

Kroger Office Expansion JSP13-65

Kroger Office Expansion, JSP13-65

Consideration of the request of The Kroger Company of Michigan for Preliminary Site Plan and Stormwater Management Plan approval. The subject property is located in Section 24, at 40393 Grand River Avenue, west of Seeley Road in the I-1, Light Industrial District. The subject property is 1.63 acres and the applicant is proposing to add a 2,019 square foot addition on the north side of the existing building.

REQUIRED ACTION

Approval/denial of the Preliminary Site Plan and Stormwater Management Plan.

REVIEW	RESULT	DATE	COMMENTS
Planning	Approval	10/15/13	Items to address on the next plan
	recommended		submittal
Engineering	Approval	10/15/13	Items to address on the next plan
	recommended		submittal
Landscaping	Approval	10/10/13	Items to address on the next plan
	recommended		submittal
Façade	Approval	10/08/13	No additional items to address
-	recommended		· · ·
Fire	Approval	09/30/13	No additional items to address
	recommended		

Motion sheet

<u>Approval – Preliminary Site Plan</u>

In the matter of Kroger Office Expansion, JSP13-65, motion to **approve** the <u>Preliminary Site</u> <u>Plan</u> 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 the items listed in those letters being addressed on the next plan submittal; and
- b. (additional conditions here if any)

This motion is made because the plan is otherwise in compliance with Article 19, Article 24 and Article 25 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)

-AND-

Approval – Stormwater Management Plan

In the matter of Kroger Office Expansion, JSP13-65, motion to **approve** the <u>Stormwater</u> <u>Management Plan</u>, subject to:

- 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 next plan submittal; 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-

<u>Denia</u>

In the matter of Kroger Office Expansion, JSP13-65 motion to **deny** the <u>Preliminary Site</u> <u>Plan</u>, for the following reasons...(because the plan is not in compliance with Article 19, Article 24 and Article 25 of the Zoning Ordinance.)

-AND-

Denial Stormwater Management Plan

In the matter of Kroger Office Expansion, JSP13-65, motion to **deny** the <u>Stormwater</u> <u>Management Plan</u>, for the following reasons...(because the plan is not in compliance with Chapter 11 of the Ordinance.)

Planning Review



cityofnovi.org

Petitioner

The Kroger Co. of Michigan

Review Type

Preliminary and Final Site Plan

Property Characteristics

- Site Location: 40393 Grand River Ave., south side of Grand River Ave., west of
- Seeley Road (Section 24)
- Site School District: Novi Schools I-1, Liaht Industrial
- Site Zonina:
- Adjoining Zoning: North, West and East: I-1; South: R-4, One-Family Residential Existing Kroger Offices

Residential

1.63 acres 09-23-13

- Site Use(s): .
- Adjoining Uses: .
- Site Size:
- Plan Date:

Project Summary

The applicant is proposing to add a 2,019 square foot addition on the north side of the existing building. The addition would contain office space for Kroger Offices. No new parking is proposed on the site.

Recommendation

Approval of the **Preliminary and Final Site Plan is recommended**. There are only minor planning related items that need to be addressed at the time of Stamping Set submittal. The applicant should submit emailed revised plans for informal review prior to printing the Stamping Sets. Planning Commission approval is also required.

Ordinance Requirements

This project was reviewed for conformance with the Zoning Ordinance with respect to Article 19 (I-1, Light Industrial District), Article 24 (Schedule of Regulations), Article 25 (General Provisions), and any other applicable provisions of the Zoning Ordinance. Please see the attached charts for information pertaining to ordinance requirements. Applicable sections of the Zoning Ordinance and other regulatory documents are highlighted in gray on the attached chart. Items in **bold** below must be addressed by the applicant.

1. <u>Photometric Plan:</u> The applicant should confirm no additional outside lighting is proposed.

PLAN REVIEW CENTER REPORT

October 15, 2013

Planning Review

Kroger Office Expansion JSP 13-65

North, West and East: various office/industrial; South: Single-Family

Planning Review of Final Site Plan Kroger Office Expansion

JSP13-65

Response Letter

A letter from either the applicant or the applicant's representative addressing comments in this, and in the other review letters, is requested prior to the Planning Commission meeting and with the Stamping Set submittal.

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.

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 at 248-347-0430 for additional information on starting permits. The applicant should review and be aware of the requirements of Chapter 26.5 before starting construction.

Pre-Construction Meeting

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 Pre-Con, please contact Sarah Marchioni [248.347.0430 or smarchioni@cityofnovi.org] in the Community Development Department.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.347.0586 or kkapelanski@cityofnovi.org.

Yum.

Kristen Kapelanski, AICP, Planner Attachments: Planning Review Chart

PLANNING REVIEW SUMMARY CHART

Kroger Office Expansion JSP13-65 Plan Date: 09-23-13 Preliminary and Final Site Plan Review

			Meets	
ltem	Required	Proposed	Requirements?	Comments
Master Plan	Industrial Research	No Change	Yes	
	Development	Proposed		
	Technology			
Zoning	I-1 Light Industrial	No Change	Yes	
	District	Proposed		
Use (Article 19)	Office, research &	2,019 sq. ft. office	Yes	}
	development, technology centers,	addition		
	warehousing,			
	manufacturing,			
	laboratories, utility			
	buildings,			
	indoor/outdoor			
	recreation, other			
	similar uses, and			
	accessory structures			
Building Height	40 feet maximum	15'9"	Yes	
(Sec. 2400 &				
Sec. 2503.2.E)	(0			
Building Setback	40 ft.	10.41		
Front (north)	20 ft.	40 ft. 20 ft.	Yes	
Interior Side (east)	2011.	20 11.	Yes	
Interior Side	20 ft.	47 ft.	Yes	•
(west)	2011.	4/ II,	Tes	
Rear (south)	20 ft.	300 ft. +	Yes	
Parking Setback				
Front	Front yard parking	No front yard	N/A	
(north)	permitted subject to	parking is		
(nonn)	(a) Dev. must be 2	proposed.		
	acres			
	(b) Must be setback	6		÷
	same as req.			
	bldg. setback (40			
	ft.)			
	(c) Cannot occupy			
	more than 50% of			
	the area btwn.			
	min. front yard setback and			
	bldg. setback			
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ltem	Required	Proposed	Meets Requirements?	Comments
Interior Side	 (d) Must be screened by brick wall or landscaped berm (e) Planning Commission must make finding that prkg. area and lighting is compatible w/ surrounding development 			
(east) Interior Side (west)	10 ft.			
Rear (south)	10 ft.			
Number of Parking Spaces (Sec. 2505)	Office) one space per 222 sq. ft. gross leasable area 5,619/222 = 25 spaces	56 spaces	Yes	No new spaces proposed
	Total spaces required for site = 25 spaces			
Parking Space Dimensions and Maneuvering Lanes (Sec. 2506)	9' x 19' parking space dimensions and 24' wide drives. 9' x 17' parking spaces allowed along 7' wide interior sidewalks as long as detail indicates a 4" curb at these locations and along landscaping.	No new spaces proposed	N/A	
Barrier Free Spaces (Barrier Free Code)	3 barrier free spaces required (1 van accessible)	3 barrier free spaces (2 van accessible) provided	Yes	No new spaces proposed
Barrier Free Space Dimensions	8' wide with a 5' wide access aisle for standard barrier free	8' wide with a 5' wide access aisles for standard barrier	Yes	

