permanent)	<input type="checkbox"/>	
8.	Provide a note stating if dewatering is anticipated or encountered during construction a dewatering plan must be submitted to the Engineering Division for review.	<input type="checkbox"/>	
9.	A grading plan shall be provided, or grade information shown on plan.	<input type="checkbox"/>	

10.	Note that it is the developer's responsibility to grade and stabilize disturbances due to the installation of public utilities.	<input type="checkbox"/>	
11.	The CSWO shall be listed on permit application.	<input type="checkbox"/>	
12.	Plan sealed by registered civil engineer with original signature.	<input type="checkbox"/>	
13.	An itemized cost estimate (Silt Fence, Inlet Filters, Topsoil/Seed/Mulch, Const. Access, etc.) shall be provided.	<input type="checkbox"/>	The SESC financial guarantee will be \$. The SESC inspection fees will be \$.
14.	Potential stockpile areas shall be shown on the plan, with note stating a ring of silt fence will be installed surrounding any stockpiled material.	<input type="checkbox"/>	
15.	Sediment basin: Provide filter on standpipe outlet structure until site is stabilized, then removed. Noted on plan and standpipe detail(s).	<input type="checkbox"/>	
16.	Provide a note on the plan stating the storm water basin will be stabilized prior to directing flow to the basin.	<input type="checkbox"/>	
17.	Pretreatment Structures: Noted to inspect weekly for sediment accumulation until site is stabilized, and will clean as required.	<input type="checkbox"/>	.
18.	Attach the Oakland County standard detail sheet.	<input type="checkbox"/>	
19.	Construction mud tracking entrance: 75'x20', 6" of 1" to 3" stone, on geotextile fabric.	<input type="checkbox"/>	
20.	Silt fence: 6" anchor trench, stakes 6' on center. Prominent line type on plan, with legend.	<input type="checkbox"/>	
21.	Provide Silt Sack with overflow capability as the inlet protection, and provide detail on plans.	<input type="checkbox"/>	
22.	Catch basin inlet filters shall be provided on existing roadways along construction route for reasonable distance from site.	<input type="checkbox"/>	
23.	Street sweeping and dust control shall be noted on plan as responsibility of contractor.	<input type="checkbox"/>	
24.	Vegetation shall be established within 5 days of final grade, or whenever disturbed areas will remain unchanged for 30 days or greater. 3-4" of topsoil will be used where vegetation is required.	<input type="checkbox"/>	
25.	Vegetated buffer strips (25' wide wherever possible) shall be created or retained along the edges of all water bodies, water courses or wetlands.	<input type="checkbox"/>	
26.	Diversion berms or terracing shall be implemented where necessary.	<input type="checkbox"/>	
27.	All drainage ditches shall be stabilized with erosion control blanket and shall utilize check	<input type="checkbox"/>	

	dams as necessary. Drainage ditches steeper than 3% shall be sodded.		
28.	Slopes steeper than 1V:6H (16%) shall be stabilized with erosion control blanket. Add this note as a general note, and also in a prominent location near any berm, etc. where a significant slope is proposed.	<input type="checkbox"/>	
29.	All culvert end sections must contain grouted rip-rap in accordance with ordinance specifications.	<input type="checkbox"/>	

ADDITIONAL COMMENTS:

1. Please note that installation of silt fencing or tree protection fencing shall not occur prior to the initial City pre-construction meeting. When natural features exist on the site, inspection of staking may be required prior to installation of the fencing.
- 2.

Reviewed By:

LANDSCAPE REVIEW



PLAN REVIEW CENTER REPORT

March 23, 2017

Preliminary Site Plan - Landscaping

Griffin Funeral Home

Review Type

Preliminary Landscape Review

Property Characteristics

- Site Location: Southwest corner of Beck and 11 Mile Roads
- Site Acreage: 3.93 acres
- Site Zoning: R-A
- Adjacent Zoning: North: R-A and R-3; East, South and West: R-A
- Plan Date: 2/20/2015

Ordinance Considerations

This project was reviewed for conformance with Chapter 37: Woodland Protection, Zoning Article 5.5 Landscape Standards, the Landscape Design Manual and any other applicable provisions of the Zoning Ordinance. Items in **bold** below must be addressed and incorporated as part of the Preliminary Site Plan submittal. Underlined items need to be addressed for Final Site Plans. Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review and the accompanying Landscape Chart is a summary and not intended to substitute for any Ordinance.

Recommendation

This project is **recommended for approval**. Generally the site complies with the landscape ordinance and landscape design manual, **however the southern boundary line does not meet the code regarding the buffer between residential and non-residential properties**. The applicant has provided further information in letters indicating that is the owner's intention to sell the south parcel for a non-residential use, but if a residential use is put in there, that the buffer between the two parcels will be retrofitted to provide the required berm and screening. Given this, my concern about the lack of a screening berm is addressed satisfactorily.

Ordinance Considerations

Existing Soils (Preliminary Site Plan checklist #10, #17)

Provided

Existing and proposed overhead and underground utilities, including hydrants. (LDM 2.e.(4))

Provided. No conflicts are noted.

Existing Trees (Sec 37 Woodland Protection, Preliminary Site Plan checklist #17 and LDM 2.3 (2))

1. All trees in the vicinity of the project are shown as being removed or saved.
2. No trees protected under Section 37 are shown to be removed so no replacement trees are required.
3. **Please add tree protection fencing to Sheet C-2 for trees within 50 feet of the project that will be saved so they aren't damaged during construction.**

Adjacent to Residential - Buffer (Zoning Sec. 5.5.3.B.ii and iii)

1. The property is adjacent to Residential on the west and south sides. A 4.5 to 6 foot tall

berm is required between the proposed use and the residentially zoned property to the west and south.

2. A berm is provided along the west side that is about 3.5 tall as compared with the property to the west, and about 2.5 to 4 feet tall as compared with the proposed pavement elevation. It is landscaped with a row of large evergreens and intermittent groupings of large flowering shrubs.
3. As currently configured, this landscaped berm does not appear to meet the requirements of the ordinance, for height or for density of landscaping, especially with regard to the proposed White Pine groupings. While White Pine is a beautiful tree, as a young tree and as it matures, mature trees do not provide the required screening opacity. **Particularly on the southern end of the berm where the proposed berm is at least 2 feet shorter than the ordinance requires, the landscaping should be modified to provide a denser opacity.**
4. **At a minimum, please select a different evergreen species from White Pine for the buffer plantings.**
5. The berm on the south side of the project also does not meet the height requirement of the ordinance for a berm between non-residential and residential zoning, and no screening vegetation is proposed. In addition, the berm that is provided does not extend the entire length of the property line. Currently the use and zoning are residential. **As noted above, the applicant has provided further documentation that their intent is to sell the southern parcel for a non-residential use, in which case no berm or screening landscaping is required. Should the use end up being residential, the applicant has promised to retrofit the site to provide the required buffer and screening.**
6. **A landscape waiver is required for providing a berm shorter than the 4.5 to 6 feet that is required by the ordinance. Given the above discussion, this applies to the entire western berm but not the southern berm.**

Adjacent to Public Rights-of-Way – Berm (Wall) & Buffer (Zoning Sec. 5.5.3.B.ii and iii)

1. A 3 foot tall undulating berm is required along the frontages of Beck and Eleven Mile Roads. The required berm is provided between the building/parking and Beck Road, but not along the northern portion of the lot, or along Eleven Mile Road. As these frontages actually face a large lawn and landscaping which is backed up by the existing pond, this is acceptable, but **the applicant must request a landscape waiver for the deviation.** It will be supported by staff for the reasons given above.
2. Based on the frontage outside of the rights-of-way, the ordinance calls for a total of 15 canopy or large evergreen trees and 26 sub-canopy trees. These are all provided.

Street Tree Requirements (Zoning Sec. 5.5.3.E.i.c and LDM 1.d.)

1. Based on the frontages, a total of 15 street trees are required (1 per 35lf). 10 trees are provided.
2. **A landscape waiver for 3 trees based on the required corner clear zones can be supported by staff, but 2 additional trees need to be provided.**

Parking Lot Landscaping (Zoning Sec. 5.5.3.C.)

1. Based on the vehicular use areas, 3,368 sf of islands and 45 interior parking lot trees are required. 3,622 sf of islands and 45 trees are provided.
2. Three islands have areas of 149 sf or less. While some flexibility with islands that are adjacent to open space is allowed to achieve the minimum 300sf per island, these areas are still too small. **Please increase their area within the curbs to at least 200sf.**
3. A 195 sf area adjacent to the land-banked spaces just north of the building is counted as a landscape space, but no tree is proposed for it. In order to count toward the total, an island has to have a tree planted in it. **Please either propose a canopy tree for that space, or increase other areas to fulfill the requirement.**

Parking Lot Perimeter Canopy Trees (Zoning Sec. 5.5.3.C.(3) Chart footnote)

Based on the 789 lf of outer perimeter, 23 canopy trees are required and are provided.

Loading Zone screening (Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5)

The loading area is sufficiently screened with large evergreen shrubs.

Building Foundation Landscape (Zoning Sec 5.5.3.D.)

1. Based on the building's 477 lf perimeter, 3,816 sf of foundation landscape area is required. 4,002 sf are provided.
2. 60% of the building frontage facing public roads must be landscaped. Approximately 85% of the building frontage is landscaped.

Plant List (LDM 2.h. and t.)

In keeping with the stated goal of the landscape ordinance, please provide more native species as part of the building foundation landscaping.

Planting Notations and Details (LDM)

Planting details are provided as required.

Storm Basin Landscape (Zoning Sec 5.5.3.E.iv and LDM 1.d.(3))

1. Approximately 52% of the property's pond edge is landscaped with large native shrubs.
2. **Please provide additional shrubs to fulfill the requirement of 70-75% coverage.**

Irrigation (LDM 1.a.(1)(e) and 2.s)

An irrigation plan for landscaped areas is required for Final Site Plan.

Proposed topography. 2' contour minimum (LDM 2.e.(1))

1. Provided.
2. The land-banked spaces may require retaining walls for their construction, especially those facing the pond. Please provide the grading that would be required for the land-banked spaces' construction on a separate grading plan, as well as an indication of any retaining walls that would be required.

Snow Deposit (LDM.2.q.)

Snow deposit areas are indicated.

Corner Clearance (Zoning Sec 5.9)

Corner clearance areas are shown and no trees are planted within them.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.735.5621 or meader rmeader@cityofnovi.org.



Rick Meader – Landscape Architect

LANDSCAPE REVIEW SUMMARY CHART – PRELIMINARY SITE PLAN

Review Date: March 22, 2017
Project Name: GRIFFIN FUNERAL HOME
Plan Date: March 10, 2017
Prepared by: Rick Meader, Landscape Architect E-mail: rmeader@cityofnovi.org
 Phone: (248) 735-5621

Items in **Bold** need to be addressed by the applicant before approval of the Preliminary Site Plan.
Underlined items need to be addressed for Final Site Plan.

Item	Required	Proposed	Meets Code	Comments
Landscape Plan Requirements (LDM (2))				
Landscape Plan (Zoning Sec 5.5.2, LDM 2.e.)	§ New commercial or residential developments § Addition to existing building greater than 25% increase in overall footage or 400 SF whichever is less. § 1"=20' minimum with proper North. Variations from this scale can be approved by LA § Consistent with plans throughout set	Yes	Yes	Scale of 1"=30'
Project Information (LDM 2.d.)	Name and Address	Yes	Yes	
Owner/Developer Contact Information (LDM 2.a.)	Name, address and telephone number of the owner and developer or association	Yes	Yes	
Landscape Architect contact information (LDM 2.b.)	Name, Address and telephone number of RLA/LLA	Yes	Yes	
Sealed by LA. (LDM 2.g.)	Requires original signature	Yes	Yes	<u>Required for Final Site Plan</u>
Miss Dig Note (800) 482-7171 (LDM.3.a.(8))	Show on all plan sheets	Yes	Yes	
Zoning (LDM 2.f.)	Include all adjacent zoning	R-A with PSLR	Yes	Site: R-A with PSLR N: R-A&R-3 E,S&W: R-A
Survey information (LDM 2.c.)	§ Legal description or boundary line survey § Existing topography	Yes	Yes	Boundaries and descriptions on C-1
Existing plant material Existing woodlands or wetlands (LDM 2.e.(2))	§ Show location type and size. Label to be saved or removed. § Plan shall state if none exists.	Yes	Yes	All trees and trees to be removed are clearly shown on C-1 and C-2

Item	Required	Proposed	Meets Code	Comments
Soil types (LDM.2.r.)	§ As determined by Soils survey of Oakland county § Show types, boundaries	Yes	Yes	On C-1
Existing and proposed improvements (LDM 2.e.(4))	Existing and proposed buildings, easements, parking spaces, vehicular use areas, and R.O.W	Yes	Yes	On C-3
Existing and proposed utilities (LDM 2.e.(4))	Overhead and underground utilities, including hydrants	Yes	Yes	Utilities are shown on Landscape Plan.
Proposed grading. 2' contour minimum (LDM 2.e.(1))	Provide proposed contours at 2' interval	Yes	Yes	1. On C-4 2. Please show the proposed grading for the land banked spaces, should they be built.
Snow deposit (LDM.2.q.)	Show snow deposit areas on plan	Yes	Yes	
LANDSCAPING REQUIREMENTS				
Parking Area Landscape Requirements LDM 1.c. & Calculations (LDM 2.o.)				
General requirements (LDM 1.c)	§ Clear sight distance within parking islands § No evergreen trees	Yes	Yes	
Name, type and number of ground cover (LDM 1.c.(5))	As proposed on planting islands	Yes	Yes	Seed
General (Zoning Sec 5.5.3.C.ii)				
Parking lot Islands (a, b. i)	§ A minimum of 300 SF to qualify § 6" curbs § Islands minimum width 10' BOC to BOC	Yes/No	Yes/No	1. It appears that most of the proposed islands provide sufficient landscape area. 2. Please expand the area of the islands that provide 149sf or less to at least 200sf. Even with overflow allowed, they do not provide sufficient space.
Curbs and Parking stall reduction (c)	Parking stall can be reduced to 17' and the curb to 4" adjacent to a sidewalk of min. 7 ft.	Yes	Yes	On C-3
Contiguous space limit (j)	Maximum of 15 contiguous spaces	Yes	Yes	Maximum bay is 14 spaces long

Item	Required	Proposed	Meets Code	Comments
Plantings around Fire Hydrant (d)	No plantings with mature height greater than 12' within 10 ft. of fire hydrants	Yes	Yes	Hydrants are shown, and all trees are spaced sufficiently from them.
Landscaped area (g)	Areas not dedicated to parking use or driveways exceeding 100 sq. ft. shall be landscaped	Yes	Yes	
Clear Zones (LDM 2.3.(5))	25 ft corner clearance required. Refer to Zoning Section 5.9	Yes	Yes	Clear zones are provided per 5.9 and trees are not planted within them.
Category 1: For OS-1, OS-2, OSC, OST, B-1, B-2, B-3, NCC, EXPO, FS, TC, TC-1, RC, Special Land Use or non-residential use in any R district (Zoning Sec 5.5.3.C.iii)				
A = Total square footage of parking spaces not including access aisles x 10%	$A = 16316 \times 10\% = 1632 \text{ sf}$	Yes	Yes	
B = Total square footage of additional paved vehicular use areas (not including A) under 50,000 SF) x 5%	$B = 34711 \times 5\% = 1736 \text{ sf}$	Yes	Yes	
C = Total square footage of additional paved vehicular use areas (not including A or B) over 50,000 SF) x 1 %	$C = x \times 1\% = \text{sf}$	NA		
Category 2: For: I-1 and I-2 (Zoning Sec 5.5.3.C.iii)				
A. = Total square footage of parking spaces not including access aisles x 7%	$A = 7\% \times \text{xx sf} = \text{xx sf}$	NA		
B = Total square footage of additional Paved vehicular use areas (not including A) under 50,000 SF) x 2%	$B = 2\% \times \text{xx sf} = \text{xx sf}$	NA		
C = Total square footage of additional paved vehicular use areas (not including A or B) over 50,000 SF) x 0.5%	$C = 0.5\% \times 0 \text{ sf} = 0 \text{ SF}$	NA		
All Categories				
D = A+B or A+C Total square footage	$1632 + 1736 = 3368 \text{ SF}$	3622 sf	No	1. As mentioned above, the three

Item	Required	Proposed	Meets Code	Comments
of landscaped islands				<p>islands with SF of 149sf or less are too small to count as legitimate islands.</p> <p>2. Please increase those islands' area to at least 200sf so they can count toward the total.</p> <p>3. The 195sf area adjacent to the front land banked spaces cannot count toward the total if no trees are planted in it.</p>
E = D/75 Number of canopy trees required	3368/75 = 45 Trees	45 trees	Yes	
Perimeter Green space	§ 1 Canopy tree per 35 lf; § 789/35 = 23 trees	23 trees	Yes	
Parking land banked	NA	23 spaces	TBD	<p>1. The interior and perimeter calculations should include the land banked spaces.</p> <p>2. If they have been, please indicate that with a notation by the calculations. If they have not, please revised them to include the land banked spaces.</p>
Berms, Walls and ROW Planting Requirements				
Berms				
§ All berms shall have a maximum slope of 33%. Gradual slopes are encouraged. Show 1ft. contours § Berm should be located on lot line except in conflict with utilities. § Berms should be constructed with 6" of top soil.		No new berms proposed		
Residential Adjacent to Non-residential (Sec 5.5.3.A) & (LDM 1.a)				
Berm requirements (Zoning Sec 5.5.A)	Refer to Residential Adjacent to Non-residential berm requirements chart	Berms along portions of west and south property lines	TBD	<p>1. 4.5-6 foot tall landscaped berms are required along west and south property lines.</p> <p>2. Berm provided along west property line is</p>

Item	Required	Proposed	Meets Code	Comments
				<p>approximately 3.5' higher than the property to the west, and 2.5-4' higher than the adjacent parking.</p> <p>3. Additional, denser screening needs to be provided on the berm, particularly on the southern end of the berm where the berm is shortest. While White Pines provide good screening when they're young, as they get older they lose their screening density.</p> <p>4. The berm provided along south property line is not sufficiently long or tall. If the parcel is to remain as a residential use, a full berm with dense landscaping in addition to the perimeter trees will need to be provided.</p>
<p>Planting requirements <i>(LDM 1.a.)</i></p>	<p>LDM Novi Street Tree List</p>	<p>NA</p>		<p>1. Please add additional screening shrubs and use a different evergreen tree than White Pine on the western berm as the proposed combination will not provide a consistent, 80-90% opacity.</p> <p>2. As noted above, if the southern parcel is to remain residential, the berm will need to be densely landscaped to provide 80-90% opacity.</p>
<p>Adjacent to Public Rights-of-Way (Sec 5.5.B) and (LDM 1.b)</p>				

Item	Required	Proposed	Meets Code	Comments
Berm requirements (Zoning Sec 5.5.3.A.(5))	Berm must be 3 feet tall with a 4 foot wide crest, max 33% slope.	3-4 foot tall berm is proposed along most of Beck Road frontage, none fronting 10 Mile Road.	Yes	<ol style="list-style-type: none"> The berm along Beck does not extend all the way to the north, but as that section is just lawn and other landscaping, backed up by the pond, this is acceptable. The 11 Mile frontage also is backed by a long stretch of berms and landscaping so the lack of a berm is acceptable. A landscape waiver for the lack of berms in these areas will require a landscape waiver, but it will be supported by staff for the above reasons.
Cross-Section of Berms (LDM 2.j)				
Slope, height and width	§ Label contour lines § Maximum 33% slope § Constructed of loam § 6" top layer of topsoil	No	No	Please add details for the berms along Beck Road and the west property lines.
Type of Ground Cover		Lawn - seed	Yes	
Setbacks from Utilities	Overhead utility lines and 15 ft. setback from edge of utility or 20 ft. setback from closest pole	None		No overhead utility lines are shown along the road frontages.
Walls (LDM 2.k & Zoning Sec 5.5.3.vi)				
Material, height and type of construction footing	Freestanding walls should have brick or stone exterior with masonry or concrete interior	None		<ol style="list-style-type: none"> No walls are proposed. It appears that a retaining wall would be required to build the land banked spaces along the north side of the parking lot. Please show the grading and proposed retaining wall for those spaces, and any other walls that may be required

Item	Required	Proposed	Meets Code	Comments
				for land banked spaces. These should be part of the grading plan, not the landscape plan.
Walls greater than 3 ½ ft. should be designed and sealed by an Engineer		NA		
ROW Landscape Screening Requirements (Sec 5.5.3.B. ii)				
Greenbelt width (2)(3) (5)	50 feet	77 feet	Yes	
Min. berm crest width	4 feet	Min 4 feet	Yes	
Minimum berm height (9)	4 feet	3 feet	Yes	
3' wall	§ (4)(7)	None		
Canopy deciduous or large evergreen trees Notes (1) (10)	§ 1 tree per 35 lf frontage § Beck Road: o 434/35 = 13 trees § 11 Mile Road: o 76/35 = 2 trees	15 trees	Yes	
Sub-canopy deciduous trees Notes (2)(10)	• 1 tree per 35 lf frontage • Beck Road: o 434/20 = 22 trees • 11 Mile Road: o 76/20 = 4 trees	26 trees	Yes	
Canopy deciduous trees in area between sidewalk and curb (Novi Street Tree List)	§ 1 tree per 35 lf frontage § Beck Road: o 385/35 = 11 trees § 11 Mile Road: o 51/35 = 1 tree	10 trees	No	1. 1 street tree per 35 lf is required, not 1 per 45 lf. 2. Please correct the calculation and provide 2 additional street trees. 3. Landscape waiver will be required to subtract sight triangles, but will be supported.
Non-Residential Zoning Sec 5.5.3.E.iii & LDM 1.d (2)				
Refer to Planting in ROW, building foundation landscape, parking lot landscaping and LDM				
Interior Street to Industrial subdivision (LDM 1.d.(2))	§ 1 canopy deciduous or 1 large evergreen per 35 lf along ROW § No evergreen trees closer than 20 ft. § 3 sub canopy trees per 40 lf of total linear frontage	NA		

Item	Required	Proposed	Meets Code	Comments
	§ Plant massing for 25% of ROW			
Screening of outdoor storage, loading/unloading (Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5)		Tall evergreen shrubs screen the loading areas.	Yes	
Transformers/Utility boxes (LDM 1.e from 1 through 5)	§ A minimum of 2ft. separation between box and the plants § Ground cover below 4" is allowed up to pad. § No plant materials within 8 ft. from the doors	No utility boxes shown		1. Provide proper screening for any transformers. 2. Include city standard detail with other landscape details.
Building Foundation Landscape Requirements (Sec 5.5.3.D)				
Interior site landscaping SF	§ Equals to entire perimeter of the building x 8 with a minimum width of 4 ft. § 477 lf x 8ft = 3816 SF	4002 sf	Yes	Please substitute in some species native to Michigan (in addition to the Ninebark and Fragrant Sumac)
Zoning Sec 5.5.3.D.ii. All items from (b) to (e)	§ If visible from public street a minimum of 60% of the exterior building perimeter should be covered in green space	85% of frontage facing Beck and 11 Mile Roads is landscaped.	Yes	
Detention/Retention Basin Requirements (Sec. 5.5.3.E.iv)				
Planting requirements (Sec. 5.5.3.E.iv)	§ Clusters shall cover 70-75% of the basin rim area § 10" to 14" tall grass along sides of basin § Refer to wetland for basin mix	220 lf of 420 lf frontage (52%) is landscaped with shrubs).	No	Please increase coverage to 70-75%.
LANDSCAPING NOTES, DETAILS AND GENERAL REQUIREMENTS				
Landscape Notes – Utilize City of Novi Standard Notes				
Installation date (LDM 2.I. & Zoning Sec 5.5.5.B)	<ul style="list-style-type: none"> Provide intended dates Should be between March 15 and November 15. 	Between March 15 and November 15.	Yes	
Maintenance & Statement of intent (LDM 2.m & Zoning Sec 5.5.6)	<ul style="list-style-type: none"> Include statement of intent to install and guarantee all materials for 2 years. Include a minimum one cultivation in 	Yes/No	Yes/No	Please add the cultivation note.

Item	Required	Proposed	Meets Code	Comments
	June, July and August for the 2-year warranty period.			
Plant source (LDM 2.n & LDM 3.a.(2))	Shall be northern nursery grown, No.1 grade.	No	No	Please add to notes.
Irrigation plan (LDM 2.s.)	A fully automatic irrigation system and a method of draining is required with Final Site Plan	No		<u>Need for final site plan</u>
Other information (LDM 2.u)	Required by Planning Commission	NA		
Establishment period (Zoning Sec 5.5.6.B)	2 yr. Guarantee	Yes	Yes	
Approval of substitutions. (Zoning Sec 5.5.5.E)	City must approve any substitutions in writing prior to installation.	Yes	Yes	
Plant List (LDM 2.h.) - Include all cost estimates				
Quantities and sizes	Refer to LDM suggested plant list	Yes	Yes	
Root type		Yes	Yes	
Botanical and common names		Yes	Yes	
Type and amount of lawn		Yes	Yes	
Cost estimate (LDM 2.t)	For all new plantings, mulch and sod as listed on the plan	No		<u>Please add on Final Site Plans.</u>
Planting Details/Info (LDM 2.i) - Utilize City of Novi Standard Details				
Canopy Deciduous Tree	Refer to LDM for detail drawings	Yes	Yes	Please add a callout to tree detail that root ball dirt shall be removed to expose the root flare.
Evergreen Tree		Yes	Yes	Please add a callout to tree detail that root ball dirt shall be removed to expose the root flare.
Shrub		Yes	Yes	
Perennial/ Ground Cover		Yes	Yes	
Tree stakes and guys. (Wood stakes, fabric guys)		Yes	Yes	
Tree protection fencing	Located at Critical Root Zone (1' outside of dripline)	No trees are being preserved on the site, but some off-site trees will need to be protected.	No	Show tree protection fence lines for all trees within 50 feet of work to be saved on demolition plan.

Item	Required	Proposed	Meets Code	Comments
Other Plant Material Requirements (LDM 3)				
General Conditions (LDM 3.a)	Plant materials shall not be planted within 4 ft. of property line	Yes	Yes	Please add note on plan view near property line to aid installers.
Plant Materials & Existing Plant Material (LDM 3.b)	Clearly show trees to be removed and trees to be saved.	Yes	Yes	Sheet C-2
Landscape tree credit (LDM3.b.(d))	Substitutions to landscape standards for preserved canopy trees outside woodlands/ wetlands should be approved by LA. Refer to Landscape tree Credit Chart in LDM	No	No	
Plant Sizes for ROW, Woodland replacement and others (LDM 3.c)	Canopy Deciduous shall be 3" and sub-canopy deciduous shall be 2.5" caliper. Refer to section for more details	Yes	Yes	Include on Plant list
Plant size credit (LDM3.c.(2))	NA	No	No	
Prohibited Plants (LDM 3.d)	No plants on City Invasive Species List	No	TBD	
Recommended trees for planting under overhead utilities (LDM 3.e)	Label the distance from the overhead utilities	NA		
Collected or Transplanted trees (LDM 3.f)		No		
Nonliving Durable Material: Mulch (LDM 4)	§ Trees shall be mulched to 4" depth and shrubs, groundcovers to 3" depth § Specify natural color, finely shredded hardwood bark mulch. Include in cost estimate. § Refer to section for additional information	Yes	Yes	

NOTES:

1. This table is a working summary chart and not intended to substitute for any Ordinance or City of Novi requirements or standards.
2. The section of the applicable ordinance or standard is indicated in parenthesis. For the landscape requirements, please see the Zoning Ordinance landscape section 5.5 and the Landscape Design Manual for the appropriate items under the applicable zoning classification.
3. Please include a written response to any points requiring clarification or for any corresponding site plan modifications to the City of Novi Planning Department with future submittals.

WETLANDS REVIEW



March 29, 2017
ECT No. 170223-0100

Ms. Barbara McBeth
City Planner
Community Development Department
City of Novi
45175 W. Ten Mile Road
Novi, Michigan 48375

Re: Griffin Funeral Home (JSP17-0013)
Wetland Review of the Preliminary Site Plan (PSP17-0032)

Dear Ms. McBeth:

Environmental Consulting & Technology, Inc. (ECT) has reviewed the Preliminary Site Plan (Plan) for the proposed Griffin Funeral Home project prepared by Zeimet Wozniak & Associates dated March 10, 2017 (Plan). The Plan was reviewed for conformance with the City of Novi Wetland and Watercourse Protection Ordinance and the natural features setback provisions in the Zoning Ordinance. ECT also visited the site on March 22, 2017 in order to verify wetland boundaries.

ECT currently recommends approval of the Preliminary Site Plan for Wetlands. ECT recommends that the Applicant address the items noted in the *Wetland/Watercourse Comments* section of this letter prior to approval of the Final Site Plan.

The following wetland related items are required for this project:

Item	Required/Not Required/Not Applicable
Wetland Permit (specify Non-Minor or Minor)	Required (Minor)
Wetland Mitigation	Not required
Wetland Buffer Authorization	Required
MDEQ Permit	To be determined. It is the applicant's responsibility to contact the MDEQ in order to determine the need for a wetland use permit.
Wetland Conservation Easement	Not Required

The proposed development is located south of W. Eleven Mile Road and west of N. Beck Road in Section 20. The project includes the construction of a funeral home (~12,000 square feet), associated parking and utilities. Site stormwater will be managed within the existing pond/watercourse located on the northwest side of the site adjacent to W. Eleven Mile Road. A new outlet control structure has been proposed and would be installed in the northwest corner of the existing pond in order to regulate the outflow of the site stormwater. The existing 18" storm sewer and end section located within the 25-foot watercourse setback is proposed to be removed and replaced. ECT suggests that the City of Novi Engineering Department review this plan in order to verify that the site's stormwater will be adequately managed and meet the City's stormwater storage requirements.

2200 Commonwealth
Blvd., Suite 300
Ann Arbor, MI
48105

(734)
769-3004

FAX (734)
769-3164

The subject parcel currently contains a single family home, garage and barn. The majority of the site is maintained turf grass (i.e., lawn). The existing garage and barn will be removed/demolished as part of this project.

Based on our review of the Plan, Novi aerial photos, Novi GIS, the City of Novi Official Wetlands and Woodlands Maps (see Figure 1, attached) it appears as if this proposed project site contains City-regulated wetland/watercourse (i.e., pond located on north side of site).

Onsite Wetland Evaluation

ECT has reviewed the City of Novi Official Wetland and Woodlands Map and completed an onsite wetland verification on March 22, 2016. As noted above, the site does contain area mapped as City regulated wetland/watercourse (Figure 1). The Plan notes that King & MacGregor Environmental, Inc. (KME) previously completed the on-site wetland delineation (dated April 9, 2014). The Plan notes that the wetland limits are coincidental to the water's edge of the existing pond. ECT agrees with the wetland/watercourse boundaries as indicated on the Plan. The proposed site development will involve one (1) small impact to regulated wetland/watercourse for the purpose of installing a new storm water outlet control structure. In addition the 25-foot wetland/watercourse buffer will be impacted for the installation of the proposed stormwater inlet and outlet from the pond/watercourse.

It is ECT's opinion that this water feature is a man-made pond that appears to have been created between 1963 and 1974 (based on historic aerial imagery available from Oakland County (<https://gis.oakgov.com/PropertyGateway/Home.mvc>)). Although the feature does have a buffer of existing trees on its northern side (adjacent to W. Eleven Mile Road), the majority of the pond's edge does not appear to have a significant vegetated wetland fringe (i.e., herbaceous plant growth along the perimeter of the pond). It should be noted that the existing pond appears to currently outlet through a culvert in the northwest portion of the pond to a drain located just north of W. Eleven Mile Road (i.e., tributary to the Novi Lyon Drain).

What follows is a summary of the wetland and watercourse impacts associated with the proposed site design.

Wetland/Watercourse Impact Review

Currently, the Plan indicates one (1) impact to the 25-foot wetland/watercourse buffer for the purpose of constructing the proposed stormwater outfall from the north side of the building and parking lot to the wetland/pond. The Plan proposes the following:

- 712 square feet (0.016-acre) of temporary buffer impact for the construction of the proposed storm water outfall to the pond. This temporary impact area is to be restored with a meadow seed mix and revegetation mat.

The Plan includes the installation of a stormwater outlet control structure in the northwest corner of the pond. The proposed impacts to the wetland/watercourse and 25-foot buffer do not appear to be indicated on the Plan. The applicant should graphically indicate and quantify all permanent and temporary impacts to the wetland/pond as well as the 25-foot setback.

Permits and Regulatory Requirements

The purpose of the City of Novi Wetland and Watercourse Protection Ordinance is described in the City of Novi Code of Ordinances, Part II, Chapter 12, Article V.; Division 1. This section states that:

- (a) The wetlands and watercourses of the city are indispensable and fragile natural resources subject to floodwater capacity limitations, erosion, soil bearing capacity limitations and other hazards. In their natural state, wetlands and watercourses provide many public benefits, such as the maintenance of water quality through nutrient cycling and sediment trapping, and flood and stormwater runoff control through temporary water storage, slow release and groundwater recharge. In addition, wetlands provide open space, passive recreation, fish and wildlife habitat, including migratory waterfowl and rare, threatened or endangered animal and plant species. The continued destruction and loss of wetlands and watercourses constitutes a distinct and immediate danger to the public health, safety and general welfare.
- (b) Throughout the state, considerable acreage of these important natural resources has been lost or impaired by draining, dredging, filling, excavating, building, pollution and other acts inconsistent with the natural uses of such areas. Remaining wetlands and watercourses are in jeopardy of being despoiled or impaired. Consequently, it is the policy of the city to prevent a further net loss of those wetlands that are: (1) contiguous to a lake, pond, river or stream, as defined in Administrative Rule 281.921; (2) two (2) acres in size or greater; or (3) less than two (2) acres in size, but deemed essential to the preservation of the natural resources of the city under the criteria set forth in subsection 12-174(b).
- (c) Pursuant to Mich. Const. 1963, Art. IV, § 52, the conservation and development of natural resources of the state is a matter of paramount public concern in the interest of the health, safety and general welfare of the people. Pursuant to the Michigan Environmental Protection Act, MCL 324.1701, et seq., it is the responsibility of public and private entities to prevent the pollution, impairment or destruction of the air, water or other natural resources by their conduct. It is, therefore, the policy of the city to protect wetlands and watercourses while taking into account varying ecological, hydrologic, economic, recreational and aesthetic values. Activities which may damage wetlands and watercourses shall be located on upland sites outside of upland woodland areas, unless there are no less harmful, feasible and prudent alternatives to the proposed activity. When an activity will result in the impairment or destruction of a wetland, mitigation shall be required in accordance with section 12-173(e)1.b.
- (d) It is the purpose of this article to protect the public health, safety and welfare through the protection of wetlands and watercourses. To meet these purposes, this article establishes standards and procedures for the review of proposed activities in wetlands and watercourses, provides for the issuance of use permits for approved activities, requires coordination with other applicable ordinances, statutes and regulations and establishes penalties for the violation of this article.

Any proposed use of the on-site pond/watercourse (i.e., for stormwater storage and/or fill or excavation within the wetland/watercourse) will require a City of Novi *Wetland Use Permit* as well as an *Authorization to Encroach the 25-Foot Natural Features Setback* for any proposed impacts to the 25-foot wetland/watercourse buffers.

The Michigan Department of Environmental Quality (MDEQ) generally regulates wetlands that are within 500 feet of a waterbody, regulated stream or are part of wetland system greater than 5 acres in size. It is the applicant's

responsibility to contact MDEQ in order to confirm the regulatory authority with respect to the on-site wetland/watercourse areas.

Wetland/Watercourse Comments

Please consider the following comments when preparing subsequent site plan submittals:

1. The current Plan does not graphically indicate the areas of proposed impact to the wetland/watercourse and 25-foot setback in the area of proposed stormwater outlet control structure. Future site plan submittals should indicate, label and quantify (square feet or acres) all areas of proposed impacts to wetland/watercourse and/or 25-foot buffers on the Plan (both permanent and temporary impacts). This information should be indicated on the *Stormwater Outlet Analysis Plan* (Sheet C-7.1). These quantities are required prior to Final Site Plan approval and issuance of the City of Novi Wetland Use Permit and *Authorization to Encroach the 25-Foot Wetland/Watercourse Setback*.
2. In general, the following information shall be provided on future site plan submittals:
 - Acreages of all on-site wetland/watercourse/pond;
 - Indicate and label all 25-foot wetland/watercourse buffers as necessary on the Plan;
 - Indicate, label and quantify any proposed impacts to the pond/wetland and 25-foot wetland/watercourse buffers on the Plan. The area (square feet or acres) of all impacts to the wetland/watercourse and 25-foot buffers shall be indicated on the Plan. All impacts (both permanent and temporary shall be indicated on the Plan);
 - The volume (cubic feet or cubic yards) of all permanent wetland/watercourse impacts shall be indicated on the Plan.
3. As noted above, the Plan shall clearly indicate all areas of wetland/watercourse and 25-foot buffer that are proposed to be permanently and/or temporarily impacted during construction. The *Stormwater Outlet Analysis Plan* (Sheet 7.1) and *Grading Plan* (Sheet C-4) note that disturbed areas of 25-foot buffer will be restored with a Meadow Seed Mix and revegetation mat. The Plan does not appear to contain seed mix details for the Meadow Seed Mix. The *Landscape Details* sheet (Sheet LP-3) does include seed mix detail for a Stormwater Seed Mix (from JFNew). The applicant shall review and revise that Plan as necessary and provide a seed mix detail for the Meadow Seed Mix if this is being proposed.
4. It is the Applicant's responsibility to contact the Michigan Department of Environmental Quality (MDEQ) in order to determine if the proposed development would require a wetland use permit from the MDEQ. The on-site wetland could be regulated by MDEQ as it appears to be located within 500-feet of a pond, stream, drain or lake (i.e., tributary to the Novi Lyon Drain). Final determination of regulatory status should be made by the MDEQ. A permit from this agency may be required for any direct impacts, or potentially for storm water discharge from the developed site to the existing watercourse/pond. A City of Novi Wetland Permit cannot be issued prior to receiving this information.
5. The Plan appears to propose the discharge of untreated/unfiltered stormwater from the site to the existing pond/watercourse. ECT recommends that the City of Novi Engineering Department ensure that the necessary storm water quality (and quantity/storage) requirements are being met by this plan. It is unclear why the stormwater management plan does not include a sedimentation basin or other means of pre-

Griffin Funeral Home (JSP17-0013)
Wetland Review of the Preliminary Site Plan (PSP17-0032)
March 29, 2017
Page 5 of 8

treating the site stormwater (i.e., removing silt/sediment, etc.) prior to entering the existing wetland/watercourse.

Recommendation

ECT currently recommends approval of the Preliminary Site Plan for Wetlands. ECT recommends that the Applicant address the items noted in the *Wetland/Watercourse Comments* section of this letter prior to approval of the Final Site Plan.

If you have any questions regarding the contents of this letter, please contact us.

Sincerely,

ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.



Peter Hill, P.E.
Senior Associate Engineer



Matthew Carmer
Senior Scientist
Professional Wetland Scientist #1746

cc: Sri Komaragiri, City of Novi Planner
Richelle Leskun, City of Novi Planning Assistant
Rick Meader, City of Novi Landscape Architect
Kirsten Mellem, City of Novi Planner

Attachments: Figure 1. City of Novi Regulated Wetland & Woodland Map
Site Photos



Figure 1. City of Novi Regulated Wetland & Woodland GIS Coverage Map (approximate project boundary shown in red). Regulated Woodland areas are shown in green and regulated Wetland areas are shown in blue).

Site Photos



Photo 1. Looking southeast at existing pond/on-site wetland located on north side of site (ECT, March 22, 2017).



Photo 2. Existing 18" storm sewer end section located at northwest side of the pond/wetland (ECT, March 22, 2017).



Photo 3. View east along W. Eleven Mile Road in area of existing 18" storm sewer and end section located at northwest side of the pond/wetland. Storm sewer curb inlets are indicated (ECT, March 22, 2017).



Photo 4. Stormwater outfall area north of W. Eleven Mile Road (ECT, March 22, 2017).

TRAFFIC REVIEW



AECOM
27777 Franklin Road
Southfield
MI, 48034
USA
aecom.com

Project name:
JSP17-0013 Griffin Funeral Home Preliminary
Traffic Review

From:
AECOM

Date:
April 4, 2017

To:
Barbara McBeth, AICP
City of Novi
45175 10 Mile Road
Novi, Michigan 48375

CC:
Sri Komaragiri, Kirsten Mellem, George Melistas,
Theresa Bridges, Richelle Leskun, Darcy Rechten

Memo

Subject: Griffin Funeral Home Preliminary Traffic Review

The preliminary site plan was reviewed to the level of detail provided and AECOM **recommends approval** for the applicant to move forward with the condition that the comments provided below are adequately addressed to the satisfaction of the City.

GENERAL COMMENTS

1. The applicant, Novi Funeral Home, LLC, is proposing a 12,176 square foot funeral home on Beck Road south of Eleven Mile Road. Beck Road is under the jurisdiction of the City of Novi.
2. The parcel is currently under RA (Residential Acreage) zoning; however, funeral homes are permitted as a special land use subject to the following:
 - a. An adequate assembly area shall be provided off-street for vehicles to be used in funeral processions, and that such assemble area shall be provided in addition to any required off-street parking area.
 - b. A caretaker's residence may be provided within the main building or mortuary establishments.
 - c. Must be located on a designated major thoroughfare.

TRAFFIC IMPACTS

1. AECOM was unable to perform an initial trip generation estimate due to the lack of trip rate information for funeral homes.
2. The majority of trips will likely occur during viewings and burial processions, which are assumed to not occur during peak traffic periods. However, it should be acknowledged that the funeral processions could potentially interfere with existing off-peak traffic patterns on occasion.
3. The applicant has provided the following information related to funeral services and processions.
 - a. Processions typically include 10-15 vehicles.
 - b. The average funeral attendance ranges from 30-70 people; however, the service is most commonly located at a church.

EXTERNAL SITE ACCESS AND OPERATIONS

The following comments relate to the external interface between the proposed development and the surrounding roadway(s).

1. The proposed driveway modifications are in compliance with City of Novi standards.
2. The applicant has proposed entering and exiting tapers for the proposed driveway. The taper lengths are in compliance with City standards.
3. Because funeral services are assumed to not occur during peak traffic periods, there is not enough estimated traffic to warrant a left turn lane or left turn passing lane.
4. The applicant has indicated 460 feet of sight distance as required by the City's ordinance.
5. The applicant is modifying an existing driveway, therefore spacing requirements are not applicable. It should be noted, however, that the spacing requirements for same side and opposite side driveways are met.
6. There are an adequate number of site access drives provided.

INTERNAL SITE OPERATIONS

The following comments relate to the on-site design and traffic flow operations.

1. General Traffic Flow
 - a. Fire code requires a minimum of 50' outside turning radius and 30' inside turning radius. The applicant shall indicate on the plans firetruck circulation patterns throughout the site and update any turning radii that do not provide firetruck accessibility.
 - b. Loading zones are not required at the development. The trash enclosure, during trash pick-up times, could potentially interfere with parking operations and should be considered for relocation, so that parking spaces are not blocked during trash collection processes.
 - c. The use of pavement markings and/or signing could be considered for this vehicle procession storage area.
 - d. The applicant should provide dimensions for the width of the drive located in front of the main entrance.
2. Parking Facilities
 - a. The City requires one parking space for every 50 square feet of usable floor area. The applicant has designated 6,030 (49.5%) square feet of the building as usable floor area. The applicant is required to provide 121 parking spaces per the ordinance; however, has only provided 121 total spaces, as discussed below:
 - i. The applicant has provided 98 proposed parking spaces.
 - ii. The applicant has provided 23 land banked parking spaces.
 - iii. The applicant has provided information to support the reduced amount of parking spaces provided.
 - iv. The applicant should include a parking calculations table in future submittals.
 - b. Parking space dimensions are generally in compliance with City standards. However, the parking area located on the north side of the building consists of some atypically designed spaces. The applicant should provide dimensions (at the shortest lengths and widths) for those atypical parking spaces in order to ensure compliance with City standards.
 - c. Certain landbanked parking spaces appear to be within the extents of horizontal curvature. The applicant should relocate these spaces such that they are no longer within the extents of horizontal curvature.
 - d. Five barrier free parking spaces are required and the applicant has provided five spaces, two of which are van accessible.
 - e. Barrier free parking spaces are compliant with 2010 ADA standards.
 - f. It appears that there is no curb between the proposed barrier free spaces and the abutting sidewalk. The applicant should indicate any curbs or ramps in the area. If there is no curb, the applicant is required to either insert a curb or place four inch parking blocks at the end of the space resulting in two feet of vehicle overhang while maintaining five feet of width for the sidewalk.
 - g. End islands and peninsulas are generally in compliance with the City's standards.
 - h. Six inch curbs are required in areas that the curb height is not limited to four inches in height by an abutting 17 foot parking space.

- i. The development requires two bicycle parking spaces. The applicant has proposed a bicycle parking area; however, the number of bicycle parking spaces shall be provided in the parking calculations table. The applicant should also provide a dimensioned detail for the layout of the bicycle parking area.
3. Sidewalk Requirements
 - a. Sidewalks are in compliance with City standards and are in compliance with the City's Non-Motorized Master Plan.
 - b. The applicant should place ADA ramps on all sidewalk connecting to the proposed sidewalk along Beck Road.
 - c. The ADA ramp details are in compliance with the current version of MDOT details.
 4. All on-site signing and pavement markings shall be in compliance with the Michigan Manual on Uniform Traffic Control Devices. The following is a discussion of the proposed signing.
 - a. Additional pavement marking size details are required for future submittals; such as the international symbol for accessibility and parking space stripe widths, among others.
 - b. Proposed sign heights are required to be a height of seven feet. The proposed sign height must be increased a total of one foot to ensure compliance with MMUTCD standards.
 - c. The proposed stop sign is 24 x 24 inches. MMUTCD standards require a minimum stop sign size of 30 x 30 inches.
 - d. The proposed sign posts are required to be U-channel in shape and indicated as 2# or 3#, as applicable based on sign size requirements. For example, 2# posts are required for signs 12 x 18 inches or less and 3# posts are required for multiple signs on one post or when sign size exceeds 12 x 18 inches.

Should the City or applicant have questions regarding this review, they should contact AECOM for further clarification.

Sincerely,

AECOM



Sterling J. Frazier, E.I.T.
Reviewer, Traffic/ITS Engineer



Matthew G. Klawon, PE
Manager, Traffic Engineering and ITS Engineering Services

FAÇADE REVIEW



March 29, 2017

Façade Review Status Summary:
Approved, Full Compliance

City of Novi Planning Department
 45175 W. 10 Mile Rd.
 Novi, MI 48375-3024

Re: **FACADE ORDINANCE - Façade Review**
Griffin Funeral Home, PSP17-0032
 Façade Region: 1, Zoning District: RA

Dear Ms. McBeth;

The following is the Façade Review for Final Site Plan Approval of the above referenced project based on the drawings prepared by JST Architects, dated 3/10/17. The percentages of materials proposed for each façade are as shown on the table below. The maximum percentages allowed by the Schedule Regulating Façade Materials (AKA Façade Chart) of Ordinance Section 5.15 are shown in the right hand column. Materials in non-compliance with the Façade Chart, if any, are highlighted in bold.

Façade Ordinance, Section 5.15	East (Front)	West	North	South	Ordinance Maximum (Minimum)
Brick	30%	30%	30%	30%	30% Minimum
Stone	30%	30%	30%	30%	50%
Asphalt Shingles	25%	25%	25%	25%	25%
Standing Seam	5%	5%	5%	5%	25%
Metal Fascia & Trim	5%	5%	5%	5%	15%
Cast Stone	5%	5%	5%	5%	50%

As shown above, all proposed materials are in full compliance with the Façade Ordinance.

Recommendation - The building exhibits well balanced proportions and composition of materials. The façade material samples illustrated on sheet A2.0 indicate carefully coordinated colors and materials. The design is in full compliance with the Façade Ordinance and will harmonize well with other buildings in the surrounding area. Approval is recommended for the reasons stated above.

Notes to the Applicant:

1. Façade Ordinance requires inspection(s) for all projects. Materials displayed on the approved sample board will be compared to materials delivered to the site. It is the applicant's responsibility to request the inspection of each façade material at the appropriate time. Inspections may be requested using the Novi Building Department's Online Inspection Portal with the following link. Please click on "Click here to Request an Inspection" under "Contractors", then click "Façade".
<http://www.cityofnovi.org/Services/CommDev/OnlineInspectionPortal.asp>.
2. The dumpster enclosure should be constructed of materials matching the primary structure.

If you have any questions regarding this project please do not hesitate to call.

Sincerely,
DRN & Associates, Architects PC

A handwritten signature in black ink, appearing to read "Douglas R. Necci". The signature is fluid and cursive, written over the printed name below.

Douglas R. Necci, AIA

FIRE REVIEW



March 21, 2017

TO: Barbara McBeth- City Planner
Sri Ravali Komaragiri- Plan Review Center
Kirsten Mellem- Plan Review Center

CITY COUNCIL

Mayor
Bob Gatt

Mayor Pro Tem
Dave Staudt

Gwen Markham

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**Director of Public Safety
Chief of Police**
David E. Molloy

Director of EMS/Fire Operations
Jeffery R. Johnson

Assistant Chief of Police
Erick W. Zinser

Assistant Chief of Police
Jerrod S. Hart

RE: Griffin Funeral Home

PSP# 17-0032

Project Description:

Build a 12,176 sq. ft. building on the corner of Beck Rd and Eleven Mile Rd in section 20.

Comments:

- 1) Turning radius for the west entrance doesn't meet Fire Departments Standards.
- 2) **MUST** add one hydrant around business to meet City Ordinance for spacing more than 500' from hydrant to hydrant. (City Ordinance Sec 11-68)
- 3) The Fire Lane must meet the City of Novi requirements for 35 ton. (City Ordinance Sec 15-17 503.2.3)

Recommendation:

APPROVED WITH CONDITIONS

Sincerely,

Kevin S. Pierce-Fire Marshal
City of Novi – Fire Dept.

Novi Public Safety Administration
45125 W. Ten Mile Road
Novi, Michigan 48375
248.348.7100
248.347.0590 fax

cc: file

APPLICANT RESPONSE LETTER

Z EIMET W OZNIAK
& ASSOCIATES

Civil Engineers & Land Surveyors

55800 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

March 31, 2017

Ms. Sri Ravali Komaragiri
City of Novi Community Development
45175 West Ten Mile Road
Novi, MI 48375

RE: Griffin Funeral Home
PSP Comments

Dear Ms. Sri Ravali Komaragiri:

Thank you for your call regarding the PSP review for Griffin Funeral Home. We would like to address two concerns that you discussed.

Required berm along the south property line:

The current property will be split into two separate parcels. The north parcel will include the proposed funeral home, developed as a special land use under the current residential zoning. The south parcel will be developed under the PSLR zoning option and not as a residential development, as noted in the attached letter from David Griffin. It is David's intention to market the south parcel and develop the property as PSLR immediately.

David is aware that a berm is required between a special land use and residential properties. Since the north and south parcels will be similar in use and not residential, David does not want to construct a berm. A berm will reduce the continuity between the two parcels and is unnecessary. If the south parcel were developed for residential use, David would construct a berm as required. In addition, there is an existing landscaped berm between the south parcel and the school property.

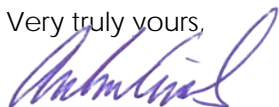
Parking Requirements:

The lobby, as noted in the architect's letter dated March 6, 2017, will be used by people, "who are there to make funeral arrangements, have appointments with funeral directors, etc."

Since these people can be in only one area of the funeral home at a time, it is logical that the lobby area (280 s.f.) should not have been included as useable space for parking requirement calculations. Removing the lobby will reduce the overall useable area to 6,030 s.f. which would require 121 parking spaces ($6,030/50 = 120.6$).

Should you have any questions or comments please don't hesitate to contact us.

Very truly yours,



Andrew J. Wozniak

Cc: David Griffin

GRIFFIN

L.J. GRIFFIN FUNERAL HOME, INC.

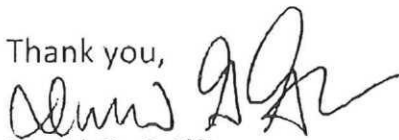
Ms. Sri Ravali Komaragiri
City of Novi Community Development

Dear Ms. Sri Komaragiri,

This letter is to confirm our intention to sell the south parcel of our development for non-residential use.

I understand and agree to retro fit the property with an appropriate berm should the parcel be sold for any residential development.

Thank you,



David G. Griffin

"Service-A Family Tradition"

Northrop-Sassaman Chapel

8809 Wayne Rd.
Livonia, MI 48150
(734) 522-6200

7707 Middlebelt Rd.
Westland, MI 48185
(734) 522-9400

42600 Ford Rd.
Canton, MI 48187
(734) 981-1700

19091 Northville Rd.
Northville, MI 48168
(248) 348-1233

Z EIMET W OZNIAK & ASSOCIATES

Civil Engineers & Land Surveyors

55800 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

April 6, 2017

Ms. Sri Ravali Komaragiri
City of Novi Community Development
45175 West Ten Mile Road
Novi, MI 48375

RE: Griffin Funeral Home, Preliminary Site Plan
Response to the Planning Review

Dear Ms. Sri Ravali Komaragiri:

We would like to thank Community Development for their review of the Preliminary Site Plan.