ltem	Required	Proposed	Meets Requirements?	Comments
(Barrier Free Code)	spaces, and 8' wide with an 8' wide access aisle for van accessible spaces	free spaces		
Barrier Free Signs (Barrier Free Design Graphics Manual)	One sign for each accessible parking space.	Signage shown	Yes	No new spaces proposed.
Loading Spaces (Sec. 2507 and Sec. 22-100 City Code)	Must be in rear yard and screened from right-of-way and neighboring properties - minimum 360 sq. ft.	No new loading area provided	N/A	
Accessory Structure Setback- Dumpster (Sec. 2503)	Accessory structures should be setback a minimum of 10 feet from any building unless structurally attached and setback the same as parking from all property lines; the structure must be in the rear or interior side yard.	Existing dumpster and enclosure to remain	N/A	- - -

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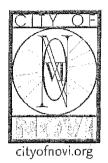
			Meets	
ltem	Required	Proposed	Requirements?	Comments
Dumpster (Chap. 21, Sec. 21-145)	Screening of not less than 5 feet required, interior bumpers or posts required. Enclosure to match building materials and be at least one foot taller than height of refuse bin.			
Exterior lighting (Sec. 2511)	Photometric plan and exterior lighting details needed at time of Final Site Plan	Lighting plan submitted		Any new lighting will need to be shown on a photometric plan.
Sidewalks (City Code Sec. 11-276(b) and Subdivision Ordinance Sec. 4.05A and Non- Motorized Plan)	No additional sidewalks required	No additional sidewalks proposed	Yes	
Development/ Business Sign	Signage if proposed requires a permit			Please contact Jeannie Niland (248.347.0438) for information on sign permits

Prepared by Kristen Kapelanski, AICP (248)347-0586

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Engineering Review



PLAN REVIEW CENTER REPORT

October 15, 2013

Engineering Review

Kroger Office Expansion JSP13-0065

<u>Petitioner</u>

Kroger Co. of Michigan, applicant

<u>Review Type</u>

Preliminary/Final Site Plan

Property Characteristics

- Site Location:
 - S. of Grand River E. of Joseph Dr. 0.155 acres
- Site Size: 0.155 acres
- Plan Date: September 23, 2013

Project Summary

- Construction of an approximately 2,019 square-foot building. Site access and parking is provided by the existing facilities.
- Storm water from the building addition would sheet flow into the proposed bioretention/detention basin and discharge into the existing storm sewer system.

Recommendation

Approval of the Preliminary/Final Site Plan is recommended, with items to be addressed at informal Final Site Plan Review.

Comments:

The Preliminary/Final Site Plan meets the general requirements of Chapter 11 of the Code of Ordinances, the Storm Water Management Ordinance and the Engineering Design Manual with the following exceptions, which can be addressed at an informal Final Site Plan submittal:

<u>General</u>

1. Provide the City's standard detail sheet for storm sewer (1 Sheet-6/15/98) at the time of the Stamping Set submittal.

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2. Remove "City of Novi inspecting engineers shall verify the bearing capacity of native soils to verify an adequate bedding depth is provided" from plan sheet 1 of 3.

<u>Storm Sewer</u>

- 3. Provide a two (2) foot diameter clean-out at the opposite end of the 6" perforated PVC versus an end section as provided.
- 4. Revise structure 2 to include a permanent four (4) foot sump versus a three (3) foot sump as provided.
- 5. Provide the location(s) for the proposed building downspouts. The outlet from each downspout must be stabilized to prevent erosion from occurring.

Storm Water Management Plan

- 6. The Storm Water Management Plan for this development shall be designed in accordance with the Storm Water Ordinance and Chapter 5 of the new Engineering Design Manual.
- 7. Revise the runoff coefficient from 0.15 to 0.35 for all turn grass lawns.
- 8. Provide a table with the proposed runoff coefficients and their respective surface type.
- 9. Provide a soil boring log indicating that the bottom of the proposed bio retention facility is a minimum of three (3) feet above the ground water elevation.
- 10. Provide the bankfull dewatering time through the proposed restricted outlet. Please note that bank full volumes shall be retained in the detention facility for a minimum of 24 hours and no more than 40 hours.
- 11. Provide a cross-section of the proposed stormwater basin indicating first flush, bankfull, and 100-year storm elevations. This cross-section must also include the inverts of any applicable dewatering facilities and outlet control structures.
- 12. Denote an overland route for storm water that would occur in the event that the outlet control structure cannot accept flow. This route shall be directed to a recognized drainage course or drainage system. Verify that any structures or drainage swales accepting overland flow are capable of handling the 100-year flood capacity.
- 13. Provide a maintenance access route to the basin outlet structure. The maintenance access routes shall be a minimum of 15 feet wide, with a maximum slope of 1V:5H, and able to withstand the passage of heavy equipment. Verify that the access route does not conflict with the proposed landscaping.

Paving & Grading

14. Provide paving details for the proposed asphalt cross-section, sidewalk, and curb to be replaced.

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

- 15. A letter from either the applicant or the applicant's engineer must be submitted with the informal final Site Pian highlighting the changes made to the plans addressing each of the comments listed above <u>and indicating the revised sheets involved</u>. Additionally, a statement must be provided stating that all changes to the plan have been discussed in the applicant's response letter.
- 16. An updated itemized construction cost estimate must be submitted to the Community Development Department 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 estimate must be itemized* for each utility (water, sanitary, storm sewer), on-site paving (square footage), right-of-way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pretreatment structure and restoration).

The following must be submitted with the Stamping Set:

(Please note that all documents must be submitted together as a package with the Stamping Set submittal. Partial submittals will <u>not</u> be accepted).

17. A draft copy of the Storm Drainage Facility Maintenance Easement Agreement, as outlined in the Storm Water Management Ordinance, must be submitted to the Community Development Department. Once the form of the agreement is approved, this agreement must be approved by City Council and shall be recorded in the office of the Oakland County Register of Deeds. This document is available on our website.

The following must be addressed prior to construction:

- 18. A pre-construction meeting shall be required prior to any site work being started. Please contact Sarah Marchioni in the Community Development Department to setup a meeting (248-347-0430).
- 19. 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 (no application required). A grading permit fee in the amount of \$125.00 must be paid to the City Treasurer's Office.
- 20. Material certifications must be submitted to Spalding DeDecker for review prior to the construction of any utilities on the site. Contact Ted Meadows at 248-844-5400 for more information.
- 21. Construction inspection fees in the amount of \$3,183.13 must be paid to the City Treasurer's Office. Note, this amount may change based upon revisions to the submitted plan set.
- 22. A storm water performance guarantee in the amount of \$18,750.00 (equal to 150% of the cost required to complete the storm water management facilities) as specified in the Storm Water Management Ordinance must be posted at the Treasurer's Office. Note, this amount may change based upon revisions to the submitted plan set.

Engineering Review of Preminary/Final Site Plan Kroger Office Expansion JSP13-0065

23. A Soil Erosion Control Permit must be obtained from the City of Novi. Contact Sarah Marchioni in the Community Development Department, Building Division (248-347-0430) for forms and information. The financial guarantee and inspection fees will be determined during the SESC review.

<u>The following must be addressed prior to issuance of a Temporary Certificate of</u> <u>Occupancy approval for the development:</u>

- 24. The amount of the incomplete site work performance guarantee for this development at this time is \$22,435.50 (equal to 1.5 times the amount required to complete the site improvements, excluding the storm water facilities) as specified in the Performance Guarantee Ordinance. This guarantee will be posted prior to TCO, at which time it may be reduced based on percentage of construction completed. Note, this amount may change based upon revisions to the submitted plan set.
- 25. All easements and agreements referenced above must be executed, notarized and approved by the City Attorney and City Engineer.
- 26. Spalding DeDecker will prepare the record drawings for this development. The record drawings will be prepared in accordance with Article XII, Design and Construction Standards, Chapter 11 of the Novi Code of Ordinances.
- 27. A letter of credit or cash in an amount of \$1,250.00 (10% of the cost of storm water facilities for projects of less than \$100,000, or 5% for the cost of projects over \$100,000) must be posted for the storm water facilities. This deposit will be held for one year after the date of completion of construction and final inspection of the storm water facilities. Note, this amount may change based upon revisions to the submitted plan set.

<u>Prior to preparing stamping sets</u>, the Applicant is advised to provide any revised sheets directly to the Engineering Department for an informal review and approval.

Please contact Adam Wayne at (248) 735-5648 with any questions.

cc: Matt Preisz, Engineering Brian Coburn, Engineering Kristen Kapelanski, Community Development Department Sheila Weber, Treasurer's T. Meadows, B. Allen; Spalding DeDecker

Landscape Review



PLAN REVIEW CENTER REPORT

October 10, 2013 Landscape Plan Review Kroger Office Expansion

<u>Petitioner</u> The Kroger Co. of Michigan

<u>Review Type</u>

Preliminary and Final Site Plan

Property Characteristics

Site Location:40393 Grand River AvenueSite Size:1.63 acresZoning:I-1 (Light Industrial)Adjoining Zoning:North, West and East: I-1; South: R-4Proposed:Expansion of existing buildingPlan Date:9/23/13

Recommendation

Approval of the Preliminary and Final Site Plan is recommended.

Ordinance Considerations

Adjacent to Public Rights-of-Way – Berm (Wall) & Buffer (Sec. 2509.3.b.)

- 1. As there is no parking proposed along the frontage on Grand River Avenue, no landscape berm is required.
- 2. The Applicant has proposed a landscaped bioswales at the front of the building as a means of stormwater control. The feature will also act as an attractive amenity on the site.

Street Tree Requirements (Sec. 2509.3.b.)

1. Existing street trees will not be affected by the building addition.

Parking Landscape (Sec. 2509.3.c.)

1. Existing parking will not be altered.

Parking Lot Perimeter Canopy Trees (Sec. 2509.3.c.(3))

1. Perimeter parking lot canopy trees will not be altered.

Building Foundation Landscape (Sec. 2509.3.d.)

- 1. A 4' wide landscape bed is required around the building foundation. The Applicant has provided additional plantings at the area where the addition is proposed. The requirement has been met.
- 2. Existing trees to be preserved near the area of construction must be protected with fencing during the entire construction operation.

Plant List (LDM)

1. The Plant List as provided meets the requirements of the Ordinance and the Landscape Design Manual.

Planting Notations and Details (LDM)

1. Planting notations and details meet the requirements of the Ordinance and Landscape Design Manual.

Irrigation (Sec. 2509 3.f.(6)(b))

1. A notation states that all landscape areas will be irrigated.

Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review is a summary and not intended to substitute for any Ordinance. For the landscape requirements, see the Zoning Ordinance landscape section on 2509, Landscape Design Manual and the appropriate items in the applicable zoning classification.

Reviewed by: David R. Beschke, RLA

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Façade Review

Phone: (248) 880-6523 E-Mail: dnecci@drnarchitects.com Web: drnarchitects.com



50850 Applebrooke Dr., Northville, MI 48167

October 8, 2013

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

Re: FACADE ORDINANCE - Facade Review Kroger Office Expansion, SP13-0156 Façade Region: I-1 Zoning District: RC Building Size: 2,000 S.F.