We have reviewed the Planning Review letter dated March 30, 2017 and offer the following response to the Planning Review Chart dated March 17, 2017:

Zoning and Use Requirements

Master Plan – Noted

Area Study - Noted

Zoning - Noted

Uses Permitted – We have noted that this submittal will require Planning Commission's approval of Special Land Use.

Use Standards: Mortuary Establishments

Adequate Assembly Area – An assembly area has been shown on the plans. As noted in David Griffin's letter, the funeral procession has become more infrequent and a small following of 10 – 15 cars is typical. The plans indicate a visual representation for 12 assembly spaces. Additional assembly spaces can be added in this area but they are not needed according to David Griffin.

Caretakers Residence – NA

Site Location – Noted

Planning Commission Consideration – Noted

Noise Impact Statement – We would like to request a waiver of the noise impact statement, as no noise generating equipment will be added to the site.

Height, bulk, density and area limitations

Maximum % of Lot Area Covered – Noted

Building Height – Noted

Building Setbacks

The setbacks distances are on sheet C-3 including the sides and rear. The building is located well within these setback areas.

Parking Setback

Noted

Note to District Standards

Noted

Parking, Loading and Dumpster Requirements

Number of Parking Spaces – We would like to thank staff for their support regarding this issue. The parking counts and useable floor area will be revised with the next submittal.

Landbank Parking – We request that Planning Commission approve the landbank parking. We will add and revise notes on the plans regarding change of use and installation of the landbank parking.

Parking Space Dimensions and Maneuvering Lanes – Noted

Parking stall located adjacent to parking lot entrance – NA

End Islands – End islands are addressed in the traffic review

Barrier Free Spaces – Noted

Barrier Free Space Dimensions – Noted

Minimum Number of Bicycle Parking – Noted

Bicycle Parking General Requirements – Noted

Bicycle Lot Layout – Noted

Loading Spaces – Noted

Dumpster – Conflicts with parking spaces are addressed in the Traffic comments.

Dumpster Details – The material for the dumpster enclosure gates will be wood and will be revised on the next submittal.

Lighting and Other Equipment Requirements

Exterior Lighting – A lighting plan is being submitted.

Roof top equipment – A note regarding no rooftop equipment will be added to the plans.

Roof top screening – NA

Sidewalk Requirements

Off-road non-motorized facilities – An 8' wide pathway is proposed along Beck Road. As requested by engineering, the pathway along Eleven Mile Rd. has been removed and payment will be made to the sidewalk escrow fund.

Pedestrian Connectivity – Noted

Building Code and Other Legal Requirements

Building Code – Noted

Design and Construction Standards – Noted

General Layout – All review letters have been addressed.

Economic Impact – Noted

Development Business sign and Street Addressing - The location of the monument sign has been shown on the plans. Application for an address will be made prior to stamping set approval.

Project and Street Naming - NA

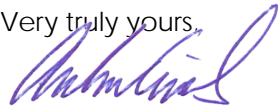
Property Split – The property split will be applied for after sale of property is finalized.

Lighting and Photometric Plan

A lighting plan is being submitted.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,



Andrew J. Wozniak

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248.437.5099 · 248.437.5222 fax
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April 6, 2017

Ms. Darcy Rechten
City of Novi - Engineering
45175 West Ten Mile Road
Novi, Michigan 48375

Re: Griffin Funeral Home, Preliminary Site Plan
Response to Engineering Review
JSP17-0013

Dear Ms. Rechten:

Thank you for your recommendation for approval of the Preliminary Site Plan and Preliminary Storm Water Management Plan.

In response to your Plan Review Center Report dated March 31, 2017, we offer the following which will be addressed during the Final Site Plan Submittal:

General

1. The City standard detail sheets will be included with the Stamping Set submittal.
2. The Non-Domestic User Survey will be submitted.

Water Main

3. A tapping sleeve valve and well will be added.
4. A temporary hydrant will be added.
5. Noted

Sanitary Sewer

6. A sanitary sewer monitoring manhole with a 20' wide access easement will be added.

Storm Sewer

7. A site drainage area map and storm sewer sizing calculations will be included.
8. Roof drains will be addressed.
9. A sump and oil/gas separator will be addressed during Final Site plan.

Storm Water Management Plan

10. The pond and lawn areas c factor calculations will be clarified.
11. Release rate calculations will be provided.

Paving and Grading

12. The existing, proposed and master planned right-of-way lines will be clarified on the plans. An off-site sidewalk easement has been submitted.
13. A payment to the City for the cost of the Eleven Mile Rd sidewalk will be made. An administrative variance is requested.

Soil Erosion and Sediment Control

14. SESC plans will be included with the Final Site Plan submittal.

Off-Site Easements

15. We received a review of the off-site easement exhibits from SDA, dated April 4, 2017 and completed the required corrections. The revised draft copies of the easements have been submitted for review.

Final Site Plan Submittal

16. A response letter will be provided.
17. An itemized opinion of probable construction cost will be provided.
18. A recent title search and legal escrow funds will be submitted.

Stamping Set Submittal

19. Items 19 – 21 will be addressed with the Stamping Set Submittal.

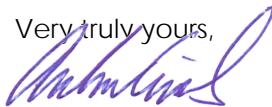
Prior to Construction

20. Items 20 -29 will be addressed prior to construction.

Please contact if you have any additional questions.

Thank you for your assistance with this project.

Very truly yours,



Andrew J. Wozniak

Pc: Mr. David Griffin

April 13, 2017

Mr. Rick Meader, Landscape Architect
City of Novi Planning Department
45175 W. Ten Mile Road
Novi, Michigan 48375

Re: **JSP 17-13 Griffin Funeral Home - Landscape Review**

Dear Mr. Meader :

We have received the Preliminary Plan Review for the Griffin Funeral Home per the review packet dated March 23, 2017. Our responses to the Landscape Plan review comments are listed below:

A. Existing Soils

1. Noted.

B. Existing and Proposed Utility Locations

1. Noted.

C. Existing Trees

1. Noted.
2. Noted.
3. Tree protection will be added to civil drawing C-2 per requirement.

D. Adjacent to Residential – Buffer

1. Noted.
2. Noted.
3. Planting will be revised to meet denser opacity requirements.
4. An alternate tree species will add on future revised plans.
5. Noted.
6. Noted.

E. Adjacent to Public Rights-of-Way – Berm

1. Noted. Landscape waiver requested.
2. Noted.

F. Street Trees

1. Noted.
2. Noted. Two (2) additional street trees will be provided on revised plans.

G. Parking Lot Landscaping

1. Noted.
2. Noted. Revised plans will meet the island size requirements as described.
3. Noted. Revised plans with adjusted landscape areas will provide required tree locations as described.

H. Parking Lot Perimeter Trees

1. Noted.

I. Loading Zone Screening

1. Noted.

J. Building Foundation Landscape

1. Noted.
2. Noted.

K. Plant List

1. We will work with staff to modify plant selection for foundation plantings to meet intent of native species criteria.

L. Planting Notations and Details

1. Noted.

M. Storm Basin Landscape

1. Noted.
2. Additional shrubs will be added to revised plans to meet requirements.

N. Irrigation Plan

1. Noted.

O. Proposed Topography

1. Noted.
2. Proposed grading for land-bank parking spaces will be provided by the civil engineer on a separate grading plan.

P. Snow Deposit

1. Noted.

Q. Corner Clearance

1. Noted.

If you have any questions, please feel free to contact me at your convenience. Thank you for your assistance with the Griffin Funeral Home Preliminary Site Plan.

Sincerely,



Steve Deak, RLA, LEED AP
Deak Planning + Design, LLC

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& ASSOCIATES

Civil Engineers & Land Surveyors

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New Hudson, Michigan 48165-9318
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www.zeimetwozniak.com

March 10, 2017

Ms. Sri Ravali Komaragiri
City of Novi Community Development
45175 West Ten Mile Road
Novi, MI 48375

RE: Griffin Funeral Home, Preliminary Site Plan
Response to the Wetland Review

Dear Ms. Sri Ravali Komaragiri:

We would like to thank ECT for their review of the Preliminary Site Plan.

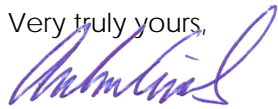
We have reviewed their letter dated March 29, 2017 and offer the following response:

Wetland Comments

1. The proposed wetland and buffer impact for the outlet control structure will be provided with the next submittal.
2. This information will be provided with the next submittal.
3. The seed mix will be clarified with the next submittal.
4. The applicant has retained King & MacGregor Environmental to determine if the proposed development will require a wetland use permit from the MDEQ.
5. The City of Novi Engineering department has informed us that pre-treatment is not required since the existing pond has over three feet of water. We will confirm the depth of the water before the next submittal.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,



Andrew J. Wozniak

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April 6, 2017

Ms. Sri Ravali Komaragiri
City of Novi Community Development
45175 West Ten Mile Road
Novi, MI 48375

RE: Griffin Funeral Home, Preliminary Site Plan
Response to Traffic Review

Dear Ms. Sri Ravali Komaragiri:

We would like to thank AECOM for their review of the Preliminary Site Plan.

We have reviewed their memorandum dated April 4, 2017 and offer the following response:

General Comments

1. Noted
2. Noted
 - a) An assembly area has been added to the plans;
 - b) A caretaker's residence is not proposed;
 - c) Noted.

Traffic Impacts

1. Noted;
2. Noted;
3. Noted.

External Site Access and Operations

1. Noted;
2. Noted;
3. Noted;
4. Noted;
5. Noted.

Internal Site Operations

1. General Traffic Flow
 - a) The turning radii will be revised and fire truck circulation patterns will be provided with the next submittal;
 - b) A feasible alternate location for the trash enclosure is not available. The trash enclosure will rotate slightly in the same general location to accommodate a

landscape concern. The impact on parking during trash pickup does not concern the owner for the following reasons:

- Trash collection will be done during the day when the parking lot is typically empty
 - The trash enclosure is located at the very rear of the parking lot and is typically empty
 - Only 2-3 parking spaces will be impacted
 - Trash collection typically takes 2 minutes once a week.
- c) The applicant does not want to add pavement markings or signage as processions are rare and frequently flags are placed on cars in parking spaces rather than assemble for a procession;
- d) Additional dimensions will be provided for the width of the driveway at the entrance.

2. Parking Facilities

- a) As required, 121 parking spaces have been provided;
- b) Additional dimensions will be provided for the atypical spaces;
- c) There is not an alternative location for the three landbanked parking spaces located along the curve of the drive. These spaces will meet the required dimensions for a parking space;
- d) Noted;
- e) Noted;
- f) Four inch parking blocks will be added between the barrier free parking spaces and the sidewalk;
- g) Noted;
- h) Six inch curbs will be provided in areas where four inch curb is not required;
- i) The number of bicycle parking spaces will be added to the parking calculations table and dimensions for the layout of the bicycle parking area will be added.

3. Sidewalk Requirements

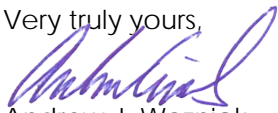
- a) Noted;
- b) ADA ramps will be provided for all sidewalks connecting to proposed sidewalk along Beck Road;
- c) Noted.

4. On-site pavement markings

- a) Additional pavement marking details will be added;
- b) Proposed sign height will be revised;
- c) The size of the proposed Stop Sign will be revised;
- d) The sign posts will be revised.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,



Andrew J. Wozniak

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& ASSOCIATES

Civil Engineers & Land Surveyors

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New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

April 6, 2017

Ms. Sri Ravali Komaragiri
City of Novi Community Development
45175 West Ten Mile Road
Novi, MI 48375

RE: Griffin Funeral Home, Preliminary Site Plan
Response to Facade Review

Dear Ms. Sri Ravali Komaragiri:

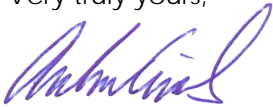
We would like to thank DRN & Associates for their review of the Preliminary Site Plan.

We have reviewed their letter dated March 29, 2017 and offer the following response:

1. Noted
2. The dumpster enclosure will be constructed of materials matching the primary structure as noted on the detail located on sheet C-10. The detail will be revised to provide wood doors as required.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,



Andrew J. Wozniak

Z EIMET W OZNAK & ASSOCIATES

Civil Engineers & Land Surveyors

55800 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

April 6, 2017

Ms. Sri Ravali Komaragiri
City of Novi Community Development
45175 West Ten Mile Road
Novi, MI 48375

RE: Griffin Funeral Home, Preliminary Site Plan
Response to the Fire Review

Dear Ms. Sri Ravali Komaragiri:

We would like to thank the Fire Department for their review of the Preliminary Site Plan.

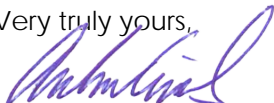
We have reviewed their letter dated March 21, 2017 and offer the following response:

Comments

- The turning radius for the west entrance will be revised for the next submittal
- There are two proposed hydrants shown on sheet C-6 which we believe meets the City Ordinance. An additional hydrant will be added if needed.
- The fire lane will meet the requirements for 35 ton.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,



Andrew J. Wozniak

PRELIMINARY SITE PLAN FOR GRIFFIN FUNERAL HOME NOVI, MICHIGAN, SECTION 20



SITE DATA:

ZONED:	R-A
GROSS SITE AREA:	171,190.80 S.F. (3.93 ACRES)
GROSS BUILDING AREA:	12,176 S.F.
USABLE BUILDING AREA:	8,310 S.F.
LOT COVERAGE ALLOWED:	25%
LOT COVERAGE PROPOSED:	7.1%
BUILDING HEIGHT:	21' 6" / 1 STORY
BUILDING SETBACK:	75' FRONT
PARKING SETBACK:	20' REAR AND SIDES

PARKING SCHEDULE

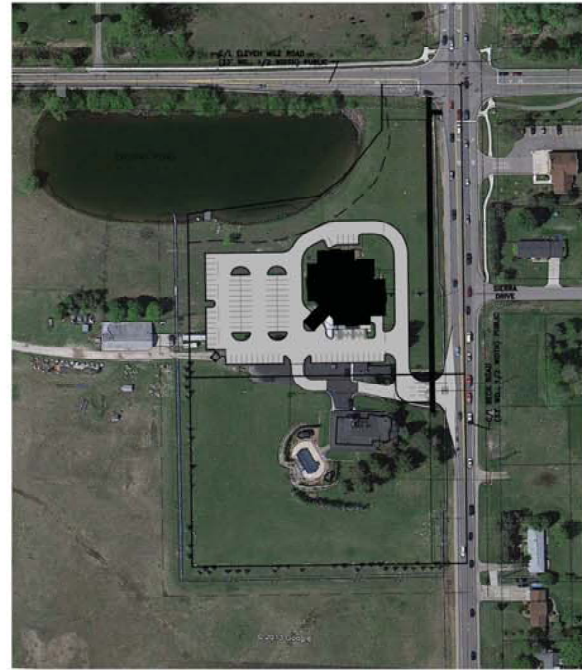
PARKING SPACES REQUIRED

1 SPACE FOR EACH 50 SQUARE FEET OF USABLE FLOOR AREA

USABLE FLOOR AREA (LESS CHAPEL)	4,810 S.F. / 50 = 97 SPACES
USABLE FLOOR AREA (CHAPEL)	1,500 S.F. / 50 = 30 SPACES
	127 SPACES

PARKING SPACES PROVIDED

STANDARD	93
BARRIER FREE (INCLUDES 2 VAN ACCESSIBLE SPACES)	5
BANKED	24
TOTAL	122 SPACES



SHEET INDEX:

CIVIL ENGINEERING	
C-1	EXISTING CONDITIONS
C-2	SITE PREPARATION PLAN
C-3	PAVING AND DIMENSION PLAN
C-3.1	BANKED PAVING AND DIMENSION PLAN
C-4	GRADING PLAN
C-5	STORM SEWER PLAN
C-6	SANITARY AND WATERMAIN PLAN
C-7	STORMWATER MANAGEMENT PLAN
C-7.1	STORMWATER OUTLET ANALYSIS PLAN
C-8	STORMWATER MANAGEMENT DETAILS
C-9	EROSION CONTROL PLAN
C-9.1	EROSION CONTROL MAINTENANCE SCHEDULES
C-10	CONSTRUCTION NOTES AND DETAILS
C-11	MDOT RAMP DETAILS
ARCHITECTURE	
A0.0	PROPOSED FLOOR PLAN
A0.1	USABLE SPACE FLOOR PLAN
A1.0	ELEVATIONS
A2.0	COLOR BOARD
A3.0	3D VIEWS
LANDSCAPING	
LP-1	LANDSCAPE PLAN
LP-2	FOUNDATION PLANTING PLAN
LP-3	LANDSCAPE DETAILS

PROPRIETOR:
NOVI FUNERAL HOME, L.L.C.
7707 MIDDLEBELT RD.
WESTLAND, MI 48185
(734) 968-9401
DAVID GRIFFIN

ARCHITECT:
JST ARCHITECTS
2919 WELBORN STREET
DALLAS, TX 75219
(214) 522-4033
JOHN GARY

CIVIL ENGINEER:
ZEIMET WOZNAK AND ASSOCIATES
55800 GRAND RIVER AVE, SUITE 100
NEW HUDSON, MICHIGAN 48165
(248) 437-5099
JULIAN J. WARGO JR., P.E.

LANDSCAPE ARCHITECT:
DEAR PLANNING + DESIGN
143 CADYCENTER # 79
NORTHVILLE, MI 48167
(248) 444-7892
STEVE DEAK, RLA

NOTE: A RIGHT-OF-WAY PERMIT WILL BE REQUIRED FROM THE CITY OF NOVI.

NOTE: ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOVI STANDARDS AND SPECIFICATIONS.

NOTE: THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/21/17	JAW						
PSP REVIEW	03/20/17	JAW						

ZEIMET WOZNAK
CIVIL ENGINEERS & LAND SURVEYORS
55800 GRAND RIVER AVE. SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5322 www.zeimetwoznak.com

MISS DIG SYSTEM, INC.
THREE FULL HOURS BEFORE THE START OF ANY EXCAVATION CALL THE MISS DIG SYSTEM 1-800-482-7174

PROJECT SPONSOR:
NOVI FUNERAL HOME, L.L.C.
7707 MIDDLEBELT RD.
WESTLAND, MI 48185 (734) 968-9401

COVER
GRIFFIN FUNERAL HOME
NOVI, MICHIGAN, SECTION 20

DATE	2-16-17	SCALE	HOR: 1" = 100'
DESIGNED BY	JAW	JOB NO.	16121
DRAWN BY	DAB	SHEET	

Z:\Projects\170204002017_Cover_Prelim_Site_Plan_ConvL 1/20/17 10:23 AM dabbler

N. 1/4 CORNER SECTION 20 T. 1 N. R. 8 E. CITY OF NOVIA, OAKLAND CO., MI

EX. 19 LF-18" STM (INCL. FLARED E.S.)

C/L ELEVEN MILE ROAD (33' WD., 1/2 WIDTH) PUBLIC

22-17-400-028 ZONED R-3

N.E. CORNER SECTION 20 T. 1 N. R. 8 E. CITY OF NOVIA, OAKLAND CO., MI

EXISTING LEGEND

- MANHOLE
- CATCH BASIN
- CLEANOUT
- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- SIGN
- TREE
- SECTION CORNER
- FO, SO
- FO FOUND CAPPED IRON
- SO SET CAPPED IRON
- CHAIN LINK FENCE
- FENCE
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- GAS MAIN
- ELECTRIC CABLE
- BOUNDARY LINE
- PARCEL LINE
- SECTION LINE
- CONTOUR MAJOR
- CONTOUR MINOR
- TOP OF PAVEMENT
- 1/P TOP OF CURB
- 1/C TOP OF CURB
- 8/C BOTTOM OF CURB
- SPOT ELEVATION
- SOIL BORING



LEGAL DESCRIPTION - PARENT PARCEL 22-20-00-012

A PARCEL OF LAND BEING PART OF THE NORTHEAST 1/4 OF SECTION 20, TOWN 1 NORTH, RANGE 8 EAST, IN THE CITY OF NOVIA, OAKLAND COUNTY, MICHIGAN, BEING DESCRIBED AS FOLLOWS:
 BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 20, S. 00°42'51" E. 816.85 FEET ALONG THE EAST LINE OF SAID SECTION, SAID LINE ALSO BEING THE CENTERLINE OF BECK ROAD (33.00 FEET WIDE, 1/2 WIDTH); THENCE S. 89°17'10" W. 468.04 FEET; THENCE N. 00°42'51" W. 500.89 FEET; THENCE N. 81°58'24" E. 227.54 FEET; THENCE N. 32°57'09" E. 50.00 FEET; THENCE N. 30°27'30" E. 104.67 FEET; THENCE 0.00 FEET NORTH, 78.00 FEET TO A POINT ON THE NORTH LINE OF SAID SECTION, SAID LINE ALSO BEING THE CENTERLINE OF ELEVEN MILE ROAD (33.00 FEET WIDE, 1/2 WIDTH); THENCE ALONG SAID NORTH LINE OF SAID SECTION AND THE CENTERLINE OF ELEVEN MILE ROAD S. 89°57'54" E. 135.00 FEET TO THE POINT OF BEGINNING, SAID POINT ALSO BEING THE NORTHEAST CORNER OF SAID SECTION 20, CONTAINING 7.40 ACRES.

LEGAL DESCRIPTION - RESULTANT PARCEL FUNERAL HOME

A PARCEL OF LAND BEING PART OF THE NORTHEAST 1/4 OF SECTION 20, TOWN 1 NORTH, RANGE 8 EAST, IN THE CITY OF NOVIA, OAKLAND COUNTY, MICHIGAN, BEING DESCRIBED AS FOLLOWS:
 BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 20, S. 00°42'51" E. 484.05 FEET ALONG THE EAST LINE OF SAID SECTION, SAID LINE ALSO BEING THE CENTERLINE OF BECK ROAD (33 FEET WIDE, 1/2 WIDTH); THENCE S. 89°17'09" W. 468.04 FEET; THENCE N. 00°42'51" W. 278.09 FEET; THENCE N. 81°58'24" E. 227.54 FEET; THENCE N. 32°57'09" E. 50.00 FEET; THENCE N. 30°27'30" E. 104.67 FEET; THENCE 0.00 FEET NORTH, 78.00 FEET TO A POINT ON THE NORTH LINE OF SAID SECTION, SAID LINE ALSO BEING THE CENTERLINE OF ELEVEN MILE ROAD (33.00 FEET WIDE, 1/2 WIDTH); THENCE ALONG SAID NORTH LINE OF SAID SECTION AND THE CENTERLINE OF ELEVEN MILE ROAD S. 89°57'54" E. 135.00 FEET TO THE POINT OF BEGINNING, SAID POINT ALSO BEING THE NORTHEAST CORNER OF SAID SECTION 20, CONTAINING 3.47 ACRES.

LEGAL DESCRIPTION - RESULTANT PARCEL REMAINING LAND

A PARCEL OF LAND BEING PART OF THE NORTHEAST 1/4 OF SECTION 20, TOWN 1 NORTH, RANGE 8 EAST, IN THE CITY OF NOVIA, OAKLAND COUNTY, MICHIGAN, BEING DESCRIBED AS FOLLOWS:
 COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 20, THENCE S. 00°42'51" E. 494.05 FEET ALONG THE EAST LINE OF SAID SECTION, SAID LINE ALSO BEING THE CENTERLINE OF BECK ROAD (33 FEET WIDE, 1/2 WIDTH); THENCE S. 89°17'09" W. 468.04 FEET; THENCE N. 00°42'51" W. 278.09 FEET; THENCE N. 81°58'24" E. 227.54 FEET; THENCE N. 32°57'09" E. 50.00 FEET; THENCE N. 30°27'30" E. 104.67 FEET; THENCE 0.00 FEET NORTH, 78.00 FEET TO A POINT ON THE NORTH LINE OF SAID SECTION, SAID LINE ALSO BEING THE CENTERLINE OF ELEVEN MILE ROAD (33.00 FEET WIDE, 1/2 WIDTH); THENCE ALONG SAID NORTH LINE OF SAID SECTION AND THE CENTERLINE OF ELEVEN MILE ROAD S. 89°57'54" E. 135.00 FEET TO THE POINT OF BEGINNING, CONTAINING 3.47 ACRES.

FLOODPLAIN NOTE:

SUBJECT SITE DOES NOT FALL WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA PER THE NATIONAL FLOOD INSURANCE PROGRAM. FLOODWAY MAP COMMUNITY PANEL No. 201300007 WITH AN EFFECTIVE DATE OF SEPTEMBER 29, 2006. SUBJECT SITE IS IN ZONE X. DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

WETLAND NOTE:

WETLAND IDENTIFIED BY WOODY FIELD, KING MAGNOLIUM ENVIRONMENTAL, INC., DATED 4-9-2014. WETLAND LIMITS ARE CONCORDANT TO THE WATERS EDGE OF THE EXISTING POND.