Dear Ms. McBeth;

The following is the Facade Review for Preliminary Site Plan application for the above referenced project based on the drawings prepared by Jeffery A. Scott Architects, dated 9/23/13. The percentages of materials proposed are as shown on the table below. The maximum (and minimum) percentages allowed by the <u>Schedule Regulating Façade Materials</u> of Ordinance Section 2520 are shown in the right hand column. Materials in non-compliance with the Facade Schedule are highlighted in bold.

	NORTH	SOUTH (Unaltered)	EAST	WEST	Ordinance Maximum (Minimum)
Brick	32%	0%	46%	24%	100% (30% MIN)
EIFS	59%	58%	12%	48%	25%
Split Faced CMU	5%	38%	31%	0%	10%
CMU Accents	0%	0%	8%	25%	. 10%
Metal (Roof Screen)	4%	4%	3%	3%	50%

As shown above, the percentage of EIFS and Concrete Masonry Units (CMU) exceeds the maximum percentages allowed by the Facade Chart on the east and west facades and the minimum percentage of Brick is not provided on the north and west facades. The overage of CMU and EIFS on the south facade represents existing conditions; no alteration is proposed for the south facade. Section 2520.7 of the Facade Ordinance allows a continuation of existing materials on an addition provided that the visual effect is to appear as a continuation of the existing building. In this case the deviations from the Facade Chart on the north, east and west facades are a continuation of materials matching the existing building. This application is therefore in full compliance with the Facade Ordinance

Section 2516.C.10 of the Zoning Ordinance provides that an application may be approved administratively when a proposed alteration is in full compliance with the Facade Ordinance. As stated above, this alteration is in full compliance with Section 2520 and therefore qualifies for administrative approval.

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

Sincerely, DRN & Associates, Architects PC

Douglas R. Necci, AIA

Fire Review



CITY COUNCIL

Mayor Bob Gatt

Mayor Pro Tem Dave Staudt

Terry K. Margolis

Andrew Mutch

Justin Fischer

Wayne Wrobel

Laura Marie Casey

City Manager Clay J. Pearson

Director of Public Safety Chief of Police David E. Molloy

Director of EMS/Fire Operations Jeffery R. Johnson

Assistant Chief of Police Victor C.M. Lauria

Assistant Chief of Police Jerrod S. Hart August 28, 2013

September 30, 2013

- TO: Barbara McBeth, Deputy Director of Community Development
- RE: Kroger Office Expansion

SP#: PSP13-0145 PSP13-0156

Project Description:

Proposed 2019 sq. ft. addition to building located at 40393 Grand River

<u>Comments</u>:

No comments from Fire Department

Recommendation:

Approval

Sincerely,

Joseph Shelton - -Fire Marshal City of Noví – Fire Dept.

cc: file

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

cityofnovi.org

Applicant Response Letter



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jeffery a. scott architects p.c.

architects · engineers

TO:	Kristen Kapelanski City of Novi
FROM:	Jeffery A Scott AIA Jeffery A. Scott Architects Matt Andrus Jeffery A. Scott Architects
DATE:	Tuesday, November 5, 2013
RE:	Kroger FE Office Expansion 40393 Grand River Ave. Novi, Michigan 48375 Response Memo for Plan Review Center Report
JSA job #	1368
CC:	Mark Millerwise (The Kroger Company), and File.

RESPONSE FOR PLANNING REVIEW LETTER DATED October 15, 2013

1. Photometric Plan: The applicant should confirm no additional outside lighting is proposed.

Response: No additional outside lighting is proposed.

2. A letter from either the applicant or the applicant's representative addressing comments in this, and in the other review letters, is requested prior to the Planning Commission meeting and with the Stamping Set submittal.

Response: We understand.

3. Stamping sets are still required for this project. After having received all of the review letters from the 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.

Response: We understand.

4. Chapter 26.5 of the City of Novi Code of Ordinance generally requires all projects be completed within two years of the issuance of any starting permit. Please contact Sarah Marchioni at 248-347-0430 for additional information on starting permits. The applicant should review and be aware of the requirements of Chapter 26.5 before starting construction.

Response: We understand.

5. 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 Pre-Con, please contact Sarah Marchioni [248.347.0430 or smarchioni@cityofnovi.org] in the Community Development Department.

Response: We understand.

RESPONSE FOR ENGINEERING REVIEW LETTER DATED October 15, 2013

Please see the attached letter from Mickalich Engineering, Inc. that addresses the plan review comments.

RESPONSE FOR LANDSCAPE REVIEW LETTER DATED October 10, 2013

1. Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review is a summary and not intended to substitute for any Ordinance. For the landscape requirements, see the Zoning Ordinance landscape section on 2509, Landscape Design Manual and the appropriate items in the applicable zoning classification.

Response: We understand.

END OF MEMORANDUM

Mickalich Engineering, Inc.

Civit Engineering | Land Surveying | Planning

November 5, 2013

Jeffery A Scott Architects PC 32316 Grand River Ave Suite 200 Farmington, MI 48336

Attention: Mr. Matt Andrus Project Manager

Re: Kroger Novi, MI

Dear Matt,

We have reviewed the "Plan Review Center Report" dated October 15, 2013 in regards to items 1 through 27 listed. The engineering plans shall incorporate all of these items in the engineering plans and will addressed in detail at the informal Final Site Plan Review with the exception of item number 9 where a Request for Variance Design and Construction Standards has been applied for.

Should you have any questions please feel free to contact me.