UTILITY CONTACT INFORMATION:

ATT	248-456-8254	LINDA DENNIS
BRIGHT HOUSE NETWORKS	734-293-1258	BOB HINDGILL
BUCKEYE FIBER NETWORKS	616-504-4475	TRACY MCCLURE
CONSUMERS ENERGY	999-999-9999	KURT GOLDING
CLEARIE		
COMMUNICATIONS INC.	248-208-0871	JOE FORSTHE
COXCATV	248-898-0711	CHRIS PUDAS
DETRICH EDDSON	313-235-5632	
INTERNATIONAL TRANSDORCH COMPANY	248-744-3322	BRIANNA KOTLES
LEVEL 3 COMMUNICATIONS	720-888-2061	JUDY HENRY
LIGHTHOUSE FIBER NETWORKS	585-445-5851	LEWIS HALL
MCI / VERIZON	972-729-6016	GWY PRINSENGAARD
NET SERVICES	517-853-3120	CARL KING
U.S. SIGNAL CORP.	816-295-0848	KEVIN VANDER FLOEG
WESTERN COMMUNICATIONS	319-790-7510	JOE GREEN
WIDE OPEN WEST	734-237-4319	JOHN HAJEC
XO COMMUNICATIONS	248-754-4427	ANDREW KOWALSKI

NOTE: THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

Tag	Scientific Name	Common Name	Diameter at Breast	Height	Conditions
EXISTING TREES					
GRIFFIN FUNERAL HOME (NORTH PARCEL)					
1	Acer saccharinum	Sugar Maple	18.0		Good
2	Acer saccharinum	Sugar Maple	19.0		Good
3	Acer saccharinum	Sugar Maple	14.0		Good
4	Malus Floribunda	Japanese Crabapple	10.0	7.0	Good
5	Acer saccharinum	Sugar Maple	24.0		Good
6	Picea pungens	Norway Spruce	35.0		Good
7	Picea pungens	Norway Spruce	15.0		Good
8	Picea pungens	Norway Spruce	24.0		Good
OFF-SITE (SOUTH PARCEL)					
9	Picea pungens	Norway Spruce	34.0		Good
10	Picea pungens	Norway Spruce	35.0		Good
11	Picea pungens	Norway Spruce	14.0		Good
12	Picea pungens	Norway Spruce	14.0		Good
13	Picea pungens	Norway Spruce	24.0		Good
14	Picea pungens	Norway Spruce	25.0		Good
15	Picea pungens	Norway Spruce	24.0		Good
16	Prunus Subhirtella	Dwarf Weeping Cherry	16.0		Good
17	Picea pungens	Norway Spruce	20.0		Good
18	Pinus Strobus	Eastern White Pine	24.0		Good
19	Pinus Strobus	Eastern White Pine	20.0		Good
20	Pinus Strobus	Eastern White Pine	29.0		Good
21	Picea pungens	Norway Spruce	16.0		Good
22	Pinus Strobus	Eastern White Pine	23.0		Good
23	Picea pungens	Norway Spruce	36.0		Good
24	Picea pungens	Norway Spruce	20.0		Good
25	Picea pungens	Norway Spruce	23.0		Good
26	Picea pungens	Norway Spruce	32.0		Good
27	Pinus Strobus	Eastern White Pine	15.0		Good
28	Pinus Strobus	Eastern White Pine	26.0		Good
29	Pinus Strobus	Eastern White Pine	21.0		Good

Condition	Description
Excellent	Trees in this class are judged to be exceptional trees and possess the best qualities of the species. All have excellent form and very minor maintenance problems and are growing in a location which will enable them to achieve full mature shape.
Good	Trees in this class are judged to be high-quality trees with decent crown shape and little to no dead limbs or insect activity.
Fair	Trees are in general decent health, which may be brought into better condition with better maintenance. They have few dead stems, insect insect or disease activity, or signs nutritional deficiencies.
Poor	Most trees in this group have the following problems: large dead limbs, with as much as one-third (1/3) of the tree already dead; large cavities; drastic deformities; girdling roots; stress (disease, drought, or insect pest) problems.
Very Poor	Trees in this group are extremely weak with inevitable problems such as severe decline in health, structural degradation, lethal disease or insect infestation with no hope for survival. Trees in this group will have to be removed in the near future and may pose hazardous situations.
Dead	Trees in this group are dead, potentially hazardous and should be removed.



SOILS DATA

PER THE USDA, NCEC, THE SOILS FOR THIS SITE ARE CLASSIFIED AS:
 18B FOX SANDY LOAM, 1 TO 6% SLOPES.
 54A MATHERSON SANDY LOAM, 0 TO 3% SLOPES.

ALSO, REFER TO "SOILS INVESTIGATION" PERFORMED BY McDOWELL AND ASSOCIATES (JOB NO. 17-041 DATED 2/27/2017) FOR SPECIFIC SOILS TESTS, RESULTS, AND RECOMMENDATIONS FOR CONSTRUCTION.



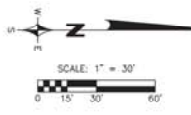
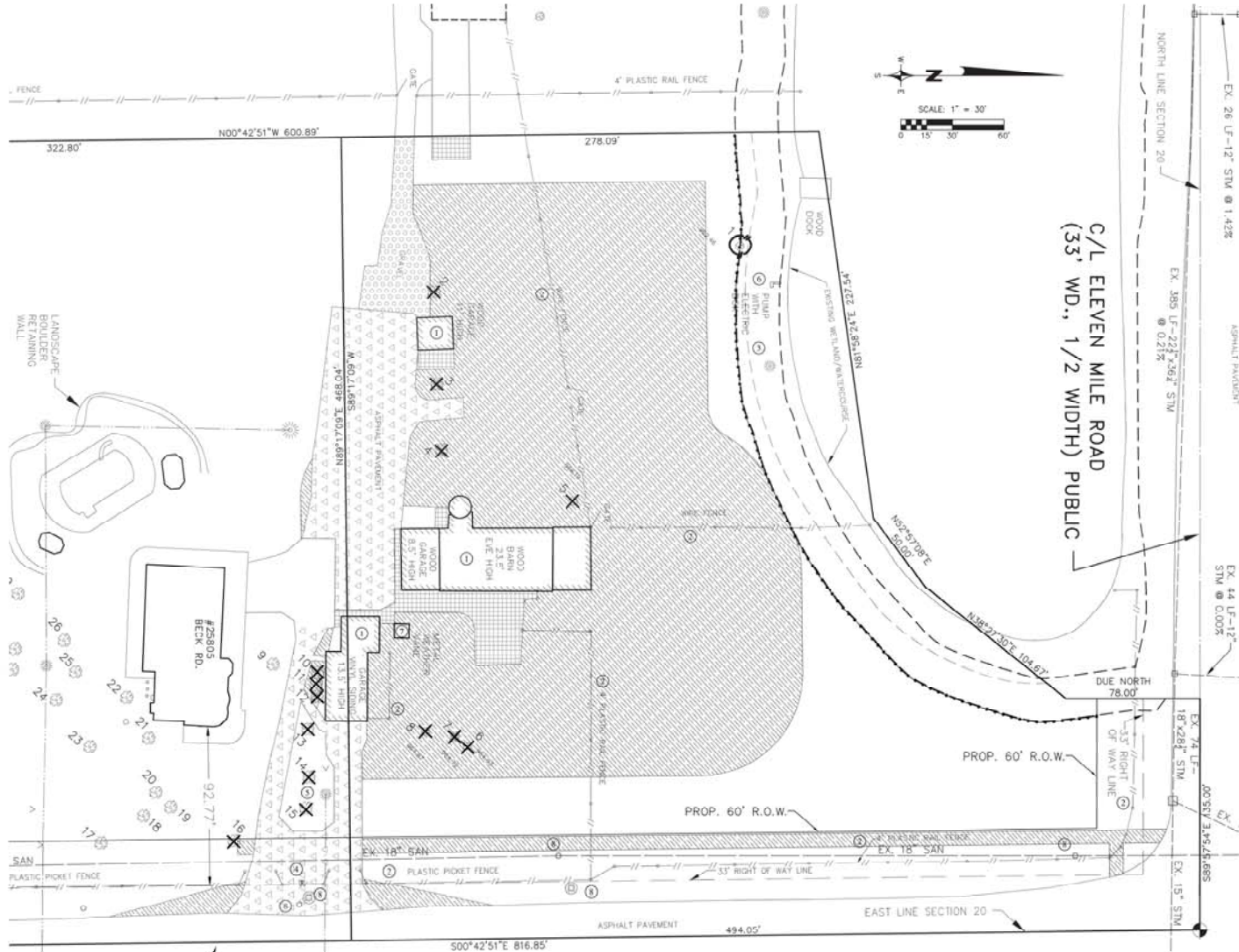
REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/26/17	JAW						
PSP REVIEW	03/20/17	JAW						

ZEMET WOZNAK
 CIVIL ENGINEER & LAND SURVEYOR
 10800 BAYVIEW BLVD. SUITE 100
 NEW BRIDGE, MICHIGAN 48165
 P: (248) 467-8888 F: (248) 467-8333 www.zemetwoznak.com

PROJECT SPONSOR:
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 7707 MIDDLEBELT RD.
 WESTLAND, MI 48185
 (734) 968-9401

EXISTING CONDITIONS
GRIFFIN FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

DATE: 2-16-17 SCALE: HOR: 1" = 50'
 DESIGNED BY: JAW JOB NO.: 16121
 DRAWN BY: JAW SHEET: C-1



- REMOVALS LEGEND:**
- REMOVE EXISTING ASPHALT PAVEMENT
 - REMOVE EXISTING VEGETATION - STRIP EXISTING TOPSOIL TO MIN. 4\"/>
 - REMOVE EXISTING CONCRETE (4\"/>
 - REMOVE EXISTING GRAVEL PAVEMENT
 - INSTALL PLASTIC TREE PROTECTION FENCE
 - WETLAND/ WOODLAND BUFFER PROTECTION FENCING
 - REMOVE TREE AND STUMP
 - INSTALL "SILT-SACK" INLET FILTER ON DRAINAGE STRUCTURE IN PUBLIC ROAD.

- SITE PREPARATION NOTES:**
1. ALL EROSION CONTROLS SHALL FOLLOW THE CITY'S STANDARDS.
 2. CONTRACTOR TO COORDINATE BUILDING UTILITY SERVICE SHUTOFFS AT BARN AND GARAGE WITH MECHANICAL/PLUMBING/ELECTRICAL ENGINEER.
 3. PROTECT ALL EXISTING UTILITIES, STRUCTURES, SIGNS AND POSTS IN PUBLIC RIGHT-OF-WAY UNLESS OTHERWISE NOTED.

- NOTE KEY:**
- ① REMOVE/DEMOLISH EXISTING BUILDING AND FOUNDATION.
 - ② REMOVE FENCE AND POSTS.
 - ③ REMOVE LIGHT POLE AND BASE.
 - ④ REMOVE AND RELOCATE RESIDENTIAL MAILBOX AND POST.
 - ⑤ REMOVE UTILITY POLE (CONTRACTOR TO COORDINATE WORK WITH FRANCHISE UTILITY CO.)
 - ⑥ REMOVE EXISTING PUMP AND HOUSING.
 - ⑦ REMOVE EXISTING WEATHER VANE AND FOUNDATIONS.
 - ⑧ ADJUST FRAME AND COVER/PERILL STRUCTURE AS NEEDED. ANY UTILITY STRUCTURE REQUIRING MORE THAN 18 INCHES OF TOTAL ADJUSTMENT (MEASURED FROM THE TOP OF CONE TO BOTTOM OF CASTING) WILL REQUIRE PRE-CAST RISERS OF BRICK BENEATH THE CONE AS DETERMINED NECESSARY.

REGULATED TREES			
Tag	Scientific Name	Common Name	Diameter at Breast Height/Conditions
Griffin Funeral Home (North Parcel)			
1	Acer saccharum	Sugar Maple	12.0 Good
2	Acer saccharum	Sugar Maple	8.8 Good
3	Acer saccharum	Sugar Maple	14.0 Good
4	Malus Floribunda	Hawthorn-Crabapple	8.0 2.0 Good
5	Acer saccharum	Sugar Maple	8.4 Good
6	Pinus pungens	Norway Spruce	8.4 Good
7	Pinus pungens	Norway Spruce	8.4 Good
8	Pinus pungens	Norway Spruce	2.6 Good
Off-Site (South Parcel)			
9	Pinus pungens	Norway Spruce	38.0 Good
10	Pinus pungens	Norway Spruce	39.0 Good
11	Pinus pungens	Norway Spruce	14.0 Good
12	Pinus pungens	Norway Spruce	14.0 Good
13	Pinus pungens	Norway Spruce	26.0 Good
14	Pinus pungens	Norway Spruce	26.0 Good
15	Pinus pungens	Norway Spruce	26.0 Good
16	Pinus pungens	Norway Spruce	24.0 Good
17	Pinus strobus	Eastern White Pine	20.0 Good
18	Pinus strobus	Eastern White Pine	24.0 Good
19	Pinus strobus	Eastern White Pine	20.0 Good
20	Pinus strobus	Eastern White Pine	20.0 Good
21	Pinus pungens	Norway Spruce	39.0 Good
22	Pinus strobus	Eastern White Pine	23.0 Good
23	Pinus pungens	Norway Spruce	12.0 Good
24	Pinus pungens	Norway Spruce	30.0 Good
25	Pinus pungens	Norway Spruce	23.0 Good
26	Pinus pungens	Norway Spruce	12.0 Good
27	Pinus strobus	Eastern White Pine	15.0 Good
28	Pinus strobus	Eastern White Pine	20.0 Good
29	Pinus strobus	Eastern White Pine	23.0 Good

Condition based on the International Society of Arboriculture Health Ratings, 6th Edition

Good: Trees in this class are judged to be exceptional trees and possess the best qualities of the species. All have excellent form and very minor maintenance problems and are growing in a location which will enable them to achieve full mature stage.

Fair: Trees in this class are judged to be high-quality trees with decent crown shape and little to no dead limbs or crown activity.

Poor: These trees are in general decent health, which may be brought into better condition with better maintenance. They have few dead limbs, limited insect or disease activity, or slight nutritional deficiencies.

Dead: Most trees in this group have the following problems: large dead limbs, with as much as one-third (1/3) of the tree already dead; large cavities; drastic deformities; girdling roots; severe disease problems; or restricted growing space.

Very Poor: Trees in this group are extremely weak with irreversible problems such as severe decline in health, structural degradation, viral disease or insect infestation with no hope for survival. Trees in this group will have to be removed in the near future and may pose hazardous situations.

Dead: Trees in this group are dead, potentially hazardous and should be removed.

Trees to be removed



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/15/17	JAW									
PSP REVIEW	03/20/17	JAW									

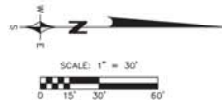
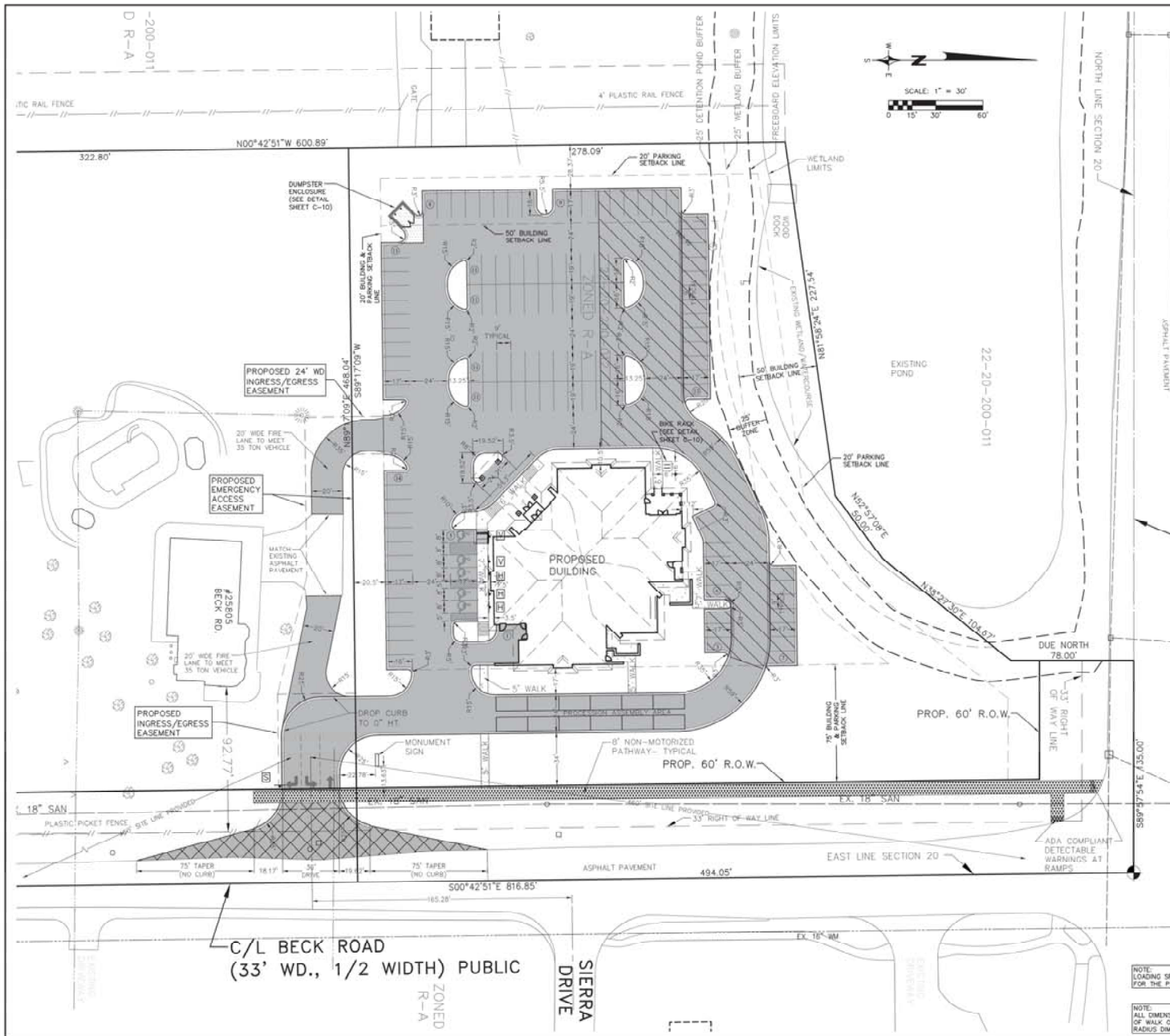
ZEIMET WOZNAK
 CIVIL ENGINEER & LAND SURVEYOR
 700 GRAND BLVD. SUITE 100
 NEW BRIDGE, MICHIGAN 48165
 P: (313) 481-4800 F: (313) 481-4322 www.zeimetwoznak.com

THREE HILL
 WOODWORKERS
 REPAIR AND
 FINISHING
 1-800-482-7174

PROJECT SPONSOR:
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 7707 MIDDLEBELT RD.
 WESTLAND, MI 48185 (734) 968-9401

SITE PREPARATION PLAN
GRIFFIN FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

DATE: 2-16-17 SCALE: HOR. 1" = 30'
 DESIGNED BY: JAW JOB NO.: 16121
 DRAWN BY: JAW SHEET: C-2



C/L ELEVEN MILE ROAD
 (33' WD., 1/2 WIDTH) PUBLIC
 ZONED R-3
 22-17-400-028

- 4.0" NON-REINFORCED CONCRETE (MOOT P1-3500 PSI MIX) WITH 6.0" MOOT 21AA LIMESTONE PREPARED SUBGRADE +
PROPOSED NON-MOTORIZED PATHWAY
- 6.0" CONCRETE (MOOT P1-3500 PSI MIX) WITH #4 @ 20" X 20" WIRE MESH 4.0" COMPACTED MOOT CL # SAND PREPARED SUBGRADE +
PROPOSED CONCRETE DUMPSTER PAD
- 2.0" MOOT BITUMINOUS MIXTURE 1100L 20AA BEARING COURSE 2.0" MOOT BITUMINOUS MIXTURE 1100L 20AA LEVELING COURSE 8.0" MOOT 21AA AGGREGATE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT PREPARED SUBGRADE +
PROPOSED BITUMINOUS PARKING LOT AND DRIVES
- 2.0" MOOT BITUMINOUS MIXTURE 1100L 20AA BEARING COURSE 2.0" MOOT BITUMINOUS MIXTURE 1100L 20AA LEVELING COURSE 8.0" MOOT 21AA LIMESTONE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT PREPARED SUBGRADE +
PROPOSED BITUMINOUS PARKING LOT AND DRIVES (WITH LIMESTONE BASE)
- 1.5" MOOT BITUMINOUS MIXTURE SE1 BEARING COURSE 2.5" MOOT BITUMINOUS MIXTURE 3C LEVELING COURSE 8.0" MOOT 21AA AGGREGATE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT PREPARED SUBGRADE +
PROPOSED BITUMINOUS BECK ROAD R.O.W.
- 4.0" CONCRETE (3300 PSI MIX) 4.0" COMPACTED MOOT CL # SAND PREPARED SUBGRADE +
PROPOSED WALK

NOTE: SUBGRADE SHALL BE PREPARED COMPACTED TO USE MAXIMUM UNIT WEIGHT BEFORE PLACING CURB AND OUTLET AND AGGREGATE BASE IN ACCORDANCE WITH THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER.

SIGN TABLE

TYPE	MMUTCD	DESCRIPTION	QUANTITY
STOP SIGN	R1-1	24"x36" OCTAGON WITH WHITE LEGEND & BORDER ON RED BACKGROUND	1
BARRIER FREE PARKING	R7-8	12"x18" GREEN LEGEND & BORDER ON WHITE BACKGROUND WITH BLUE WHEELCHAIR SYMBOL AND WORD "ONLY" IN THE WHITE SPACE BELOW THE WHEELCHAIR	5
VAN ACCESSIBLE (PLAQUE)	R7-8P	12"x18" GREEN LEGEND & BORDER ON WHITE BACKGROUND	2

NOTE: ALL TRAFFIC CONTROL SIGNAGE SHALL COMPLY WITH CURRENT MAINT CONTROL STANDARDS.

SIGN LEGEND:

- STOP SIGN (R1-1)
- BARRIER FREE PARKING (R7-8)
- BARRIER FREE PARKING (R7-8) WITH VAN ACCESSIBLE (PLAQUE) (R7-8P)

NOTE: THE OWNER OF THE PROPERTY SHALL REPORT ANY PROPOSED CHANGE IN USE OCCUPANCY FOR FURTHER EVALUATION OF LAND BANK PARKING, LAND BANK SPACES MAY BE INSTALLED PRIOR TO CHANGE IN USE OR OCCUPANCY IF DETERMINED.



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/15/17	JAW									
PSP REVIEW	03/20/17	JAW									

ZEIMET WOZNAK
 CIVIL ENGINEERS & LAND SURVEYORS
 1000 GRAND AVENUE, SUITE 100
 NEW BRIDGE, MICHIGAN 48165
 P: (313) 467-8888 P: (248) 451-8222 www.zeimetwoznak.com

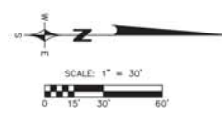
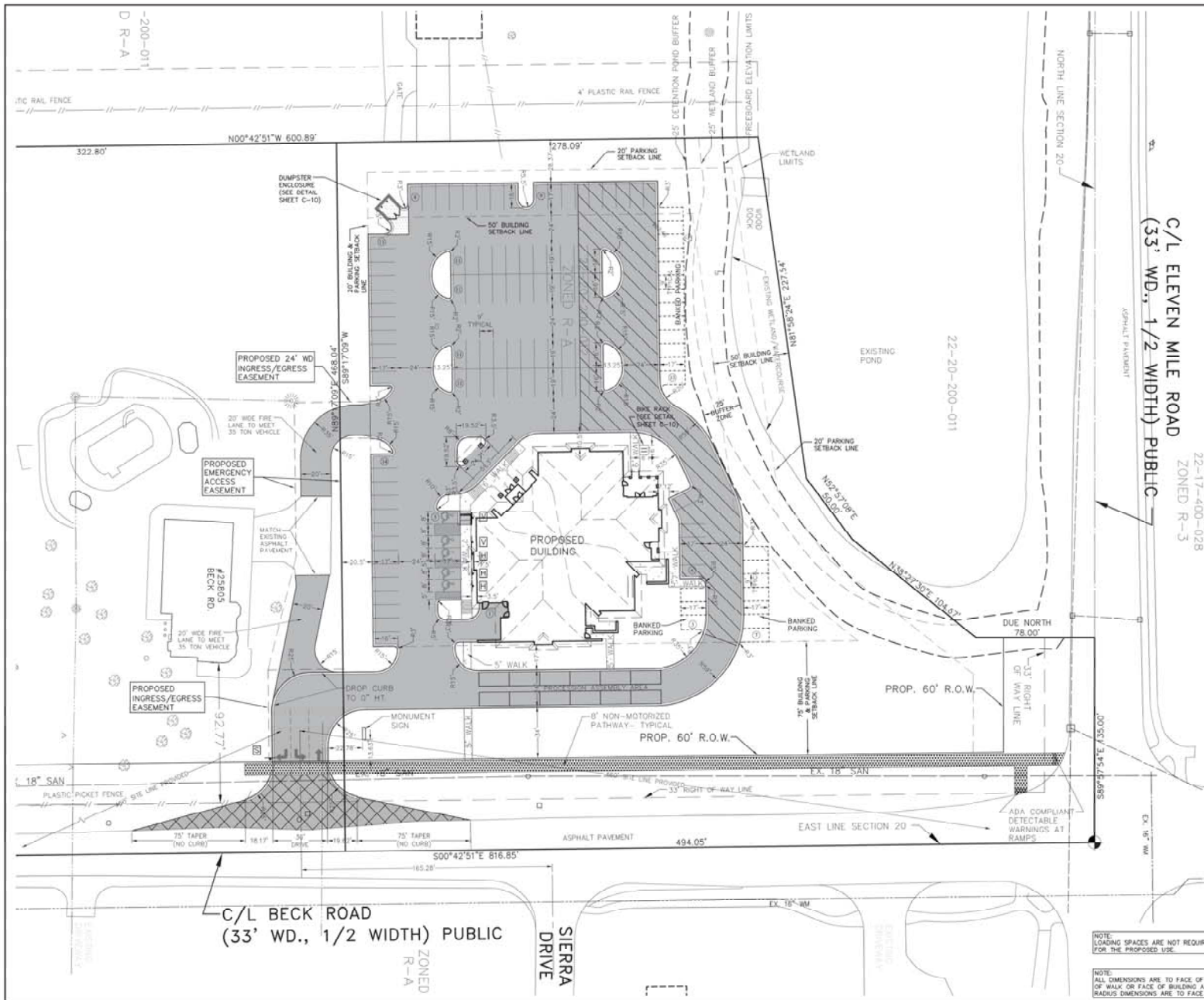
MISS DIG SYSTEM, INC.
 THREE FULL WORKING DAYS BEFORE THE JOB CALL THE MISS DIG SYSTEM 1-800-482-7174

PROJECT SPONSOR:
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 7707 MIDDLEBELT RD.
 WESTLAND, MI 48185

(734) 968-9401

BANKED PAVING AND DIMENSION PLAN
GRiffin FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

DATE: 2-16-17 SCALE: HOR: 1" = 30'
 DESIGNED BY: JAW JOB NO.: 16121
 DRAWN BY: JAW SHEET: C-3.1



- PROPOSED NON-MOTORIZED PATHWAY
 4.0" NON-REINFORCED CONCRETE (MOOT P1-3500 PSI MIX) WITH #2 SIKO 9 WIRE MESH
 6.0" MOOT 21AA LIMESTONE PREPARED SUBGRADE +
- PROPOSED CONCRETE DUMPSTER PAD
 8.0" CONCRETE (MOOT P1-3500 PSI MIX) WITH #4 SIKO 9 WIRE MESH
 4.0" COMPACTED MOOT CL # SAND PREPARED SUBGRADE +
- PROPOSED BITUMINOUS PARKING LOT AND DRIVES
 2.0" MOOT BITUMINOUS MIXTURE 1100T, 20AA BEARING COURSE
 2.0" MOOT BITUMINOUS MIXTURE 1100L, 20AA LEVELING COURSE
 8.0" MOOT 21AA AGGREGATE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT
 PREPARED SUBGRADE +
- PROPOSED BITUMINOUS PARKING LOT AND DRIVES (WITH LIMESTONE BASE)
 2.0" MOOT BITUMINOUS MIXTURE 1100T, 20AA BEARING COURSE
 2.0" MOOT BITUMINOUS MIXTURE 1100L, 20AA LEVELING COURSE
 8.0" MOOT 21AA LIMESTONE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT
 PREPARED SUBGRADE +
- PROPOSED BITUMINOUS BECK ROAD R.O.W.
 1.5" MOOT BITUMINOUS MIXTURE SE1, BEARING COURSE
 2.5" MOOT BITUMINOUS MIXTURE 3C, LEVELING COURSE
 8.0" MOOT 21AA AGGREGATE BASE COURSE (DENSE-GRADED) COMPACTED TO USE MAXIMUM UNIT WEIGHT
 PREPARED SUBGRADE +
- PROPOSED WALK
 4.0" CONCRETE (3300 PSI MIX)
 4.0" COMPACTED MOOT CL # SAND PREPARED SUBGRADE +

NOTE: SUBGRADE SHALL BE PREPARED COMPACTED TO USE MAXIMUM UNIT WEIGHT BEFORE PLACING CURB AND OUTLET AND AGGREGATE BASE IN ACCORDANCE WITH THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER.

SIGN TABLE

TYPE	MUTCD	DESCRIPTION	QUANTITY
STOP SIGN	R1-1	24"X36" OCTAGON WITH WHITE LEGEND & BORDER ON RED BACKGROUND	1
BARRIER FREE PARKING	R7-8	12"X18" GREEN LEGEND & BORDER ON WHITE BACKGROUND WITH BLUE WHEELCHAIR SYMBOL AND WORD "ONLY" IN THE WHITE SPACE BELOW THE WHEELCHAIR	5
VAN ACCESSIBLE	R7-8P	12"X18" GREEN LEGEND & BORDER ON WHITE BACKGROUND	2

NOTE: ALL TRAFFIC CONTROL SIGNAGE SHALL COMPLY WITH CURRENT MUTCD STANDARDS.

- SIGN LEGEND:**
- S STOP SIGN (R1-1)
 - H BARRIER FREE PARKING (R7-8)
 - V BARRIER FREE PARKING (R7-8) WITH VAN ACCESSIBLE (PLAQUE) (R7-8P)



Julian J. Wargo, Jr.

NOTE: LOADING SPACES ARE NOT REQUIRED FOR THE PROPOSED USE.

NOTE: ALL DIMENSIONS ARE TO FACE OF CURB OR FACE OF WALK OR FACE OF BUILDING AS SHOWN. ALL RADII DIMENSIONS ARE TO FACE OF CURB.

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/15/17	JAW									
PSP REVIEW	03/10/17	JAW									

ZEIMET WOZNAK
 CIVIL ENGINEERS & LAND SURVEYORS
 1500 GRAND BAYVIEW BLVD. SUITE 800
 NEW BRIDGE, MICHIGAN 48165
 P: (313) 487-8888 F: (313) 487-8333 www.zeimetwoznak.com

MISS DIG SYSTEM, INC.
 THREE FILL, WINDERMERE DRIVE
 BEFORE YOU DIG, CALL THE MISS DIG SYSTEM
 1-800-482-7174

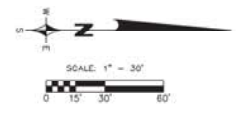
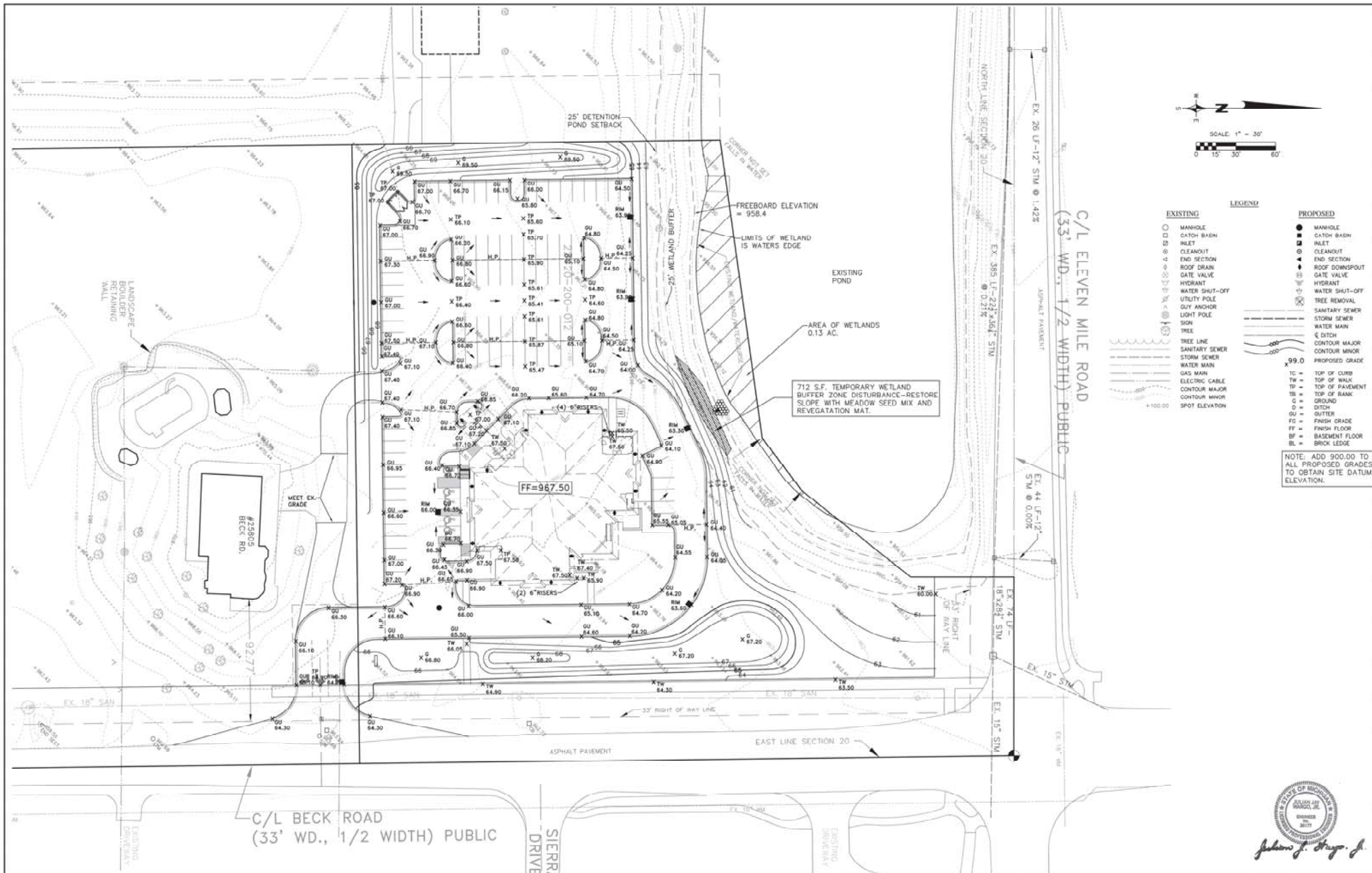
PROJECT SPONSOR:
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 7707 MIDDLEBELT RD.
 WESTLAND, MI 48185

(734) 968-9401

PAVING AND DIMENSION PLAN
 GRIFFIN FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

DATE	2-16-17	SCALE	HOR: 1" = 30'
DESIGNED BY	JAW	JOB NO.	16121
DRAWN BY	JAW	SHEET	C-3

2: Prepared by J. Wargo, Jr. Paving and Dimension Plan, 03/10/17, 14:30 PM, 16121.dwg



EXISTING		PROPOSED	
○	MANHOLE	●	MANHOLE
○	CATCH BASIN	●	CATCH BASIN
○	INLET	○	INLET
○	CLEANOUT	○	CLEANOUT
○	END SECTION	○	END SECTION
○	ROOF DRAIN	○	ROOF DOWNSPOUT
○	GATE VALVE	○	GATE VALVE
○	HYDRANT	○	HYDRANT
○	WATER SHUT-OFF	○	WATER SHUT-OFF
○	UTILITY POLE	○	TREE REMOVAL
○	OUT ANCHOR	○	SANITARY SEWER
○	LIGHT POLE	○	WATER MAIN
○	SIGN	○	STORM SEWER
○	TREE	○	CONTOUR MAJOR
○	TREE LINE	○	CONTOUR MINOR
○	SANITARY SEWER	○	PROPOSED GRADE
○	WATER MAIN	○	X 99.0
○	GAS MAIN	○	TC = TOP OF CURB
○	ELECTRIC CABLE	○	TW = TOP OF WALK
○	CONTOUR MAJOR	○	TP = TOP OF PAVEMENT
○	CONTOUR MINOR	○	TB = TOP OF BANK
○	SPOT ELEVATION	○	G = GROUND
		○	D = DITCH
		○	GU = GUTTER
		○	FG = FINISH GRADE
		○	FF = FINISH FLOOR
		○	BF = BASEMENT FLOOR
		○	BL = BRICK LEDGE

NOTE: ADD 900.00 TO ALL PROPOSED GRADES TO OBTAIN SITE DATUM ELEVATION.

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/19/17	JAW									
PSP REVIEW	03/20/17	JAW									

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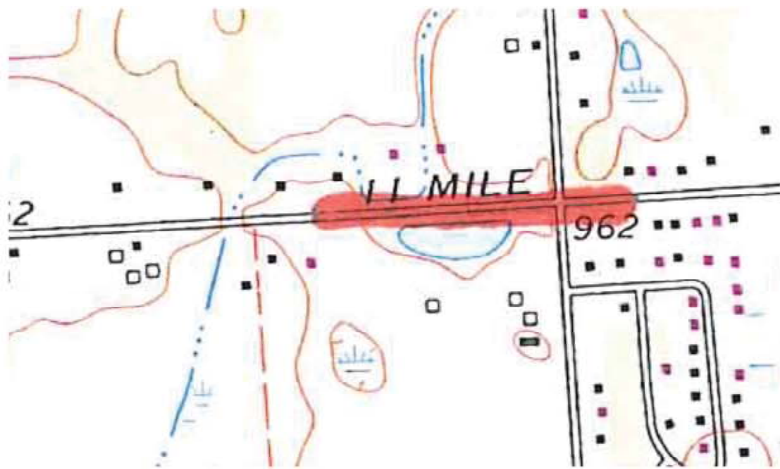
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GRADING PLAN
 GRIFFIN FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

SEAL AND SIGNATURE OF PROFESSIONAL ENGINEER
 JULIAN J. WAGO, J.E.
 ENGINEER
 1971
 Julian J. Wago, J.E.

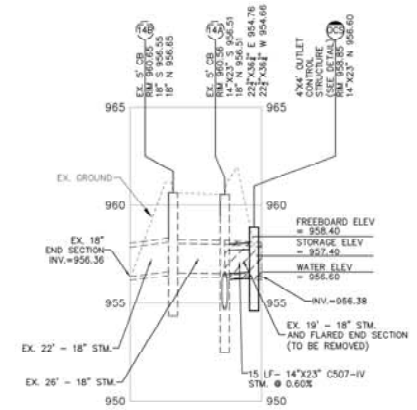
DATE	2-16-17	SCALE	HOR. 1" = 30'
DESIGNED BY	JAW	JOB NO.	16121
DRAWN BY	JAW	SHEET	C-4



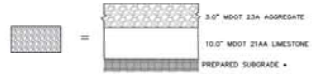
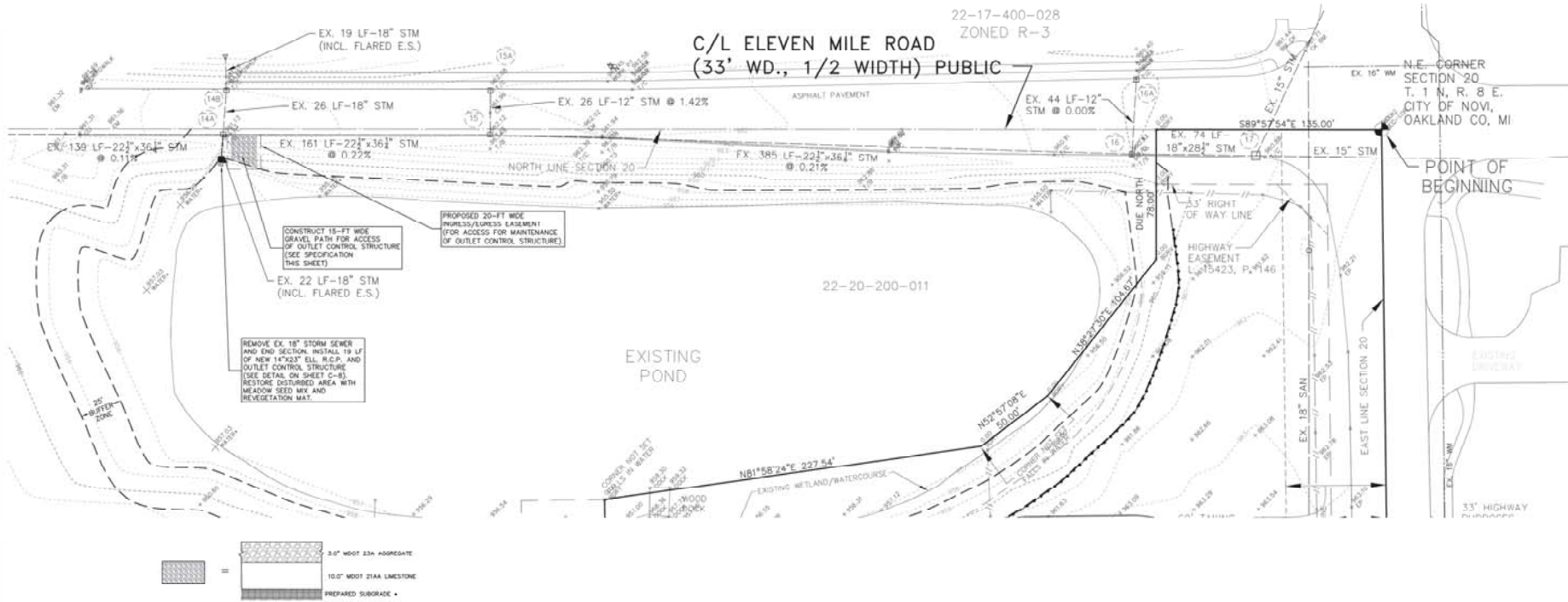
CONTRIBUTING AREA TO 11-MILE ROAD
SOURCE: USGS QUADRANGLE FOR SALEM, MICHIGAN



OVERFLOW ROUTE
SOURCE: OAKGOV.COM MAPS



CROSS-SECTION
SCALE: 1"=30' HORIZ.
1"=3' VERT.



PROPOSED GRAVEL ACCESS PATH
(FOR STORMWATER MAINTENANCE)

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	03/29/17	JAW									

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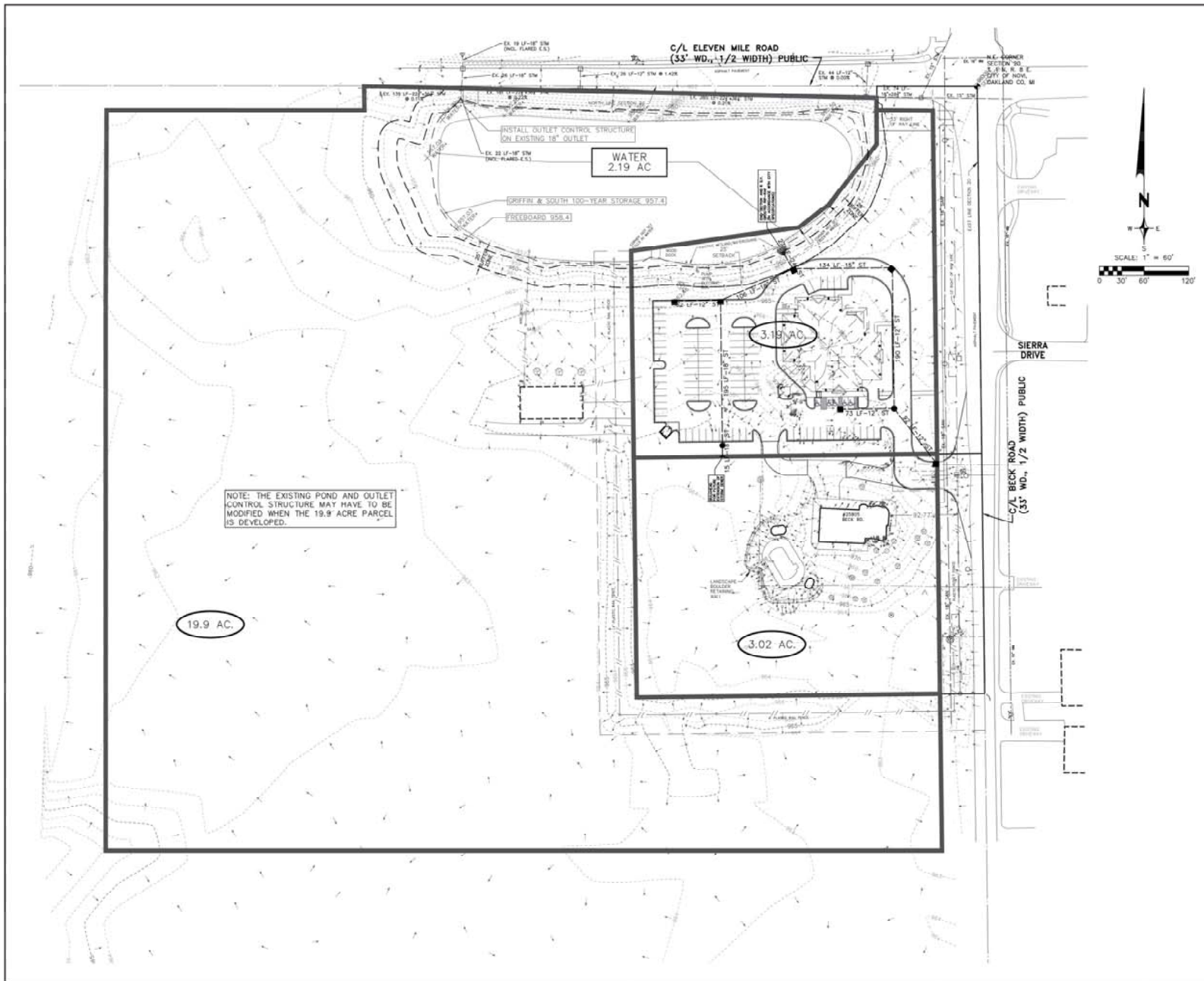
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STORMWATER OUTLET ANALYSIS PLAN
GRIFFIN FUNERAL HOME
NOVI, MICHIGAN, SECTION 20
DATE: 2-16-17 SCALE: HOR. 1" = 30'
DESIGNED BY: JAW JOB NO.: 16121
DRAWN BY: DAW SHEET: C-7.1



Julian J. Wojcik, P.E.

Z:\Projects\17-0000\17-0000-01\Stormwater Outlet Analysis - C/L ELEVEN MILE ROAD\17-0000-01.dwg, 17/03/2017 10:44:14 PM, 16121.dwg



NOTE: THE EXISTING POND AND OUTLET CONTROL STRUCTURE MAY HAVE TO BE MODIFIED WHEN THE 19.9 ACRE PARCEL IS DEVELOPED.

PRELIMINARY STORMWATER MANAGEMENT CALCULATIONS (REV. 2-16-17)

- EXISTING POND**
AN EXISTING POND IS LOCATED AT THE SOUTHWEST CORNER OF ROCK AND ELEVEN MILE ROADS. IT HAS AN ENCLOSED 18" OUTLET PIPE THAT FLOWS NORTH INTO AN EXISTING 20" DIA 20' DEEP TRENCH UNDER ELEVEN MILE ROAD. THE EXISTING OUTLET FOR THE DRAINAGE IS THE SOUTHWEST CORNER OF THE NORTH SIDE OF ELEVEN MILE ROAD THAT FLOWS WEST TO "SUBSISTANT C" OF THE NORTH DRAIN.
- DETERMINE DESIGN DRAINAGE FOR GRIFFIN FUNERAL HOME**
 DRIVE AREA = 3.19 AC
 NET AREA = 3.19 AC
 POND = 2.19 AC
 TOTAL AREA = 3.19 + 2.19 = 5.38 AC
 RUNOFF COEFFICIENTS:
 PAVEMENT = 0.80 AC @ 0.80 = 0.64 CFS
 ROOF = 0.30 AC @ 0.80 = 0.24 CFS
 POND = 1.10 AC @ 0.05 = 0.055 CFS
 LAWN = 1.22 AC @ 0.30 = 0.366 CFS
 USE C = 0.74
 $Q = 0.115 CFS/AC \times 5.38 AC = 0.61 CFS$
 $Q = 0.115 CFS/AC \times 5.38 AC = 0.61 CFS$
 $T_{10} = 0.5 + 1.1(0.02)(0.20) = 0.522$ MINUTES
 $V_{10} = 13.68 AC \times 0.74 \times 0.522 = 5.21 AC$ @ 1.10 CFS = 5.73 AC FT
 BY INTERPOLATION, AT ELEVATION 957.4, A VOLUME OF 5.68 FT OF CHAIN BE REQUIRED.
- DETERMINE 100-YEAR STORAGE FOR SUBSISTANT C**
 GROSS AREA = 1.84 AC
 NET AREA = 1.83 AC
 C = 0.75 (ASSUME SAME AS GRIFFIN)
 $Q = 0.115 CFS/AC \times 1.83 AC = 0.21 CFS$
 $Q = 0.115 CFS/AC \times 1.83 AC = 0.21 CFS$
 $T_{10} = 0.5 + 1.1(0.02)(0.20) = 0.522$ MINUTES
 $V_{10} = 13.68 AC \times 0.74 \times 0.522 = 5.21 AC$ @ 1.10 CFS = 5.73 AC FT
 TOTAL VOLUME REQUIRED FOR 100-YEAR STORAGE = 5.68 + 5.73 = 11.41 AC FT
- DETERMINE REQUIRED 100-YEAR STORAGE**
 TOTAL VOLUME REQUIRED FOR GRIFFIN AND SOUTH PARCELS = 5.68 + 11.41 = 17.09 AC FT
- AVAILABLE STORAGE IN THE EXISTING POND**
 NOTE THAT THE BOTTOM OF DRAINAGE IS PREEMBED, ABOVE THE HEIGHT OF THE COLLECT PIPE AT EXISTING CE 81.44 UNDER ELEVEN MILE ROAD SINCE THE PIPE WILL BE EXPOSED INTO THE POND AT 81.44 FT.

ELEV.	AREA (SQ FT)	AVERAGE DEPT.	DEPTH (FT)	VOLUME (CU FT)
81.44	92,313	0.4	30.184	
81.00	100,708	0.4	30.184	100,708
80.50	110,392	1.0	100.550	110,392

 BY INTERPOLATION, A VOLUME OF 5.68 FT OF CHAIN BE REQUIRED AT ELEVATION 81.44. THE ADDITIONAL VOLUME ALLOWED FOR CONSTRUCTION TOLERANCES. THE PREBOARD ELEVATION SHALL BE 81.1 FOOT ABOVE THE STORAGE ELEVATION AT 81.44.
- DESIGN NOTES**
 SINCE THE GRIFFIN AND SOUTH PARCELS DISCHARGE INTO A "NET" POND WITH MORE THAN 2 FEET DEEP OF STANDING WATER, THE TREATMENT OF RUNOFF IN THE FORM OF A SEDIMENT FOREBAY OR A MECHANICAL TREATMENT CHAMBER IS USED.
- OUTLET CONTROL**
 A STRUCTURE SHALL BE INSTALLED ON THE END OF THE 18-INCH DIAMETER PIPE THAT EXTENDS INTO THE POND TO RESTRICT THE FLOW TO THE ALLOWABLE RATE PER THE CITY'S REQUIREMENTS.
 CONTRIBUTING DRAINAGE AREAS:
 GRIFFIN = 3.19 ACRES
 POND = 2.19 ACRES
 SOUTH PARCELS = 1.83 ACRES
 FUTURE SCHOOL = 1.83 ACRES
 $Q = 0.115 CFS/AC \times (3.19 + 2.19 + 1.83 + 1.83) AC = 4.88 CFS$
 $T_{10} = 0.522$ MINUTES
 $V_{10} = 13.68 AC \times 0.74 \times 0.522 = 5.21 AC$ @ 1.10 CFS = 5.73 AC FT
 A 4-INCH DIAMETER HOSE HAS AN AREA OF 0.1044 SF
 USE 0.950 / 0.1044 = 7.5 DIA HOSE @ 81.1 FT
- OVERFLOW STRUCTURE**
 THE OVERFLOW STRUCTURE SHALL BE DESIGNED TO ACT AS A WEIR.
 COEFFICIENTS OF 10-YEAR DESIGN FLOODS AREAS:
 GRIFFIN AND POND = 0.47 @ 2.75 ACRES @ 0.74 CFS = 1.24 CFS
 POND = 1.19 AC @ 0.05 = 0.059 CFS
 SCHOOL = 1.83 AC @ 0.15 CFS/AC = 0.27 CFS
 TOTAL = 1.57 + 0.059 + 0.27 = 1.89 CFS
 $H = 1.02$ FT
 $H = 1.02$ FT
 $C = 4.0$ FOR A BRICK CRESTING WEIR
 $L = 1.00$ FT @ 4.0 @ 0.0074 = 1.24 FT
 A 4' X 4' SQUARE STRUCTURE SHALL BE DESIGNED WITH AN EFFECTIVE WEIR OF 1.24 FT.
 THE DRAIN PIPE IS USED AS AN INLET WHERE THE PIPE HAS A SLOPE OF 0.008 FT SHALL FLOW ON GRADE AND THE WEIR IS TOPPED.
 FROM A MANNING TABLE, WE FIND THAT THE PIPE HAS A CAPACITY OF 4.33 CFS WITH A VELOCITY OF 4.4 FPS WHEN FLOWING UNDER RESTRICTED CONDITIONS.
 WHEN THE WEIR IS TOPPED, HOWEVER, THE SPECIFIC SLOPE IS:
 $S = 1.49 \times 10^{-4}$ FEET PER FOOT @ 4.33 CFS @ 1.24 FT
 USING MANNING'S FORMULA, WE FIND THE CAPACITY IS:
 $Q = 3.19 \times 10^{-4} \times 1.77 \times 4.33^{2.48} \times 1.24^{5.49} = 4.33 CFS$ @ 2.90 CFS
 CAPACITY OF EXISTING OUTLET PIPE
 THE CITY REQUIREMENTS, THE EXISTING 18-INCH DIAMETER PIPE UNDER ELEVEN MILE ROAD THAT TRENCH FROM EXISTING CE 81.44 AND AS BUILT WITH A SLOPE OF 0.1%, THE PIPE CAPACITY IS:
 FROM A MANNING TABLE, THE PIPE HAS A CAPACITY OF 11 CFS WITH A VELOCITY OF 8.5 FPS.
 FOR THE USGS QUADRANGLE MAP FOR SALINA, MICHIGAN, APPROXIMATELY 1,000 FT OF THE ELEVEN MILE ROAD CAN FLOW INTO THE PIPE AT EXISTING CE 81.44.
 $C = 0.75$ (ASSUMED)
 $L = 1.00$ FT @ 0.1% SLOPE
 $Q = 11.00 \times 0.75 \times 1.00 \times 0.1^{0.48} = 1.10 CFS$
 THE PROJECT CONTRIBUTES A FLOW OF 4.33 CFS.
 THE TOTAL CONTRIBUTING FLOW INTO THE EXISTING PIPE IS:
 $1.10 + 4.33 = 5.43 CFS$ @ 1.10 CFS
 IT CAN BE CONCLUDED THAT THE EXISTING PIPE UNDER ELEVEN MILE ROAD IS ADEQUATE.