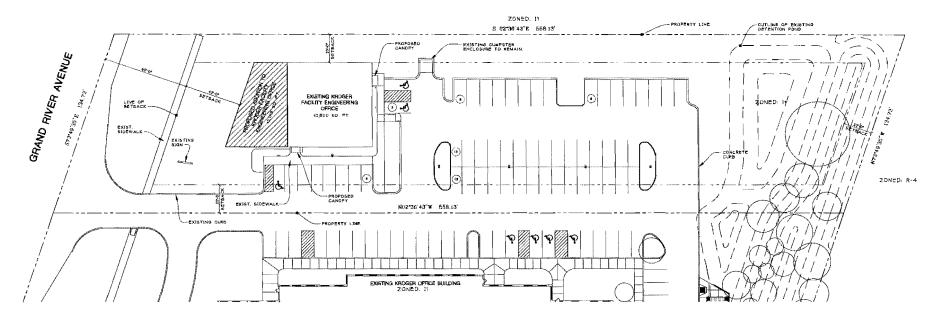
Sincerely,

Albert P. Mickalich, PE

15243 Hawley Road Holly, MI 48442 588.246.9872 amickalich@gmail.com

nackalichengineeriag.com

Site Plan



BCALE T = 207

GENERAL NOTES

- 1 MAJORITY OF LANDSCAPING WILL REMAIN AS EXISYING. SEE L-1 FOR NEW LANDSCAPE ITEMS
- 2. EXISTING INRIGATION SYSTEM TO BE MODIFIED TO STRVE THE CHANGE IN LANDSCAPING PROPOSED AS PART OF THIS PROJECT.
- 3 ANY CHANSES TO BITE SIGNAGE WILL BE ADDREGAED UNDER A SEPARATE SUBMITTAL
 4. NO CHANGES IN BUILDING SETBACKE PROPOSED.
- ALL MATERIALS WILL MATCH EXISTING AS INDICATED ON A-1.
- 5. THE SITE PLAN IS BASED ON A SURVEY PREPARED BY Ledy design group dated 1-02-03 as provided by The kroger company



	DETAILS	OF DEVELOP	MENT
D.	ATA	REQUIRED	PROVIDED
ZO	NING	11 - LIGHT INDUSTRIAL DISTRIC	
SETBACKS	PΥ	40'-0"	1461-18
	SY-BAST	20'-0*	18-6" (EX15TH43
	ST-WEST	20'-0"	47-31
	RY	20-04	358'-7"
NET LOT A	REA (SQFT)	471,191	SQ. PT.
TOTAL A	CREAGE	41.63	ACRES
BUILDING COVERAGE		<u>5×</u>	
BUILDING HEIGHT		15%11 ^k #6 ⁴	
GROSS FLOOR AREA		15,019 5Q. PT.	
4 OF PARTING SPACER		17	66 (3 HCI

LEGAL DESCRIPTION

THE LAND REFERRED TO IS LOCATED IN THE CITY OF NOVI, COUNTY OF OAKLAND, STATE OF MICHIGAN, AND IS DESCRIBED AS FOLLOWS.

ASSMANCE NOTE, THE ABOVE LEGAL DEGERIPTION DESCRIBES THE BANG PROPERTY AS IN SCHEDULE A OF TITLE COMMITMENT ND. NOSGED OF LAWYERS TITLE INSURANCE CORPORATION BEARING AN EFPECTIVE GATE OF DETOBER 18, 2000 AT 800 AM.

ZONING DATA:

ZONING CLASSIFICATION: THE PROPERTY IS ZONEO, II - LIGHT INDUSTRIAL OISTRICT MAXIMUM BUILONG REISHT. 40 PEET SETBACKS ETRONT UPTRACE 40 PEET

SETBACKS FRONT SETBACK. 40 PEET Side Setback. 10 PEET NEAR SETBACK: 10 PEET NOTE: SIDE A SPAS IP ADUITING A K

NOTE SIDE & REAR IF ADUTTING A RESIDENTIAL ZONE FIVE (5) PEET OF NORIZONTAL SETBACK FOR Each FOOT OF BULLING HEJENT, OR DNE NUNDRED DOOT PEET, WHICHEVER IS GREATER

PARKING; BUBINESS OFFICES; ONE || POR EACH TWO HUNORED TWENTY-TWO (\$21) GOUARE FEET OLA (+5 SPACE PER 1000 GA | FT. JOLA) FOR BUILDINGS UP TO (30,000 SOUARE FEET.

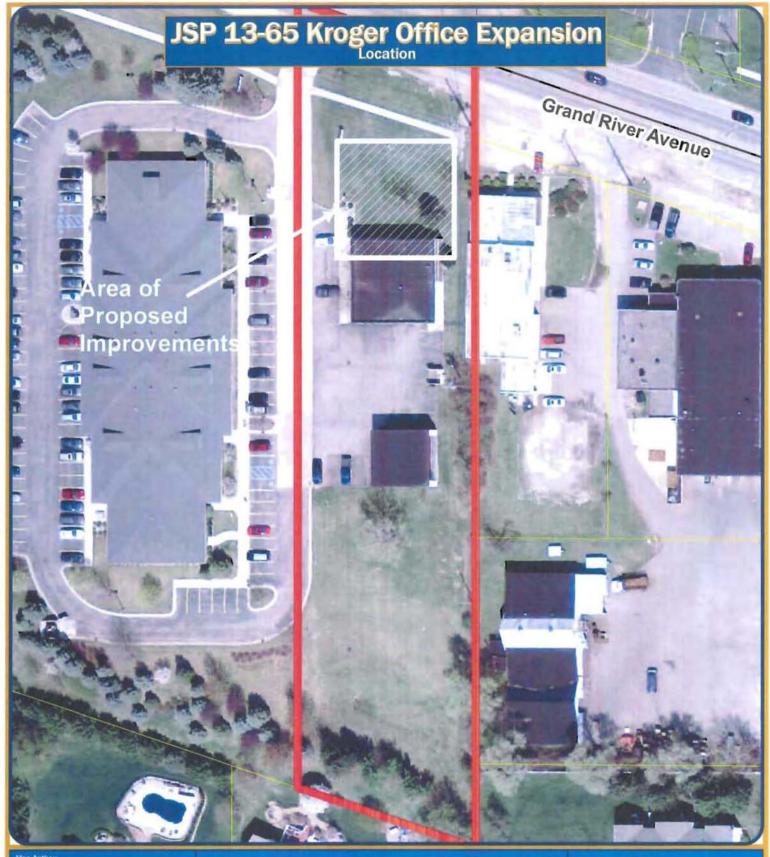
SOURCE: CITY OF NOVI ZONING ORDINANCE WEB SITE, HTTP://WWW.CITYOPNOVF.ORG/

Know what's below, Call before you dig.