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PSP REVIEW	02/16/17	JAW						
PSP REVIEW	03/20/17	JAW						

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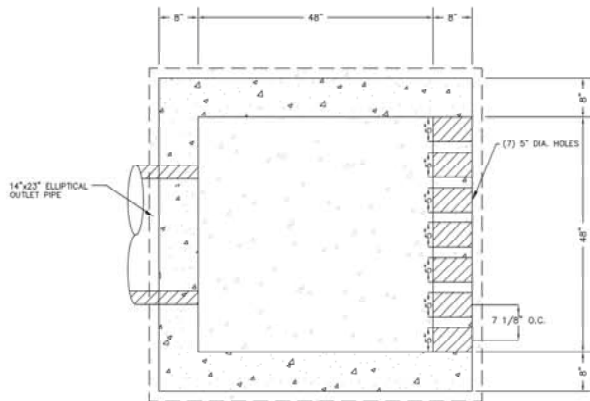
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STORMWATER MANAGEMENT PLAN
GRIFFIN FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

DATE: 2-16-17 SCALE: HORZ: 1" = 80'
 DESIGNED BY: JAW VERT: 1" = N/A
 DRAWN BY: JAW JOB NO.: 16121
 SHEET: C-7

SEAL: JAW
 REGISTERED PROFESSIONAL ENGINEER
 MICHIGAN
 9677

Johnson J. Kruger, Jr.



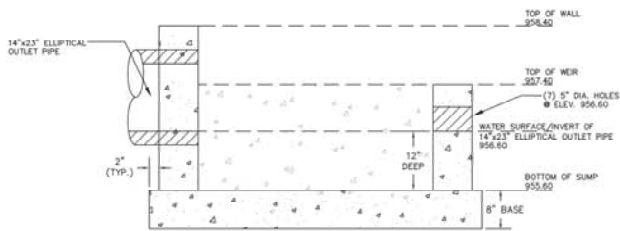
TOP VIEW
1"=10'

NOTES:

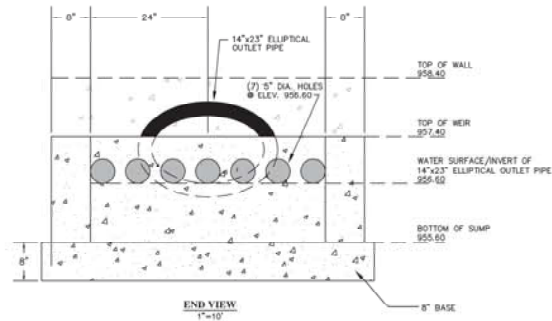
1. THE PRECAST REINFORCED FLOW RESTRICTOR STRUCTURE SHALL BE MANUFACTURED PER ASTM C-475 SPECIFICATIONS.
2. CONTRACTOR TO SEAL BETWEEN PRECAST WALLS AND BASE WITH BUTYL ROPE.
3. CONCRETE STRENGTH: 4500 PSI @ 28 DAYS.
4. STRUCTURE TO BE MANUFACTURED WITH VIBRATED CONCRETE REINFORCEMENT WITH A COMBINATION OF WELDED WIRE FABRIC AND REBAR AS REQUIRED.
5. TOP OF STRUCTURE TO BE FITTED WITH BOLT-DOWN STEEL BAR GRATE.



56" X 64" STEEL BAR GRATE
NOT TO SCALE



SIDE VIEW
1"=10'



END VIEW
1"=10'

OUTLET CONTROL STRUCTURE



Julian J. Wargo, J.E.

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/15/17	JAW									
PSP REVIEW	03/10/17	JAW									

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STORMWATER MANAGEMENT DETAILS
GRIFFIN FUNERAL HOME
NOV, MICHIGAN, SECTION 20

DATE	2-16-17	SCALE	HOR. 1" = 10'	VERT. 1" = 4'
DRAWN BY	JAW	JOB NO.	16121	
CHECKED BY	JAW	SHEET	C-8	

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TEMPORARY MAINTENANCE AND INSPECTION TASKS AND SCHEDULE (DURING CONSTRUCTION)

Note: The contractor shall maintain a log of all inspection and maintenance activities and shall make the log available to city personnel as needed.

Tasks	Pavement	Storm Sewer pipes	Catch Basin Sumps	Catch Basin Inlet Castings	Outflow Control Structures	Rip-Rap	Storm Detention Basins	Wetlands	Emergency Overflow	Schedule
Inspect for sediment accumulation		X	X		X		X			Weekly
Removal of sediment accumulation		X	X		X		X			As needed and prior to turnover
Inspect for floatables and debris				X	X		X			Quarterly
Cleaning of floatables and debris				X	X		X			Quarterly and prior to turnover
Inspection for erosion					X		X		X	Weekly
Re-establish permanent vegetation on eroded slopes							X		X	As needed and prior to turnover
Replacement of stone (if it cannot be adequately cleaned)					X	X			X	As needed
Clean Streets	X									Daily
Mowing/remove invasive species							X			As needed and 0-2 times per year
Inspect storm water system components during wet weather and compare to as-built plans (by professional engineer reporting to condo assoc.)		X	X	X	X	X	X	X		Prior to turnover
Make adjustments or replacements as determined by annual wet weather inspection		X	X	X	X	X	X	X	X	Prior to turnover
Keep records of all inspections and maintenance activities and report to facilities manager	X	X	X	X	X	X	X	X	X	Prior to turnover
Keep records of all costs for inspections, maintenance and repairs report to facilities manager	X	X	X	X	X	X	X	X	X	Prior to turnover

PERMANENT MAINTENANCE AND INSPECTION TASKS AND SCHEDULE (POST CONSTRUCTION)

Note: The owner and/or facilities manager shall maintain a log of all inspection and maintenance activities and shall make the log available to city personnel as needed.

Tasks	Pavement	Storm Sewer pipes	Catch Basin Sumps	Catch Basin Inlet Castings	Outflow Control Structures	Rip-Rap	Storm Detention Basins	Wetlands	Emergency Overflow	Schedule
Inspect for sediment accumulation		X	X		X		X			Annually
Removal of sediment accumulation		X	X		X		X			Every 2 years as needed
Inspect for floatables and debris				X	X		X			Annually
Cleaning of floatables and debris				X	X		X			Annually
Inspection for erosion					X		X		X	Annually
Re-establish permanent vegetation on eroded slopes							X		X	As needed
Replacement of stone (if it cannot be adequately cleaned)					X	X			X	Every 3-5 years as needed
Clean Streets	X									Semi-Annually
Mowing/remove invasive species							X			0-2 times per year
Inspect storm water system components during wet weather and compare to as-built plans (by professional engineer reporting to condo assoc.)		X	X	X	X	X	X	X		Annually
Make adjustments or replacements as determined by annual wet weather inspection		X	X	X	X	X	X	X	X	As needed
Keep records of all inspections and maintenance activities and report to facilities manager	X	X	X	X	X	X	X	X	X	Annually
Keep records of all costs for inspections, maintenance and repairs report to facilities manager	X	X	X	X	X	X	X	X	X	Annually



Julian J. Swargo, Jr.

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
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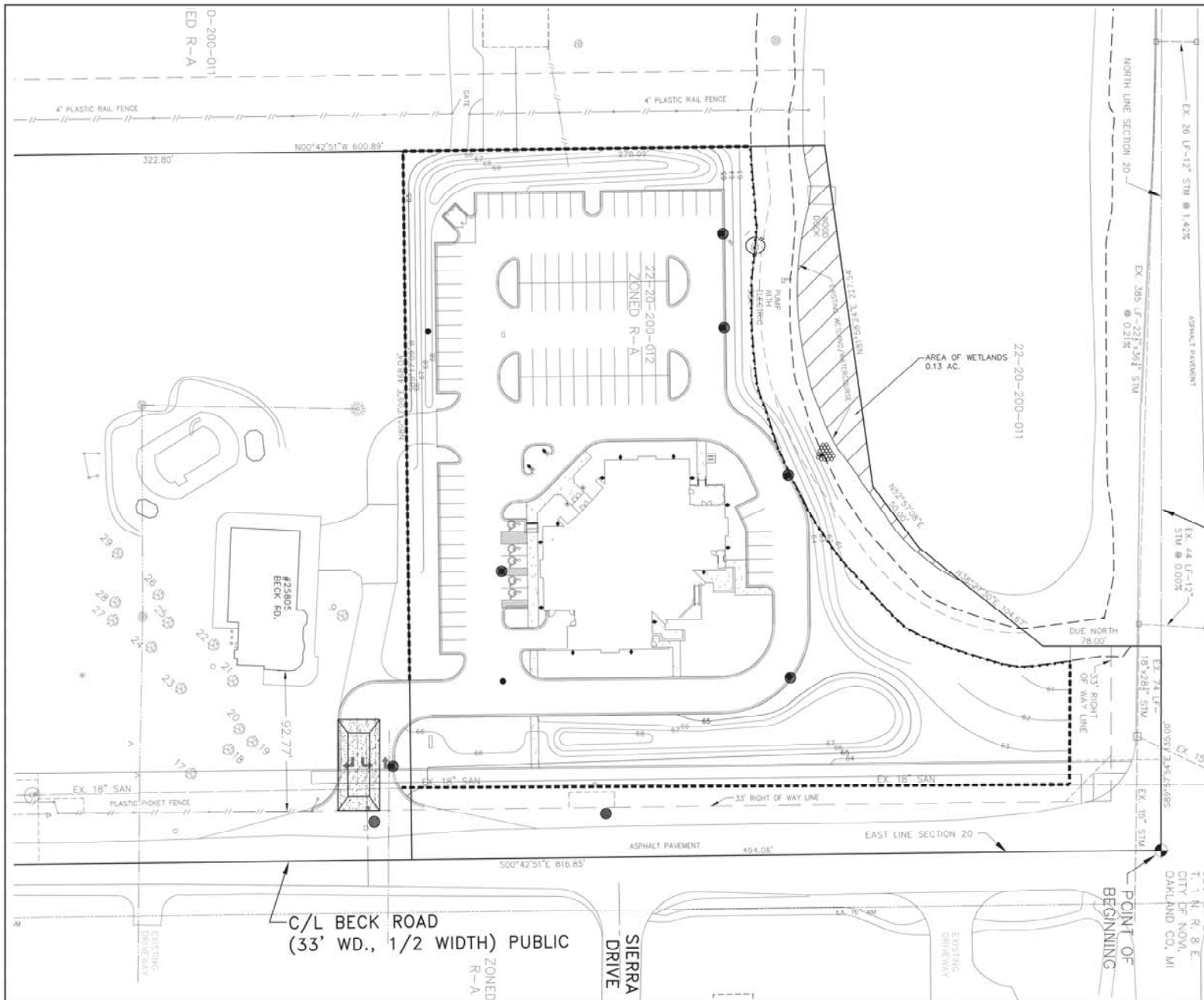
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EROSION CONTROL MAINTENANCE SCHEDULES
GRIFFIN FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

DATE: 2-16-17 SCALE: HOR: 1" = N/A
 VERT: 1" = N/A
 DESIGNED BY: JAW JOB NO.: 16121
 DRAWN BY: JAW SHEET: C-9.1

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- GENERAL EROSION CONTROL SEQUENCE:**
- INSTALL SILT FENCE AS INDICATED ON PLANS. ADDITIONAL AREAS MAY BE REQUIRED.
 - TREE PROTECTION FENCE SHOULD BE INSTALLED AS INDICATED ON PLANS.
 - REMOVE BUILD-UP SEDIMENT WHEN IT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE SILT FENCE AND AFTER EACH MAJOR RAINFALL.
 - IF THE SILT FENCE FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF THE EXPECTED LIFE SPAN, AND IT IS STILL REQUIRED TO BE IN PLACE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
 - INSPECTIONS OF SILT FENCE SHALL BE MADE WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF RAINFALL AND DAILY DURING PROLONGED RAIN. ANY MAINTENANCE SHALL BE DONE IMMEDIATELY.
 - CLEAR AND GRUB SITE FOR MASS GRADING. STRIP TOPSOIL AND REMOVE IT FROM THE SITE.
 - MASS GRADE SITE. IMMEDIATELY INSTALL ADDITIONAL SILT FENCE AS SHOWN.
 - INSTALL UNDERGROUND UTILITIES (SANITARY, STORM AND WATERMAIN).
 - INLET FILTERS SHALL BE INSPECTED WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF RAINFALL AND DAILY DURING PROLONGED RAINFALL.
 - PROMPTLY REMOVE SEDIMENT AND DEBRIS FROM INLET FILTERS.
 - IF THE FILTER FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO ITS EXPECTED LIFE, REPLACE FABRIC PROMPTLY.
 - INSTALL UTILITIES (GAS, ELECTRIC, PHONE, ETC.).
 - INSTALL PAVEMENT COMPLETE, INCLUDING CURBS AND GUTTER. RE-INSTALL ANY PAVEMENT FILTERS THAT WERE DISTURBED DURING INSTALLATION.
 - FINISH GRADE SITE. ESTABLISH TEMPORARY VEGETATION AND/OR LANDSCAPE ALL DISTURBED AREAS NOT BUILT UPON OR PAVED WITHIN 90 DAYS OF FINAL GRADE.
 - REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES AFTER PERMANENT LANDSCAPING IS INSTALLED AND FULL STABILIZATION IS ACHIEVED.

- EROSION CONTROL NOTES:**
- DURING DRY PERIODS ALL DISTURBED AREAS SHALL BE WATERED FOR DUST CONTROL.
 - ALL DIRT AND MUD TRACKED ONTO ROADWAYS SHALL BE REMOVED IMMEDIATELY.
 - ALL SOIL EROSION CONTROL MEASURES SHALL CONFORM TO THE LATEST CITY OF NOVA STANDARDS.
 - IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL SOIL EROSION CONTROL MEASURES ARE MAINTAINED AND IN PLACE UNTIL SITE IS COMPLETELY STABILIZED.
 - THE IS TEMPE OUTLET FOR THIS PROJECT'S STORM DRAINAGE DISCHARGE IS THE NOV LYON DRAIN.
 - UPON COMPLETION OF THE BUILDING CONSTRUCTION, CLEAN STORM SEWERS OF ANY ACCUMULATED SEDIMENT AND DEBRIS.
 - NO STOCKPILING OF MATERIAL IS PERMITTED.
 - THIS PLAN DESCRIBES THE MINIMUM EROSION CONTROL MEASURES NEEDED TO PREVENT SILT AND SEDIMENT FROM LEAVING THE SITE. ADDITIONAL BEST MANAGEMENT PRACTICES MAY BE REQUIRED AS CONDITIONS IN THE FIELD WARRANT.
 - IF DEWATERING IS ANTICIPATED OR ENCOUNTERED DURING CONSTRUCTION, A DEWATERING PLAN MUST BE SUBMITTED TO THE CITY'S ENGINEERING DIVISION FOR REVIEW.

- PERMIT NOTE:**
- THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451, OF 1994 AS AMENDED. THE SOIL EROSION AND SEDIMENT CONTROL ACT. AN NOICES NOTICE OF COVERAGE SHALL BE OBTAINED FROM THE MDEQ.
 - INSTALLATION OF SILT FENCE AND TREE PROTECTION FENCE SHALL NOT OCCUR PRIOR TO THE INITIAL PRE-CONSTRUCTION MEETING WITH THE CITY. WHEN NATURAL FEATURES EXIST ON THE SITE, INSPECTION OF THE STAKING MAY BE REQUIRED PRIOR TO INSTALLATION OF THE FENCE.

STREET CLEANING SCHEDULE

	S	M	T	W	T	F	S
SCRAPE STREET	X	X	X	X	X	X	X
SWEEP STREET			X				

*STREET SWEEPING AND DUST CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

- EROSION CONTROL LEGEND**
- GEOTEXTILE SILT FENCE AT GRADING LIMITS (PER OCMR DETAIL SP-2)
 - WETLAND/WOODLAND BUFFER WITH SILT FENCE
 - LOW POINT INLET FILTER (PER OCMR DETAIL SI-2A)
 - CONSTRUCTION MUD TRACKING ENTRANCE

C/L ELEVEN MILE ROAD
 (33' WD., 1/2 WIDTH) PUBLIC
 ZONED R-3
 22-17-400-028

0-200-011
 ED R-A

C/L BECK ROAD
 (33' WD., 1/2 WIDTH) PUBLIC
 ZONED R-A

SIERRA DRIVE

POINT OF BEGINNING
 M.E. CORNER
 SECTION 20
 T. 1 N. R. 8 E.
 CITY OF NOVA,
 OAKLAND CO. MI

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
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 HOT LINE
 1-800-482-7174

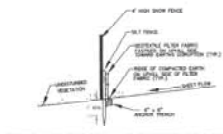
PROJECT SPONSOR:
 NOV FUNERAL HOME, L.L.C.
 7707 MIDDLEBELT RD.
 WESTLAND, MI 48185
 (734) 968-9401

EROSION CONTROL PLAN
GRIFFIN FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

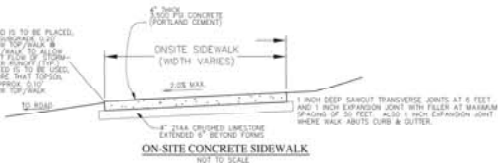
DATE: 2-16-17 SCALE: HOR. 1" = 30'
 DESIGNED BY: JAW VER. 1" = N/A
 DRAWN BY: JAW JOB NO.: 16121
 SHEET: C-9



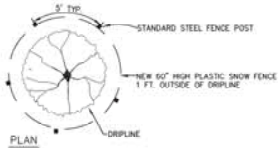
Julian J. Wargo, P.E.



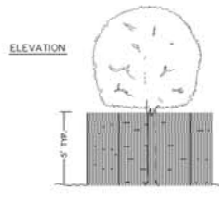
WETLAND/WOODLAND BUFFER PROTECTION FENCING WITH SILT FENCE
NOT TO SCALE



ON-SITE CONCRETE SIDEWALK
NOT TO SCALE



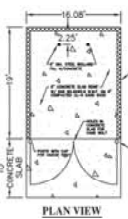
PLAN



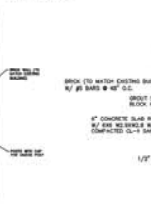
ELEVATION

NOTES:
1. TREE PROTECTION FENCING IS TO BE INSTALLED PRIOR TO ANY EARTHWORK OR CONSTRUCTION AND IS TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
2. FENCE SHALL BE LOCATED AT THE OUTER PERIMETER OF THE SPREAD OF THE BRANCHES OF CLOSER GIRT AT THE DIRECTION OF THE LANDSCAPE ARCHITECT.
3. ALL EXISTING FULL EQUIPMENT OR MATERIAL IS TO BE KEPT CLEAR OF AREA WITHIN PROTECTIVE FENCE. NO CLEANING OF EQUIPMENT OR MATERIAL OR STORAGE OR DISPOSAL OF ANY MATERIAL WITHIN THE DWP LINE OF ANY TREES TO BE SAVED.

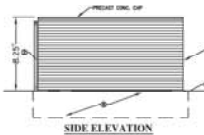
TREE PROTECTION DETAIL
NOT TO SCALE



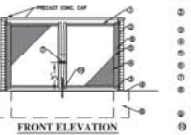
PLAN VIEW



FRONT ELEVATION



SIDE ELEVATION



FRONT ELEVATION

DUMPSTER ENCLOSURE DETAILS
NOT TO SCALE

FULL PAVEMENT MARKING SPECIFICATIONS:

1. BARRIER-FREE PARKING SPACES AND ASSOCIATED CROSS-HATCHED ACCESS AISLES SHALL BE MARKED IN BLUE.
2. NON-BARRIER-FREE PARKING SPACES SHALL BE MARKED IN WHITE.
3. ABUTTING BARRIER-FREE AND NON-BARRIER-PARKING SPACES SHALL BE SEPARATED BY ABUTTING BLUE AND WHITE STRIPES.
4. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY (I.E. WHEELCHAIR) SHALL BE MARKED IN WHITE.

WATER MAIN NOTES:

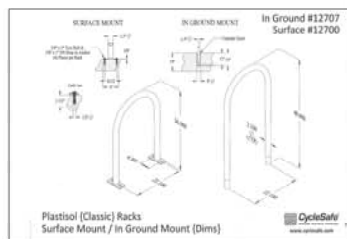
1. ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM COVER OF 5.5' BELOW FRESH GRADE. WHEN WATER MAINS MUST DIP TO PASS UNDER A STORM SEWER OR SANITARY SEWER, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE KEPT TO A MINIMUM LENGTH BY THE USE OF VERTICAL TWENTY TWO AND A HALF (22.5) DEGREE BENDS, PROPERLY ANCHORED.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF NOVA.
3. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND, COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
4. ALL TEES, BENDS, CONNECTIONS, ETC. ARE CONSIDERED INCIDENTAL TO THE JOB.
5. PHYSICAL CONNECTIONS SHALL NOT BE MADE BETWEEN EXISTING AND NEW WATER MAINS UNTIL TESTING IS SATISFACTORILY COMPLETED.
6. MAINTAIN 10' HORIZONTAL CLEARANCE BETWEEN OUTER EDGE OF WATER MAIN AND ANY SANITARY SEWER OR STRUCTURE.
7. ALL WATER MAIN SHALL BE DUCTILE IRON CLASS 54 WITH POLYETHYLENE WRAP. REFER TO CITY OF NOVA WATER MAIN DETAIL SHEETS FOR ADDITIONAL INFORMATION.

SANITARY SEWER NOTES:

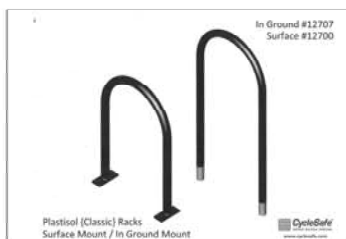
1. DOWNSPOUTS, KEEP TIE, FOOTING DRAIN OR ANY CONDIT THAT CARRIES STORM OR GROUND WATER SHALL NOT BE ALLOWED TO DISCHARGE INTO A SANITARY SEWER.
2. ALL SANITARY LEADS SHALL BE CONSTRUCTED OF PVC SCH 20S AT 1.00% MINIMUM SLOPE.
3. REFER TO CITY OF NOVA STANDARD DETAILS FOR PIPE BEDDING DETAILS.
4. REFER TO CITY OF NOVA SANITARY SEWER DETAIL SHEETS FOR ADDITIONAL INFORMATION.

PAVING NOTES:

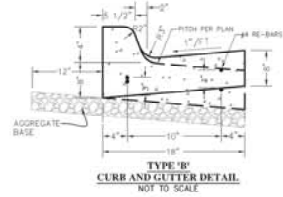
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF NOVA AND M.O.D.T.
2. IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
3. SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL SECTIONS OR BELOW SUBGRADE IN CUT SECTIONS, WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
4. SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED WITH SAND OR OTHER SIMILAR IMPROVED MATERIAL. BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT (PER ASTM D-1557) UNLESS OTHERWISE SPECIFIED.
5. BACKFILL UNDER PAVED AREAS SHALL BE AS SPECIFIED ON DETAILS.
6. ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.



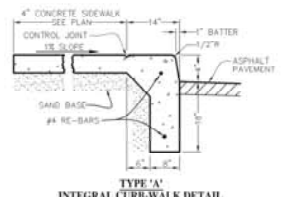
Plastroil (Classic) Racks
Surface Mount / In Ground Mount (Dims)



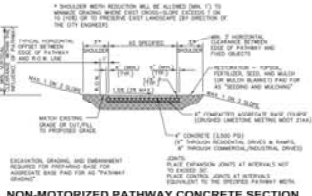
Plastroil (Classic) Racks
Surface Mount / In Ground Mount



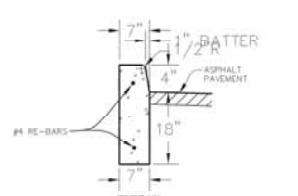
TYPE 'B' CURB AND GUTTER DETAIL
NOT TO SCALE



TYPE 'A' INTEGRAL CURB-WALK DETAIL
NOT TO SCALE



NON-MOTORIZED PATHWAY CONCRETE SECTION
(IN ROAD R.O.W.)
NOT TO SCALE



TYPE 'C' STRAIGHT CURB DETAIL
NOT TO SCALE

GENERAL NOTES:

- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THE PROJECT.
1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
 2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF NOVA CURRENT STANDARDS AND REGULATIONS.
 3. THE CONTRACTOR SHALL NOTIFY CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR OF THE BEGINNING OF CONSTRUCTION.
 4. ANY WORK WITHIN THE PUBLIC STREET RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGAIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
 5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND /OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND NOT BE PAID FOR SEPARATELY.

GRADING NOTES:

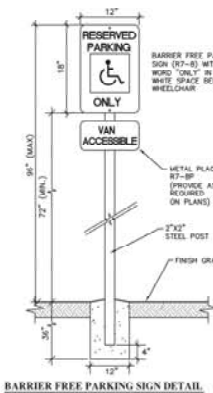
1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF NOVA.
2. ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCE ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OTHER SHALL PAY FOR ALL THE CITY INSPECTION FEES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING THE PERIODS OF CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO THE JOB.
4. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG (811) TO VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND SHALL NOTIFY OTHER REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK.
5. ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
6. MANHOLE, CATCH BASIN, GATE VALVES AND HYDRANT FINISH GRADES MUST BE CLOSELY CHECKED AND APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR'S WORK IS CONSIDERED COMPLETE.
7. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF-SITE ANY TREES, BRUSH, STAMPS, TRASH OR OTHER UNWANTED DEBRIS AT THE OWNER'S DIRECTION, INCLUDING OLD BUILDING FOUNDATIONS AND FLOORS, BURNING OF TRASH, STAMPS OR OTHER DEBRIS SHALL NOT BE PERMITTED.
8. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY CONTAIN TRAFFIC IN ACCORDANCE WITH "MANUTED".
9. ALL EXCAVATIONS SHALL BE SLOPED, SHORED OR BRACED IN ACCORDANCE WITH M-OSHA REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE AN ADEQUATELY CONSTRUCTED AND BRACED SHORING SYSTEM FOR EMPLOYEES WORKING IN AN EXCAVATION THAT MAY EXPOSE EMPLOYEES TO THE DANGER OF MOVING AROUND.
10. ALL REFERENCES TO M.O.D.T. SPECIFICATIONS ARE TO BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

GENERAL UTILITY NOTES:

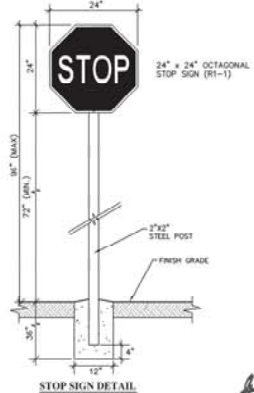
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF NOVA.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES, WHICH MIGHT AFFECT THIS JOB.
3. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
4. WHENEVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEARNESS JOINT BEFORE BRACING SECTION OUT.
5. EXACT GRADES AND DEPTHS OF UTILITIES ARE TO BE CHECKED CLOSELY BY THE CONTRACTOR PRIOR TO INSTALLATION. FURNISH PIPE LOCATIONS AND ELEVATIONS TO DESIGN ENGINEER TO CONFIRM OR RE-DESIGN. REFER TO CITY OF NOVA STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.

STORM SEWER NOTES:

1. ALL STORM SEWER 12" AND LARGER SHALL BE RCP CLASS IV UNLESS OTHERWISE NOTED. REFER TO CITY OF NOVA STANDARD DETAILS SHEET FOR STANDARD BEDDING DETAILS.
2. JOINTS FOR ALL STORM SEWER 12" AND LARGER SHALL BE MODIFIED TONGUE AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443).
3. ALL STORM SEWER LEADS SHALL BE CONSTRUCTED OF PVC SCHEDULE 40 PIPE AT 1.00% MINIMUM SLOPE WITH GLEED JOINTS, UNLESS OTHERWISE NOTED. REFER TO CITY OF NOVA DETAILS FOR BEDDING DETAILS.
4. REFER TO CITY OF NOVA STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.



Barrier Free Parking Sign Detail
NOT TO SCALE



STOP SIGN DETAIL
NOT TO SCALE



Julian J. Stray, P.E.

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	02/26/17	JAW						
PSP REVIEW	03/03/17	JAW						

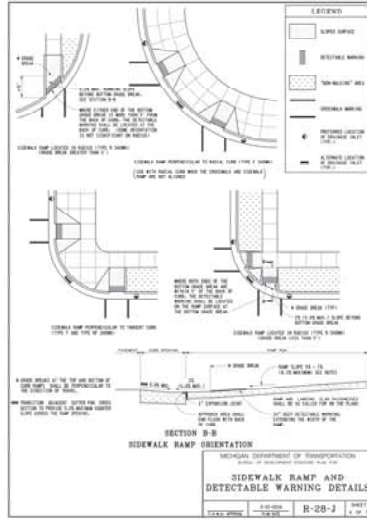
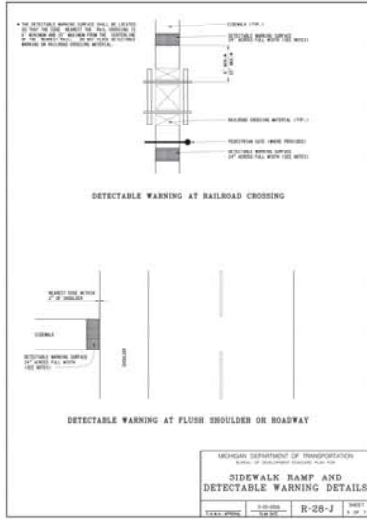
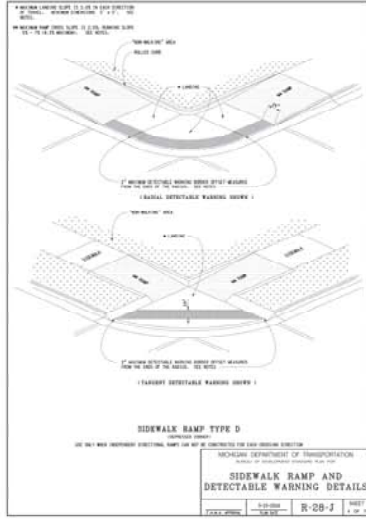
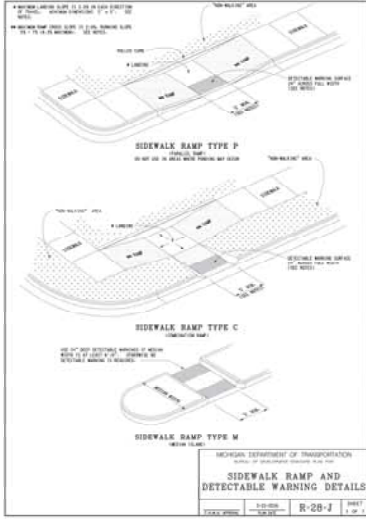
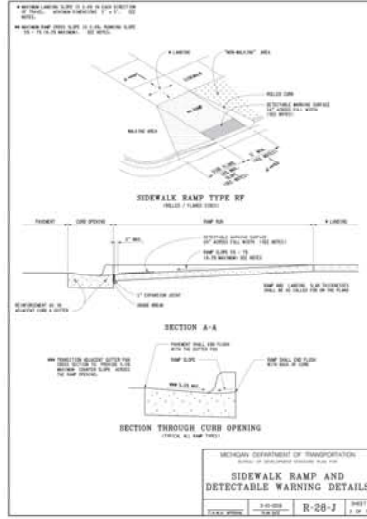
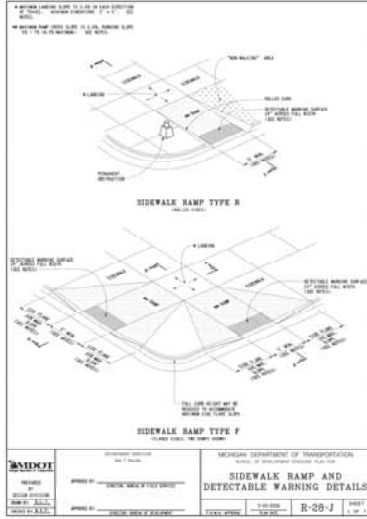
ZEIMET WOZNAK
CONSULTANTS & ENGINEERS
11111 BROADVIEW AVENUE, SUITE 200
NEW BRIDGE, MICHIGAN 48165
PH: 248.447.8800 FAX: 248.447.8322 WWW.ZEIMETWOZNAK.COM

MISS DIG SYSTEM, INC.
THREE FULL TIME OPERATORS
BEFORE THE JOB
CALL THE MISS DIG SYSTEM
1-800-882-7171

PROJECT SPONSOR:
NOVA FUNERAL HOME, LLC.
7707 MIDDLEBELT RD.
WESTLAND, MI 48185
(734) 968-9401

CONSTRUCTION NOTES AND DETAILS
GRIFFIN FUNERAL HOME
NOVA, MICHIGAN, SECTION 20

DATE: 2-16-17 SCALE: HOR: 1" = 8'-0" V: 1" = 4'-0"
DRAWN BY: JAW JOB NO.: 16121
CHECKED BY: JAW SHEET: C-10



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
PSP REVIEW	03/09/17	JAW						

ZEMET WOZNAK
 CIVIL ENGINEERS & LAND SURVEYORS
 10000 BAYVIEW BLVD., SUITE 500
 NEW BURGESS, MICHIGAN 48165
 P: (313) 487-4000 F: (313) 487-4333 www.zemetwoznak.com

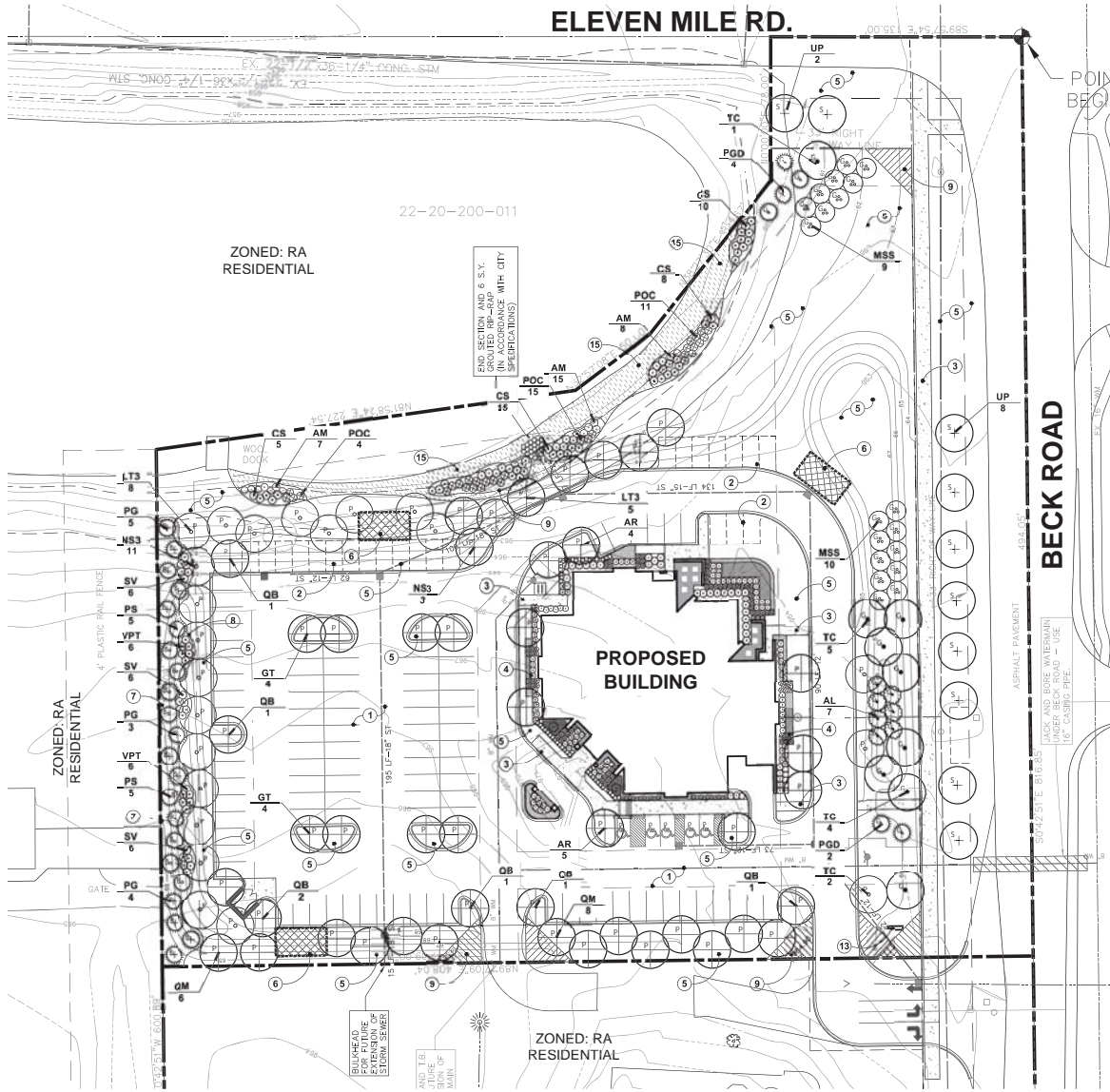
MISS DIG SYSTEM INC.
 1-800-842-7171

PROJECT SPONSOR:
 NOV FUNERAL HOME, L.L.C.
 7707 MIDDLEBELT RD.
 WESTLAND, MI 48185

(734) 968-9401

MDOT RAMP DETAILS
GRIFFIN FUNERAL HOME
 NOV, MICHIGAN, SECTION 20

DATE	2-16-17	SCALE	HOR: 1" = 8'-0"	VER: 1" = 8'-0"
DRAWN BY	JAW	JOB NO.	16121	
CHECKED BY	JAW	SHEET	C-11	



SITE PLANTING PLAN
SCALE 1" = 30'

NOTE KEY:

- ① ASPHALT PARKING LOT
- ② LAND BANKED PARKING - SEE CIVIL ENGINEERING DRAWINGS
- ③ CONCRETE SIDEWALK - SEE CIVIL DWGS
- ④ PROPOSED FOUNDATION PLANTING - SEE SHEET LP-2
- ⑤ EXISTING LAWN OVER MINIMUM 4" DEPTH TOPSOIL - SEE TOPSOIL NOTE BELOW, ALL DISTURBED AREAS
- ⑥ SNOW DEPOSIT AREA
- ⑦ CONTINUOUS MULCH BED
- ⑧ SHOVEL CUT BED EDGE TYPICAL
- ⑨ 25 CLEAR VISION TRIANGLE
- ⑩ 2" DIA. SIGSTONE OVER FILTER MAT
- ⑪ 4" RYERSON STEEL EDGING, 2" THICK
- ⑫ 2 FT. X 2 FT. CONC. PATIO STEPPING STONE
- ⑬ PROJECT SIGN - SEE ARCH. DRAWINGS
- ⑭ PROPOSED BIKE RACKS
- ⑮ NATIVE SEEDING - SEED TO EDGE OF WATER, SEE MIX SHEET

LANDSCAPE DATA

R.O.W. Frontage	
Eleven Mile Road Frontage:	76 ln. ft.
Beck Road Frontage:	434 ln. ft.
Total Frontage:	510 ln. ft.
Canopy/Evergreen Trees Req.:	15 Trees
Canopy/Evergreen Trees Prov.:	15 Trees
Sub-Canopy Trees Req.:	25 Trees
Sub-Canopy Trees Prov.:	25 Trees
Total Trees Provided:	40 Trees

PARKING LOT INTERIOR PARKING LOT LANDSCAPING	
Total Square Footage of Parking Spaces:	16,316 s.f.
Required Landscape Area:	1,832 s.f.
(Parking spaces s.f. x 0.10 s.f./sq ft.)	
Additional Paved Vehicular Use Area:	34,711 s.f.
Required Landscape Area:	1,736 s.f.
(V.U.A. x 0.05 s.f./sq ft.)	
Total s.f. of Landscape Area Req.:	3,568 s.f.
Total s.f. of Landscape Area Prov.:	3,622 s.f.
Parking Lot Tree Requirement:	
Total Trees Required (1 per 75 s.f.):	45 Trees
Total Trees Provided:	45 Trees

PARKING PERIMETER LANDSCAPING	
Parking Lot Perimeter:	789 L.F.
Canopy/Evergreen Trees Req.:	23 Trees
(1 Tree/35 ln. ft.)	
Total Trees Provided:	23 Trees

BUILDING FOUNDATION PERIMETER LANDSCAPING	
Building Perimeter:	477 L.F.
Landscape Area Req.:	3,616 s.f.
(Building Perimeter x 8.0')	
Landscape Area Prov.:	4,002 s.f.

PLANTING KEY

- GREENBELT TREES
- STREET TREES
- BUFFER TREES
- PARKING LOT TREES

GENERAL PLANTING REQ.:

- A THE WORK SHALL CONSIST OF PROVIDING ALL NECESSARY MATERIAL, LABOR, EQUIPMENT, TOOLS, AND SUPERVISION REQUIRED FOR THE COMPLETION AS SHOWN ON THE DRAWING.
- B ALL PLANT MATERIALS SHALL CONFORM TO THE TYPE STATED ON THIS PLAN SET. SPECIES SHALL BE THE NUMBER LISTED ON THE PLANT LIST SET. ALL DIMENSIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "A.L.N. STANDARDS FOR NURSERY STOCK."
- C 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.
- D ALL SINGLE TRUNK TREES SHALL HAVE A CENTRAL LEADER, TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED. ALL SINGLE TRUNK TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- E ALL MULTI-STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE LEADER TREE ON THOSE WITH TRUNK OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- F ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FALL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST DROPPING SEASON.
- G THE CONTRACTOR IS RESPONSIBLE FOR PLANTING THE MATERIALS AT THE CORRECT GRADES AND SPACING. THE PLANTS SHALL BE ORIENTED AS TO GIVE THE BEST APPEARANCE.
- H WHEN THE PLANT HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED WITH A TOPSOIL AND NATIVE SOIL MIXTURE. GROUNDLY FILLING, PATTING AND SETTLING WITH WATER.
- I ALL PLANT MATERIALS SHALL BE PRUNED AND INJURIES REPAIRED. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE REMOVAL OF DEAD OR INJURED TWIGS AND TO COMPENSATE FOR THE LOSS OF ROOTS FROM TRANSPLANTING. CUTS SHOULD BE RECURVING, LEAVING NO STUBS.
- J THE CONTRACTOR AGREES TO GUARANTEE ALL PLANT MATERIALS FOR THE PERIOD OF ONE YEAR, AT THAT TIME THE OWNER'S REPRESENTATIVE SHALL BE PERMITTED TO INSPECT AND REMOVE PLANT MATERIALS THAT DO NOT MEET THE GUARANTEE. THIS GUARANTEE INCLUDES THE FURNISHING OF NEW PLANTS, LABOR AND MATERIALS. THESE NEW PLANTS SHALL ALSO BE GUARANTEED FOR THE PERIOD OF ONE YEAR.
- K TOPSOIL SHALL BE FRUITFUL, FERTILE, FINEST OF CLAY LOAM CHARACTER CONTAINING AT LEAST 5% BUT NOT MORE THAN 20% BY WEIGHT OF ORGANIC MATTER. IT SHALL BE FREE FROM 6" TO 7.5" SIZE SOIL SHALL BE FREE FROM CLAY LUMPS, COARSE SAND, PLANT MOULD, STICKS AND OTHER FOREIGN MATERIALS.
- L NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITH DRIP LINE OF EXISTING TREES.
- M IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS, SHAWS AND WALKWAYS.
- N ALL PLANTING BEDS SHALL RECEIVE 4" SHREDDED BARK MULCH. SEE SPECIFICATIONS.
- O SOIL SHALL BE TWO YEAR OLD "BANDONCHERAZELINE" KENTUCKY BLUE GRASS GROWN IN A SOIL NURSERY ON LOAM SOIL.

PLANT MIX

- ALL PLANTING PERENNIAL BEDS TO RECEIVE:**
- 1 - 4.0 QUINCY BLUE CANNONBALL FRUIT
 - 1 - 4.0 LB. B&B DRAINER
 - 1 - 1.0 LB. BAG SHENNS 13-13 MULTI-PURPOSE FERTILIZER
- PER 100 SQ FT BED AREA.**
- HAND TILL INTO SOIL TO A DEPTH OF 12" MINIMUM**

MULCH

MULCH TO BE DOUBLE SHREDDED HARDWOOD BARK MULCH
NO GROUND WOOD PALLETTE MULCH PERMITTED

TOPSOIL

CONTRACTOR TO TELL OR DISK SUBGRADE TO 4" DEPTH AND INSTALL 4" COMPACTED DEPTH TOPSOIL IN ALL LAWN AREAS. TOPSOIL SHALL BE PROVIDED BY CONTRACTOR

IRRIGATION

ALL LANDSCAPE AREAS WILL BE IRRIGATED WITH A FULLY AUTOMATIC IRRIGATION SYSTEM.

143 cadycentre #79
northville, mi 48167
[T] 966-355-4204
deakplanningdesign.com

NOT TO BE USED AS CONSTRUCTION DRAWING

LANDSCAPE PLAN
GRIFFIN FUNERAL HOME
NOVI, MICHIGAN, SEC 20

DATE: 03/10/17 SCALE: HOR: 1" = 30'
REVISION: 01 JOB NO: 0PD-121702
DRAWN BY: SD SHEET LP-1

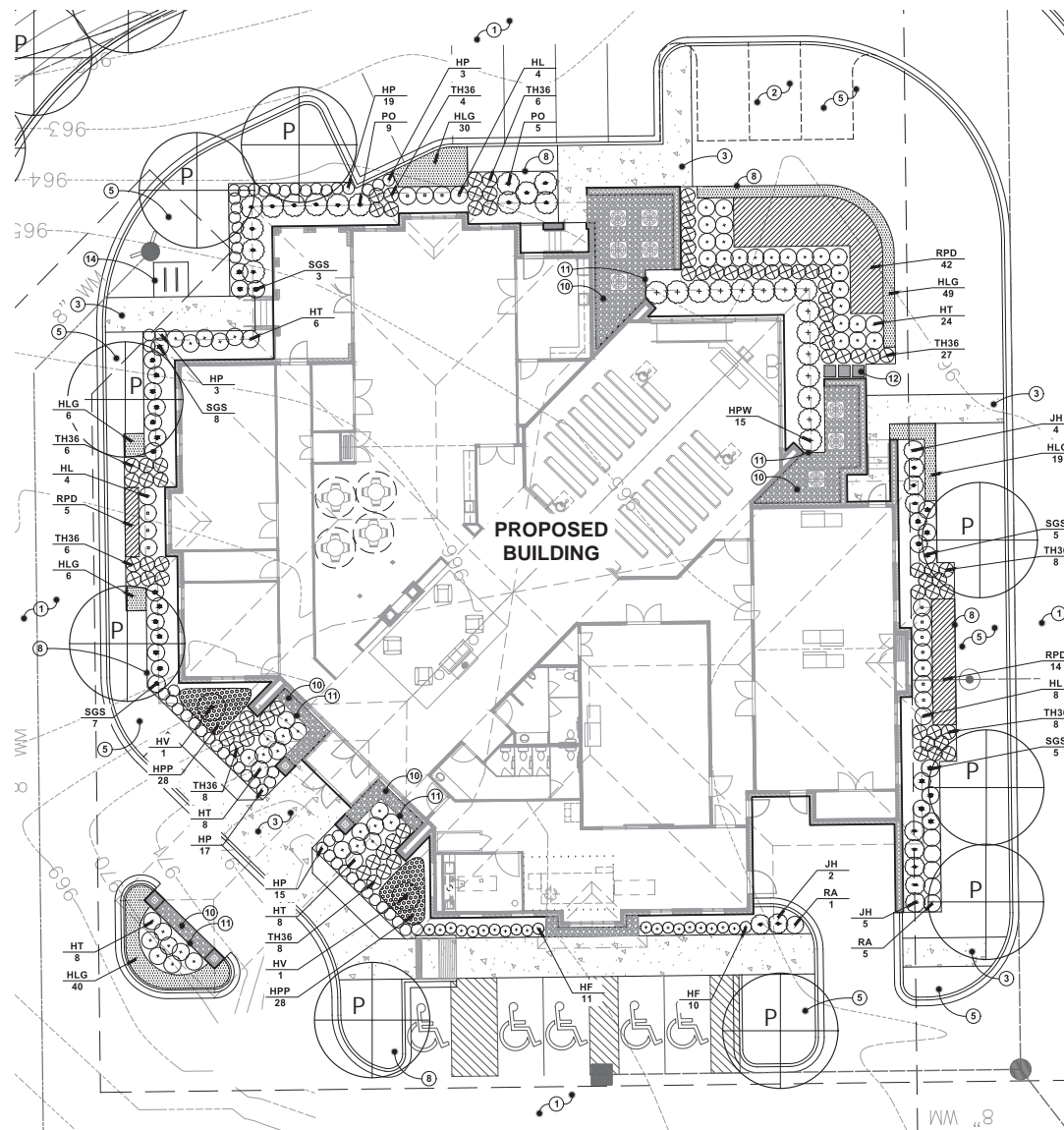
REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY

ZEIMET W. ONIAK
Civil Engineers & Land Surveyors
5880 Grand River Avenue, Suite 100
Novi, Michigan 48165-0118
481-637-5099 • 248-437-5222 fax: www.zeimetwoniak.com

THREE FULL WORKING DAYS BEFORE THE MISS DIG SYSTEM, IN ALL THE MISS DIG SYSTEM.

CLIENT:
NOVI GRIFFIN FUNERAL HOME, LLC
7707 MIDDLEBELT RD.
WESTLAND, MI 48185

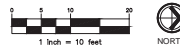
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FOUNDATION PLANTING DETAIL

SCALE 1" = 10'

NOT TO BE USED AS CONSTRUCTION DRAWING



GREENBELT PLANTINGS

QUAL	KEY	COMMON BOTANICAL NAME	SIZE	SPEC.	UNIT
7	AL	Downy Serviceberry - single stem	2" Cal.	BA8	1 250.00
19	MSS	Spring Snow Crabapple - min. 3 stems	7" H.	BA8	1 250.00
6	PGD	Black Hills Spruce	8" H.	BA8	1 325.00
9	TC	Greeneye Linden	3" Cal.	BA8	1 450.00

STREET TREES

10	UP	Pioneer Elm	3" Cal.	BA8	1 325.00
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BUFFER PLANTINGS

18	BV	Ludwig Spirex Lily	36" H.	BA8	1 50.00
12	VPT	Sheela Doublefile Yucca	36" H.	BA8	1 50.00
13	PG	White Spruce	8" H.	BA8	1 325.00
10	PS	Eastern White Pine	8" H.	BA8	1 325.00

PARKING LOT TREES

13	LTS	Yucca Tree	3" Cal.	BA8	1 400.00
14	NS3	Blackgum Tree	3" Cal.	BA8	1 400.00
8	GT	Haystack Honeylocust	3" Cal.	BA8	1 400.00
7	GT	Shagbark Hickory	3" Cal.	BA8	1 400.00
8	GT	Swamp White Oak	3" Cal.	BA8	1 400.00
14	GM	Star Oak	3" Cal.	BA8	1 400.00
9	AR	Red Pointe Red Maple	3" Cal.	BA8	1 400.00
3	TC	Greeneye Linden	3" Cal.	BA8	1 450.00

DETENTION BASIN PLANTINGS

38	CS	Redtop Dogwood	30" H.	Cont.	1 50.00
30	AM	Japanese Anemone	30" H.	Cont.	1 50.00
30	POC	Coppertina Blackberry	30" H.	Cont.	1 50.00

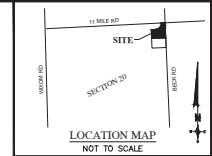
FOUNDATION PLANTINGS

2	HV	Varied Whitebark	48" H.	BA8	1 50.00
84	HT	Tuff Staff Hydrangea	48" H.	Cont.	1 50.00
81	TH36	White Pine	36" H.	Cont.	1 50.00
28	SGS	Golden Starburst Spirea	24" H.	Cont.	1 50.00
11	JH	Hate Columbian Juniper	8" H.	BA8	1 50.00
8	RA	Grey Low Spirea	24" H.	Cont.	1 50.00
16	HL	Little Leaf Hydrangea	30" H.	Cont.	1 50.00
15	HPW	Pink Waxy Hydrangea	36" H.	Cont.	1 50.00
61	RPD	Peach Drift Rose	24" H.	Cont.	1 50.00
14	FO	Summer Wine Blackberry	30" H.	Cont.	1 50.00
150	HLG	Little Globe Spiraea	1 gal.	Cont.	1 15.00
86	HPP	Pink Palace Coralbees	1 gal.	Cont.	1 15.00
87	HP	Patina Hosta	1 gal.	Cont.	1 15.00
30	HF	Frances House Hosta	1 gal.	Cont.	1 15.00
3	BSM	Beak Shape Seed Mix	34 Bales	LBS.	1 500.00
TRD		SHREDDED HARD BARK MULCH (1/4")			1 450.00
TRD		SEEDING LAWN (S.V.)			1 3.50

NOTE: CONTRACTOR TO VERIFY ALL PLANT QUANTITIES

NOTE KEY:

- ① ASPHALT PARKING LOT
- ② LAND BANKED PARKING - SEE CIVIL ENGINEERING DRAWINGS
- ③ CONCRETE SIDEWALK - SEE CIVIL DIVS.
- ④ PROPOSED FOUNDATION PLANTINGS. SEE SHEET LP-2
- ⑤ SEEDING LAWN OVER MINIMUM 4" DEPTH TOPSOIL. SEE TOPSOIL NOTE BELOW. ALL DISTURBED AREAS.
- ⑥ SNOW DEPOSIT AREA
- ⑦ CONTINUOUS MULCH BED
- ⑧ SHOVEL CUT BED EDGE, TYPICAL
- ⑨ CLEAR VISION TRIANGLE
- ⑩ 2" DIA. AGGREGATE OVER FILTER MAT
- ⑪ 4" RIBBON STEEL EDGING, 1/2" THICK
- ⑫ 2 FT. X 2 FT. CONC. PATIO STEPPING STONE
- ⑬ PROJECT SIGN. SEE ARCH. DRAWINGS
- ⑭ PROPOSED BIKE RACKS
- ⑮ NATIVE SEEDING. SEED TO EDGE OF WATER. SEE MIX SHEET LP-3



GENERAL PLANTING REQ.:

- ① THE WORK SHALL CONSIST OF PROVIDING ALL NECESSARY MATERIAL, LABOR, EQUIPMENT, TOOLS, AND SUPERVISION REQUIRED FOR THE COMPLETION AS SHOWN ON THE DRAWING.
- ② ALL PLANT MATERIALS SHALL CONFORM TO THE TYPE STATED ON THIS PLAN SET. SIZE SHALL BE THE MINIMUM STATED ON THE PLAN SET UNLESS ALL DIMENSIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "A.L.N." STANDARDS FOR NURSERY STOCK.
- ③ 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.
- ④ ALL SHOULDER TRUNK SHOE TREES TO HAVE A CENTRAL LEADER. TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED. ALL SINGLE STEM SHOE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ⑤ ALL MULTI-STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SEVERED TRUNK WITH TRUNK OR OPEN CROWN SHALL NOT BE ACCEPTED.
- ⑥ ALL EVERGREEN TREES SHALL BE BRANCHED AND FALL TO THE GROUND. SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST TWO GROWING SEASONS.
- ⑦ THE CONTRACTOR IS RESPONSIBLE FOR PLANTING THE MATERIALS AT THE CORRECT GRADES AND SPACING. THE PLANTS SHALL BE ORIENTED AS TO GIVE THE BEST APPEARANCE.
- ⑧ WHEN THE PLANT HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED WITH TOPSOIL AND NATIVE SOIL MIXTURE. GRADUALLY FILLING, PATTING AND SETTLING WITH WATER.
- ⑨ ALL PLANT MATERIALS SHALL BE PRUNED AND INJURIES REPAIRED. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE REMOVAL OF DEAD OR INJURED TWIGS AND TO COMPENSATE FOR THE LOSS OF ROOTS FROM TRUNK AND/OR CUTS SHALL BE FLUSH, LEAVING NO STUBS.
- ⑩ THE CONTRACTOR AGREES TO GUARANTEE ALL PLANT MATERIALS FOR THE PERIOD OF ONE YEAR, AT THAT TIME THE OWNER'S REPRESENTATIVE SHALL BE AVAILABLE FOR A FINAL INSPECTION. PLANT MATERIALS WITH 20% OR MORE DEAD OR DETERIORATED OR DAMAGED MATERIAL SHALL BE REPLACED. THIS GUARANTEE INCLUDES THE FURNISHING OF NEW PLANTS, LABOR AND MATERIALS. THESE NEW PLANTS SHALL ALSO BE GUARANTEED FOR THE PERIOD OF ONE YEAR.
- ⑪ TOPSOIL SHALL BE FRIDGE FORTER. TOPSOIL OF CLAY LOAM CHARACTER CONTAINING AT LEAST 5% BUT NOT MORE THAN 20% BY WEIGHT OF ORGANIC MATERIALS. USE SOIL TO 4" DEEP BEFORE PLANTING. STUBS AND OTHER FOREIGN MATERIALS.
- ⑫ NO MACHINERY IS TO BE USED WITHIN THE DRP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN DRP LINE OF EXISTING TREES.
- ⑬ IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS, PATIOS AND DRIVEWAYS.
- ⑭ ALL PLANTING BEDS SHALL RECEIVE 4" SHREDDED BARK MULCH. SEE SPECIFICATIONS.
- ⑮ SOIL BEDS WITHIN BEDS: ALL LAWN AREAS BETWEEN CURBS AND SIDEWALKS OR BETWEEN SIDEWALKS USE SOIL TO 4" DEEP BEFORE PLANTING.
- ⑯ SOIL SHALL BE TWO YEAR OLD "BAMBOOCHERAZELINE" KENTUCKY BLUE GRASS GROWN IN A SOO NURSERY ON LOAM SOIL.

PLANT MIX

- ALL PLANTING PERENNIAL BEDS TO RECEIVE:**
- 1 - 4.0 GUYL SILENT GRANULAR FERT
 - 1 - 40 LB BAG DRAINAGE
 - 1 - 1 LB BAG SHENING 13-13-13 MULT-PURPOSE FERTILIZER
- PER 100 SQ FT BED AREA.
- HAND TILL INTO SOIL TO A DEPTH OF 12" MINIMUM
- MULCH**
- MULCH TO BE DOUBLE SHREDDED HARDWOOD BARK MULCH
- NO GROUND WOOD PALLETTE MULCH PERMITTED
- TOPSOIL**
- CONTRACTOR TO TRL OR DISK SUBGRADE TO 4" DEPTH AND INSTALL 4" COMPACTED DEPTH TOPSOIL IN ALL LAWN AREAS. TOPSOIL SHALL BE PROVIDED BY CONTRACTOR

PLANT KEY

- TREE SYMBOL
- TREE TYPE KEY - SEE PLANT LIST SHEET LP-2
- QUANTITY
- NOW PLANTING DETAILS - SEE SHEET LP-3

IRRIGATION

ALL LANDSCAPE AREAS WILL BE IRRIGATED WITH A FULLY AUTOMATIC IRRIGATION SYSTEM.



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY

ZEMET & WOZNAK
Civil Engineers & Land Surveyors
55825 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-0118
248 437-5099 • 248 437-5222 fax • www.zemetwoznak.com

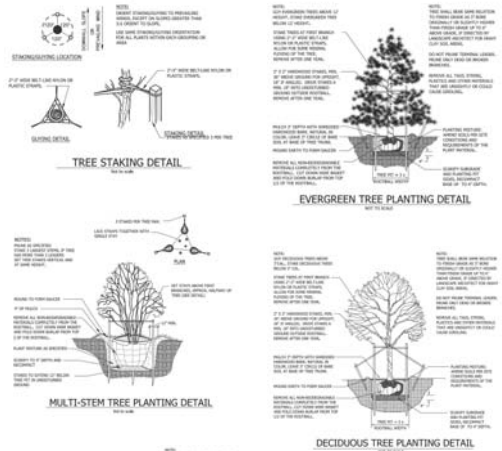
MISS DIG SYSTEM
TERRITORY WORKING DAYS
MIDNIGHT TO 5:00 AM
704-974-7878

CLIENT:
NOVI GRIFFIN FUNERAL HOME, LLC
7707 MIDDLEBELT RD.
WESTLAND, MI 48185

FOUNDATION PLANTING PLAN
GRIFFIN FUNERAL HOME
NOVI, MICHIGAN, SEC 20

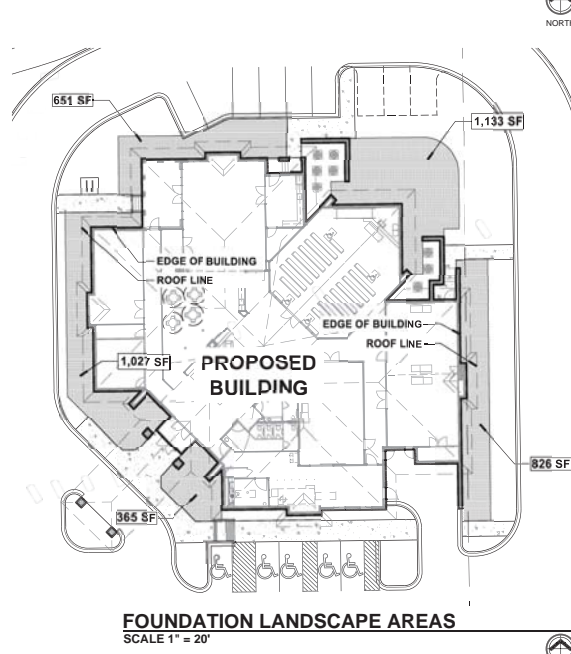
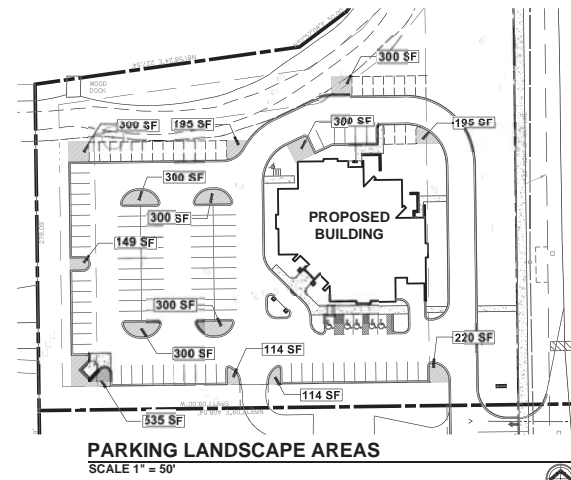
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DATE: 10/17
JOB NO.: DPD-121702
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SHEET LP-2

NOVI PLANTING DETAILS



NOVI LANDSCAPE SPECIFICATIONS

1. Whenever in this Ordinance landscape plantings are required or permitted, they shall be planted in accordance with the approved final stamped landscape plan.
 2. All plant materials shall be installed between March 15th and November 15th. All installed landscapes including plant materials, mulch, staking, irrigation, and sodding, must be installed and inspected by the City prior to issuance of a Temporary Certificate of Occupancy. At that time, a financial guarantee of 1.5 times the cost of any deficiencies will be held until inspection occurs for a Final Certificate of Occupancy. In order to receive a Final Certificate of Occupancy, the deficiencies must be addressed within 30 days during the inspection for a Final Certificate of Occupancy. Under extraordinary circumstances related to the inability to plant during the approved installation period, a financial guarantee of 2 times the cost of any deficiencies will be held until the inspection for a Final Certificate of Occupancy. If the deficiencies are not addressed in the time period outlined above, the City will cash in the amount being held for the outstanding items and remedy those items.
 3. A City representative will perform landscape inspections following a request from the developer. The inspection time periods from March 15th to November 15th. If an inspection is requested between November 16th and March 15th, a financial guarantee of 2 times the cost of any deficiencies will be held until the inspection for a Final Certificate of Occupancy as outlined above. Beginning March 15th, the Applicant then has 30 days to complete items or the City will cash in the amount being held and finish the job.
 4. The establishment period for the plant material guarantee will occur beginning at the Final Certificate of Occupancy approval to 2 years from that date. All plantings shall be properly planted so as to be a healthy, growing condition at commencement of the establishment period. At the end of the establishment period, any plantings which are 20% dead or greater, shall be replaced.
 5. (1) The removal or alteration of any tree by the City of the installation schedule. The City may reject any material which is defective or generally poor condition.
 (2) Minor changes regarding plant materials per the approved and stamped landscape plan may be allowed upon written notification and written sign-off by the City Landscape Architect of species, size, change, and location.
 (3) Minor changes due to seasonal planting preferences and lack of plant availability may be approved in writing by the City Landscape Architect when there is no reduction in the quality of plant materials, no significant change in size or location of plant material, the new plant material is compatible with the area and is the same general type (deciduous/evergreen), exhibiting same design characteristics (mature height, crown), as the material being replaced. If these criteria are not fulfilled or changes are significant from approved plan, the landscape plan shall be revised and resubmitted for plan approval.
 6. Maintenance:
 (a) Maintenance of required plantings by the owner shall be carried out so as to present a healthy, neat and orderly appearance, free from natural and other debris.
 (b) To ensure proper maintenance and as a condition of Final Site Plan approval, the property owner shall enter into and record with the office of the Oakland County Register of Deeds a Landscape Maintenance Agreement, or include such provisions as part of subdivision restrictions or condominium master deed, each of which shall be approved by the City Attorney. Such instrument shall identify the minimum quality and maintenance standards for maintenance, and shall provide the procedure, authority and finance for City care of trees that are approved by the City Attorney. Such instrument shall identify the minimum quality and maintenance standards that shall be required within one (1) year, or the next appropriate planting period, whichever occurs first, all landscaped areas shall be provided with an irrigation system, tree staking, grass seeding and tree staking and shall include other visual seasonal plantings shall be guaranteed for one (1) growing seasons after date of the acceptance of the installation, if grass or sod is required the height specified in Chapter 22 of the Novi Code of Ordinances, or if sod is allowed to be installed, vision access any portion of the island and the responsible party is unwilling to rectify the problem, the City will also take actions and shall consider the cost of such abatement measures in the manner provided by the developer and approved by the City at such instrument.
 7. Responsibility and Certificate of Occupancy. The owner of the property subject to the requirements of this Section shall be responsible for installing and maintaining per landscaping the approved final landscape plan as specified in this Section. Where the property is occupied, the owner shall be responsible for maintaining. All landscaping work required pursuant to this Section shall be treated as a site improvement for purposes of Subdivision 300.21.
 * These requirements supersede all other planting requirements or specifications.



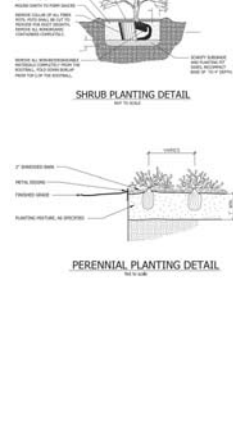
GENERAL PLANTING REQ.

- A THE WORK SHALL CONSIST OF PROVIDING ALL NECESSARY MATERIAL, LABOR, EQUIPMENT, TOOLS, AND SUPERVISORY REQUIRED FOR THE COMPLETION AS SHOWN ON THE DRAWING.
- B ALL PLANT MATERIALS SHALL CONFORM TO THE TYPE STATED ON THIS PLANT LIST. SIZES SHALL BE THE MINIMUM LISTED ON THE PLANT LIST UNLESS ALL DIMENSIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE A.L.A.N. STANDARDS FOR NURSERY STOCK.
- C 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.
- D ALL SHRUBS SHALL BE STAKED TO HAVE A CENTRAL LEADER, TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED. ALL SINGLE TRUNK TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- E ALL MULTI-STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SEVERE TRUNK OR TWO WITH TRUNK OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- F ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST TWO GROWING SEASONS.
- G THE CONTRACTOR IS RESPONSIBLE FOR PLANTING THE MATERIALS AT THE CORRECT GRADEN AND SPACING. THE PLANTS SHALL BE ORIENTED AS TO GIVE THE BEST APPEARANCE.
- H WHEN THE PLANT HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED WITH TOPSOIL AND NATIVE SOIL MIXTURE, GENTLY FILLING, PATTING AND SETTLING WITH WATER.
- I ALL PLANT MATERIALS SHALL BE PRUNED AND UNLIMBED AS REQUIRED. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE REMOVAL OF DEAD OR INLINED TWIGS AND TO COMPENSATE FOR THE LOSS OF ROOTS FROM TRANSPLANTING. CUTS SHALL BE FLUSH, LEAVING NO STUBS.
- J THE CONTRACTOR AGREES TO GUARANTEE ALL PLANT MATERIALS FOR THE PERIOD OF ONE YEAR, AT THAT TIME THE OWNER'S REPRESENTATIVE SHALL CONDUCT A VISUAL INSPECTION. PLANT MATERIALS THAT DO NOT MEET THE REQUIREMENTS OF THIS SECTION SHALL BE REPLACED. THIS GUARANTEE INCLUDES THE FURNISHING OF NEW PLANTS, LABOR AND MATERIALS. THESE NEW PLANTS SHALL BE GUARANTEED FOR THE PERIOD OF ONE YEAR.
- K TOPSOIL SHALL BE FRIDGE FERTILE TOPSOIL OF CLAY LOAM CHARACTER CONTAINING AT LEAST 5% BUT NOT MORE THAN 20% BY WEIGHT OF ORGANIC MATTER WITH PH RANGE FROM 6 TO 7.5. SOIL SHALL BE FREE FROM CLAY LUMPS, COARSE SAND, PLANT ROOTS, STICKS AND OTHER FOREIGN MATERIALS.
- L NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. THREE HAND GRADE ALL LAWN AREAS WITH DRIP LINE OF EXISTING TREES.
- M IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS, WALKS AND PAVED AREAS.
- N ALL PLANTING BEDS SHALL RECEIVE 4" SHREDED BARK MULCH. SEE SPECIFICATIONS.
- O SOIL BEHIND BURNING SHALL BE LAWN AREAS BETWEEN CURBS AND BOLLARDS OR BETWEEN BOLLARDS AND SIDEWALKS TO 12" DEEP BEFORE TOPSOIL PLACES AND OTHER FOREIGN MATERIALS.
- P SOIL SHALL BE TWO YEAR OLD "BANDONCHERAZED" KENTUCKY BLUE GRASS GROWN IN A SOIL NURSERY ON LOAM SOIL.

PLANT MIX

- ALL PLANTING PERENNIAL BEDS TO RECEIVE:**
- 1 - 4 CUBIC YARD CANADIAN PRAIRIE
 - 1 - 40 LB BAG DRAINAGE
 - 1 - 1 LB BAG SHIMENS 13-13-13 MULTI-PURPOSE FERTILIZER
- PER 100 SQ FT BED AREA.**
- HAND TILL INTO SOIL TO A DEPTH OF 12" MINIMUM**
- MULCH**
- MULCH TO BE DOUBLE SHREDED HARDWOOD BARK MULCH**
- NO GROUND WOOD PALETTE MULCH PERMITTED**
- TOPSOIL**
- CONTRACTOR TO TILL OR DISK SUBGRADE TO 4" DEPTH AND INSTALL 4" COMPACTED DEPTH TOPSOIL IN ALL LAWN AREAS. TOPSOIL SHALL BE PROVIDED BY CONTRACTOR**
- PLANT KEY**
- TREE SYMBOL
 - TREE TYPE KEY - SEE PLANT LIST SHEET LP-2
 - QUANTITY
 - NOV PLANTING DETAILS SEE SHEET LP-3
- IRRIGATION**
- ALL LANDSCAPE AREAS WILL BE IRRIGATED WITH A FULLY AUTOMATIC IRRIGATION SYSTEM.**

EROSION CONTROL BLANKET



BASIN SLOPE MIX - INCLUDE 9500 BLANKET ENTIRE AREA

Material and Performance Specification Sheet

S150 Erosion Control Blanket

The S150 Erosion Control Blanket is a non-woven geotextile fabric made of 100% polypropylene fibers with a weight of 150 gsm. It is designed for use on slopes of 1:1 to 2:1. The blanket is made of 100% polypropylene fibers with a weight of 150 gsm. It is designed for use on slopes of 1:1 to 2:1.

Manufacturer	Product Name	Material	Weight (gsm)	Thickness (mm)	Color
Waco	S150 Erosion Control Blanket	100% Polypropylene	150	3.0	Black
Waco	S150 Erosion Control Blanket	100% Polypropylene	150	3.0	Black
Waco	S150 Erosion Control Blanket	100% Polypropylene	150	3.0	Black

NATIVE SEEDING MAINTENANCE

During the first growing season, native areas should be mowed a minimum of four times to height of about 4" when the growth reaches 10"-15". Selective herbicide applications or hand pulling may be needed to control unwanted weed populations. If a mower cannot be used high enough, a string trimmer may be used.

During the second growing season, native areas should be mowed a minimum of four times to height of about 4" when the growth reaches 10"-15". Selective herbicide applications or hand pulling may be needed to control unwanted weed populations.

By the second growing season it should be apparent if some areas need reseeding. Reseed or sow seeds as needed to provide for full coverage.

Long term maintenance may include prescribed burning, mowing, hand pulling, and selective herbicide application. If burning is not allowed or feasible, the planting may be mowed to a short height and the clippings removed in the early spring before ground freezing begins to begin.

SEED MIX NOTES

1. The seed mixes shall be applied at the specified rate for each mix.
 2. Must be installed to manufacturer specification and requirements.
 3. The planting for the seed germination shall be 70% sharp sand and 30% compost.
- Manufacturer: JF New, Inc.
 128 Sunset Drive
 Westland, MI 48184
 313.586.2172



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY

ZEMET W&S
 CIVIL ENGINEERS & LAND SURVEYORS
 5580 Grand River Avenue, Suite 100
 New Hudson, Michigan 48165-0116
 248.437.5099 • 248.437.5222 fax • www.zemetwands.com

THREE FULL WORKING DAYS BEFORE THE START OF THE MISS DIG SYSTEM

CLIENT:
 NOVI GRIFFIN FUNERAL HOME, LLC
 7707 MIDDLEBELT RD.
 WESTLAND, MI 48185

NOT TO BE USED AS CONSTRUCTION DRAWING

LANDSCAPE DETAILS
 GRIFFIN FUNERAL HOME
 NOVI, MICHIGAN, SEC 20

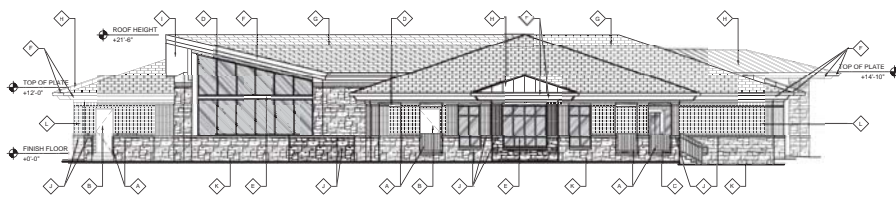
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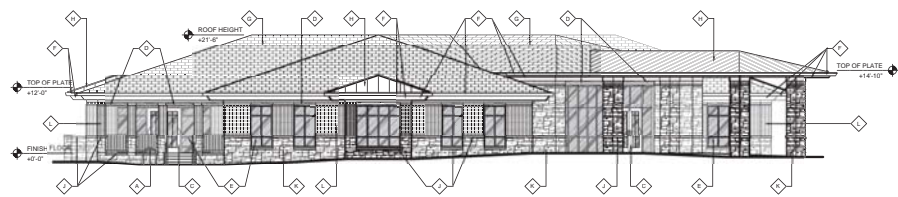
06 SOUTH ELEVATION
SCALE: 3/32 = 1'-0"



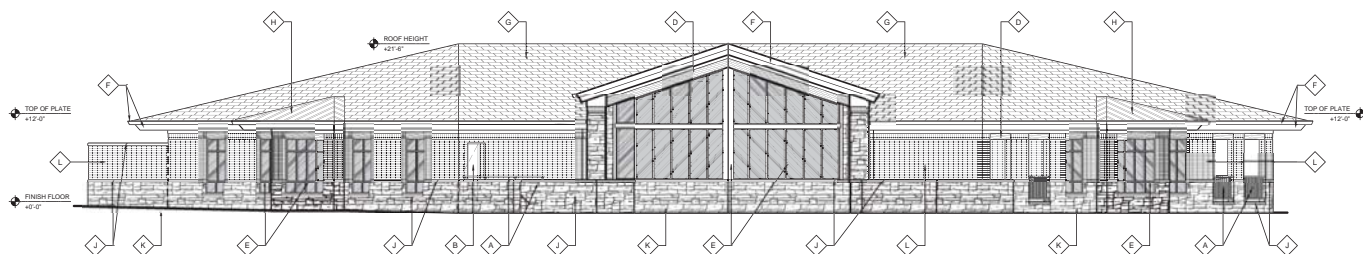
05 EAST ELEVATION
SCALE: 3/32 = 1'-0"



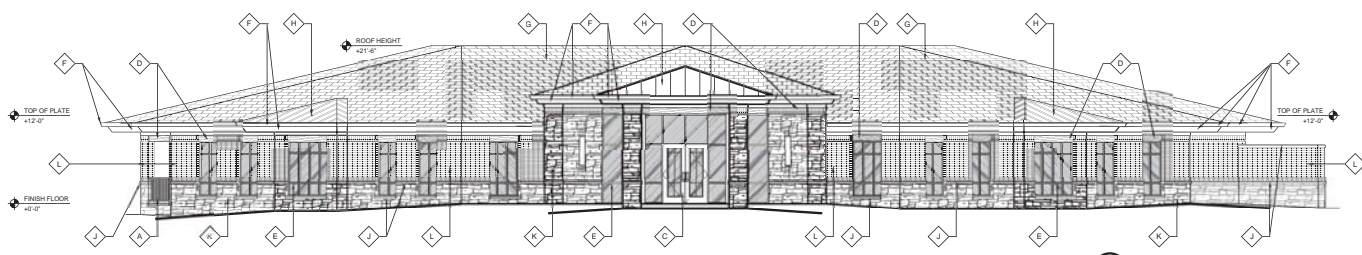
04 NORTH ELEVATION
SCALE: 3/32 = 1'-0"



03 WEST ELEVATION
SCALE: 3/32 = 1'-0"



02 NORTHEAST ELEVATION
SCALE: 1/8 = 1'-0"



01 SOUTHWEST ELEVATION
SCALE: 1/8 = 1'-0"

MATERIAL KEY

	GLASS		BRICK W/ ROWLOCK SOLDIER COURSE		STONE		CASTSTONE
	PRE-FINISHED PERFORATED CONCRETE BOARD SOFFIT		METAL ROOFING		ASPHALT SHINGLE		INSULATED WOOD/ALUM PANELS
	PRE-FINISHED CONCRETE BOARD		ALUMINUM STOREFRONT		MODIFIED/PANED METAL RAILING		
	WOOD DOORS		METAL DOORFRAMES				

ISSUE DATE:	MARCH 10, 2017
REVISION:	



JST ARCHITECTS
ARCHITECTURE PLANNING INTERIORS
W.W. J. STAR ARCHITECTS . C.O.M.
J. STUART TODD, INC.
2019 MELBURN STREET, SUITE 307, DALLAS, TEXAS 75211 | 214.822.4033



L.J. GRIFFIN FUNERAL HOME
SCHEMATIC DESIGN
NOVI, MI

SHEET NO.
A1.0
JOB NUMBER: 16228