81

<u>MAPS</u> Location Zoning Future Land Use Natural Features

i



Map Author Date: Project Version #





City of Novi Community Development 45175 W Ten Mile Rd Novi, MI 48375 cityofnovi.org

100

0 125 25



Map Autho Date Project Version

MAP INTÉRPRETATION NOTICE

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Map Legend

Subject Property

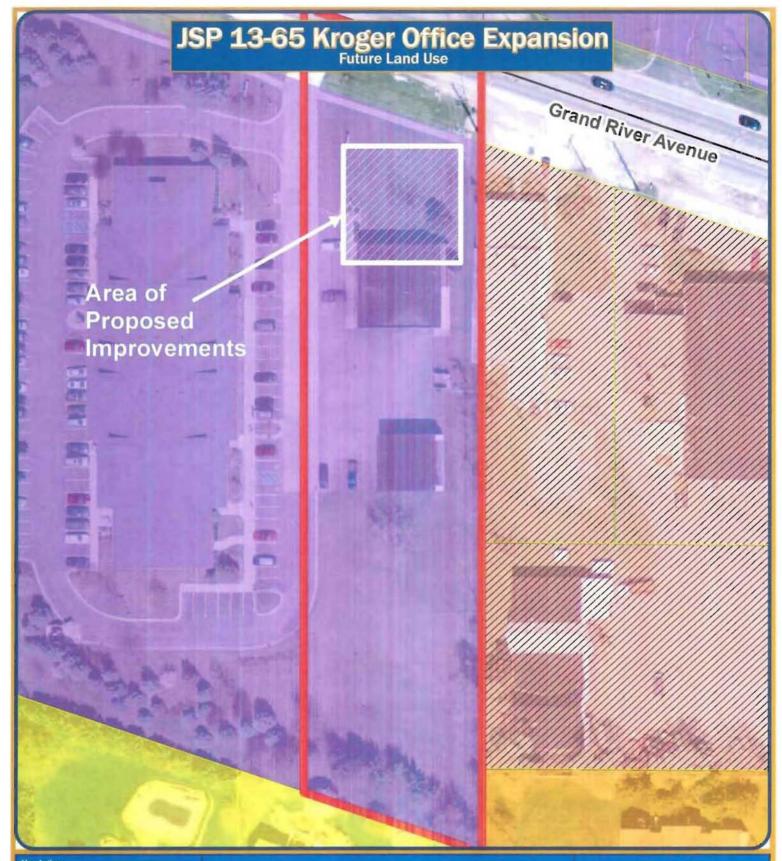
R-4: One-Family Residential District

RM-1: Low-Density Multiple Family

I-1: Light Industrial District



City of Novi Planning Division Community Development 45175 W Ten Mile Rd Novi, MI 48375 cityofnovi.org



Map Author Date Project Version #

AP-INTERFRETATION NOTICE

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Community Commercial

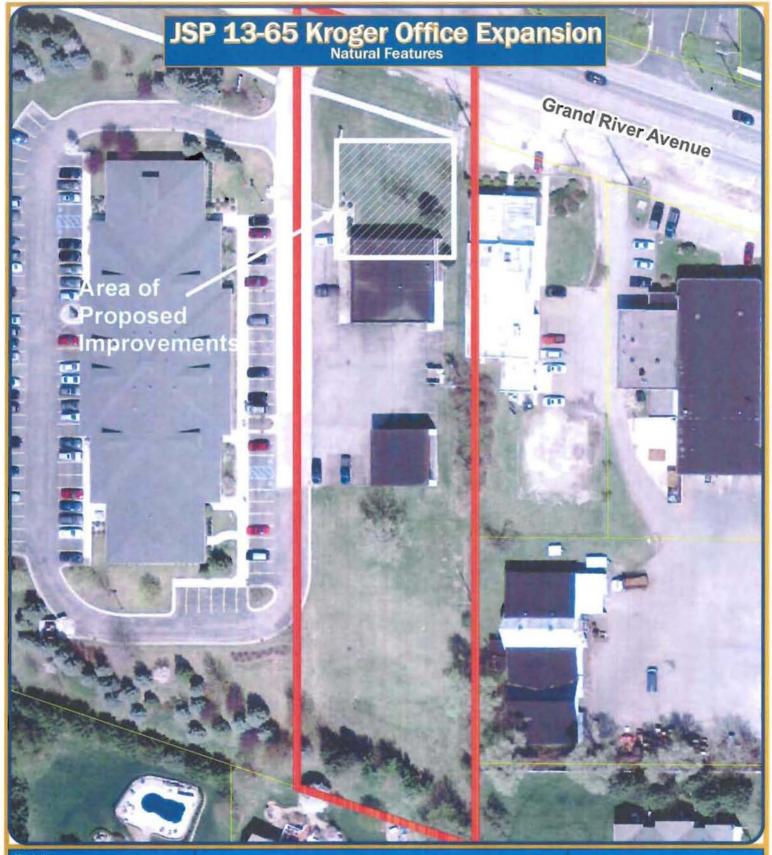
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Planning Division Community Development 45175 W Ten Mile Rd Novi. MI 48375 cityofnovi org

1 mch = 68 feet

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Map Author Date: Project Version #.





Woodlands



City of Novi Planning Division 45175 W Ten Mile Rd Novi, MI 48375 cityofnovi, org

100

0 12 5 25

LEGAL DESCRIPTION:

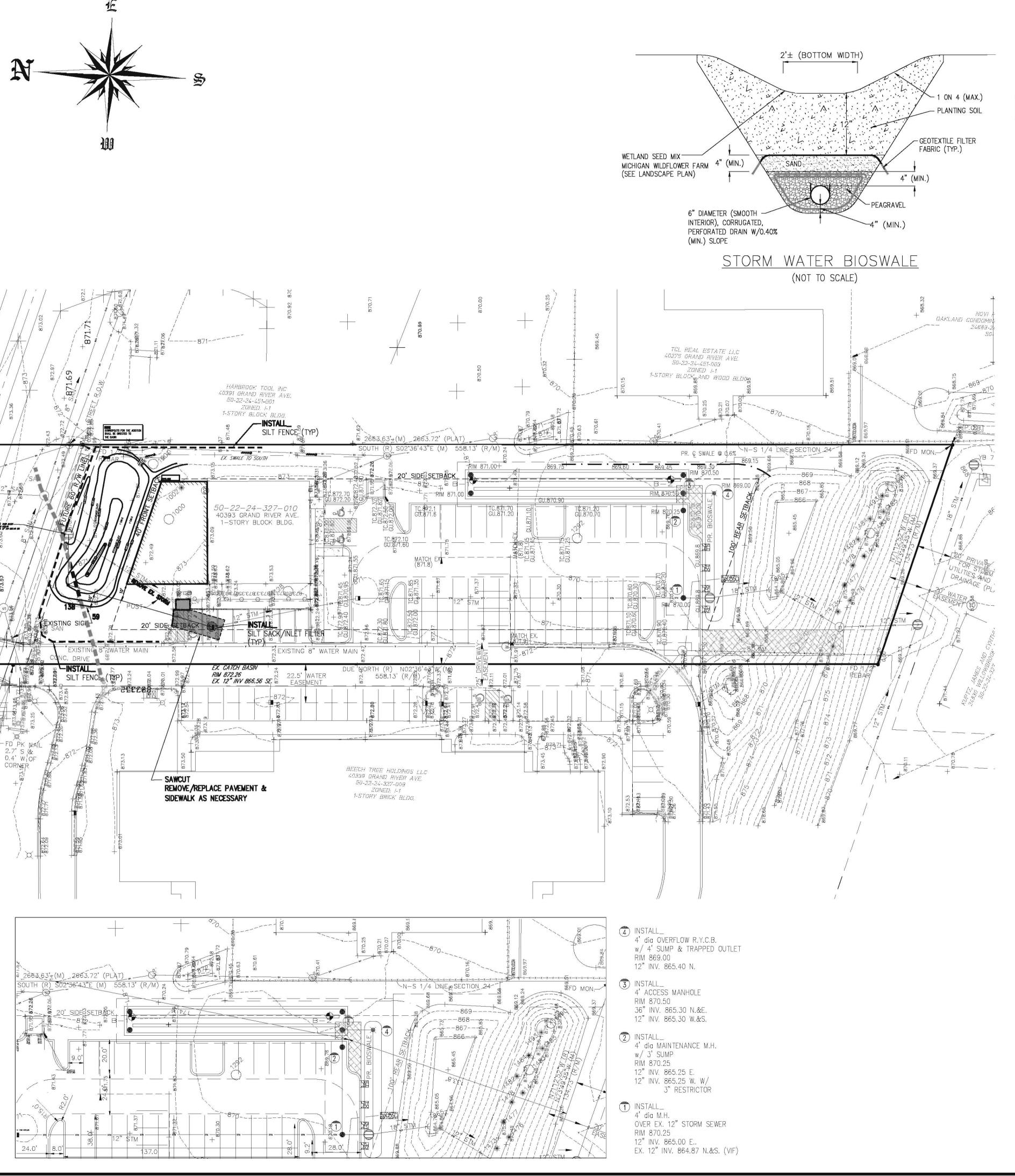
(Per Alta Survey by Ledy Survey Group)

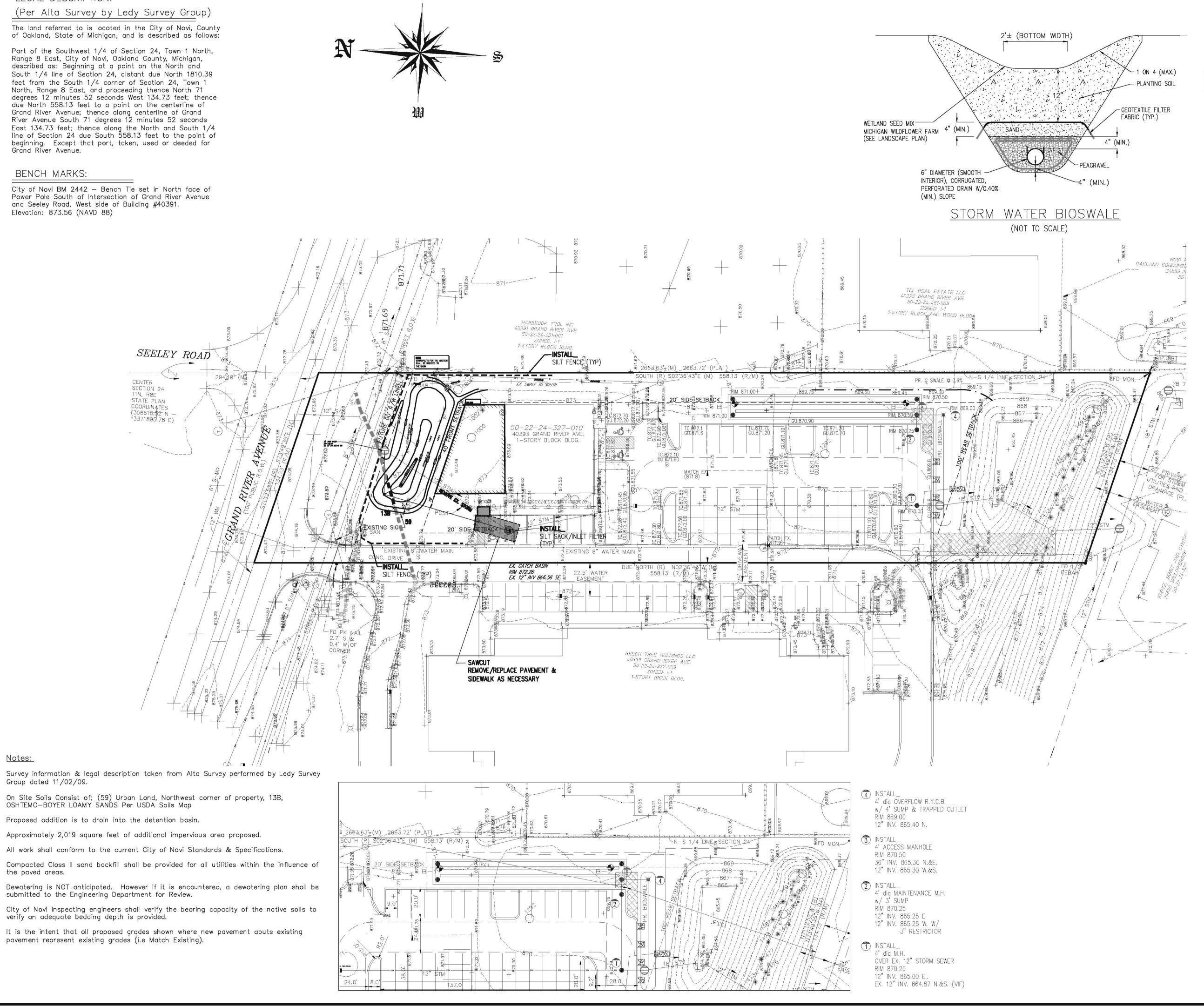
The land referred to is locoted in the City of Novi, County of Oakland, State of Michigan, and is described as follows:

Part of the Southwest 1/4 of Section 24, Town 1 North, Range 8 East, City of Novi, Oakland County, Michigan, described as: Beginning at a point on the North and South 1/4 line of Section 24, distant due North 1810.39 feet from the South 1/4 corner of Section 24, Town 1 North, Range 8 East, and proceeding thence North 71 degrees 12 minutes 52 seconds West 134.73 feet; thence due North 558.13 feet to a point on the centerline of Grand River Avenue; thence along centerline of Grand River Avenue South 71 degrees 12 minutes 52 seconds East 134.73 feet; thence along the North and South 1/4 line of Section 24 due South 558.13 feet to the point of beginning. Except that port, taken, used or deeded for Grand River Avenue.

BENCH MARKS:

City of Novi BM 2442 - Bench Tie set in North face of Power Pole South of Intersection of Grand River Avenue and Seeley Road, West side of Building #40391. Elevation: 873.56 (NAVD 88)





<u>Notes:</u>

Survey information & legal description taken from Alta Survey performed by Ledy Survey Group dated 11/02/09.

Proposed oddition is to droin into the detention bosin.

Approximately 2,019 square feet of additional impervious area proposed.

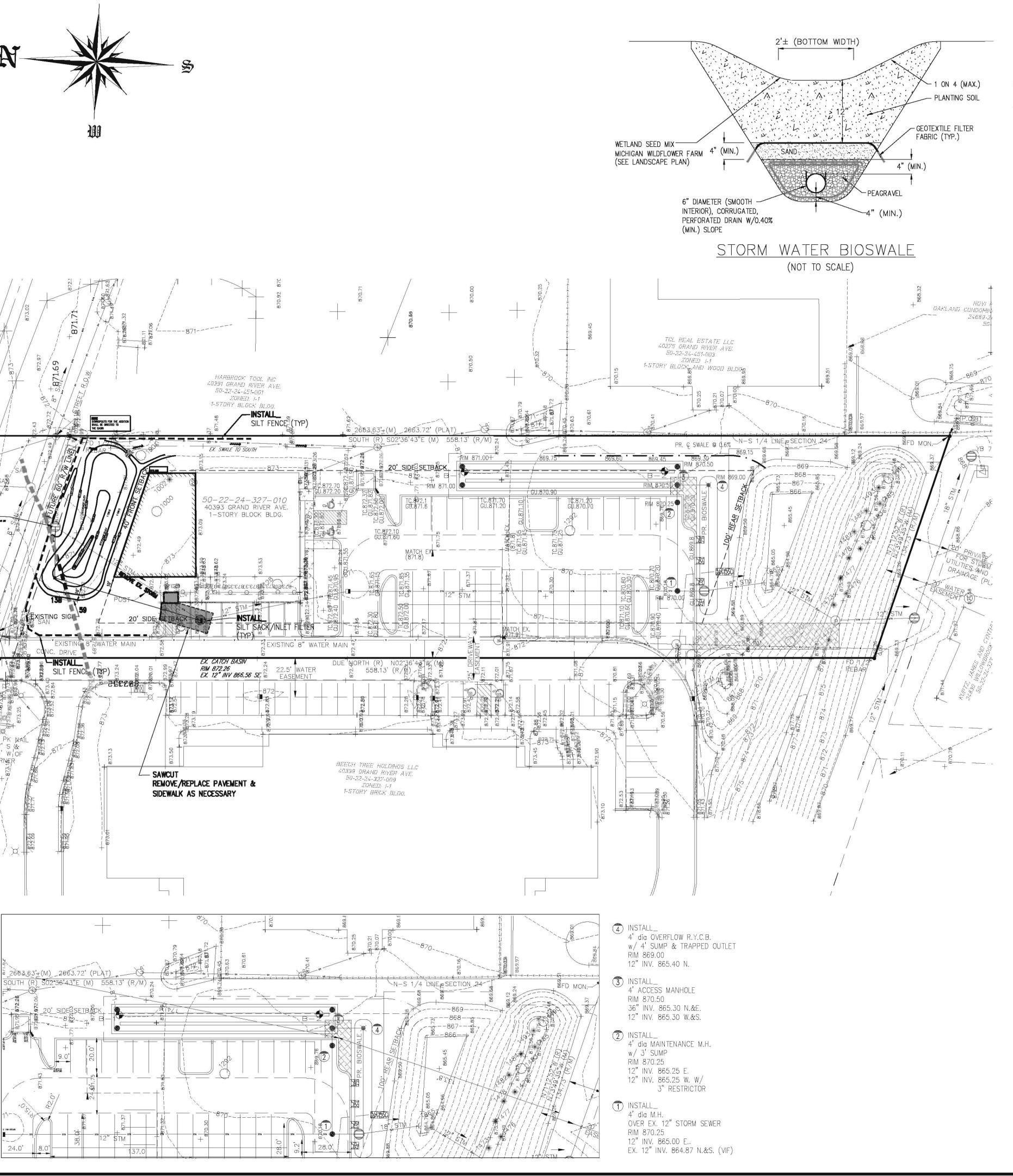
All work shall conform to the current City of Novi Standards & Specifications.

Compacted Closs II sond backfill shall be provided for all utilities within the influence of the paved areas.

Dewatering is NOT anticipated. However if it is encountered, a dewotering plan sholl be submitted to the Engineering Department for Review.

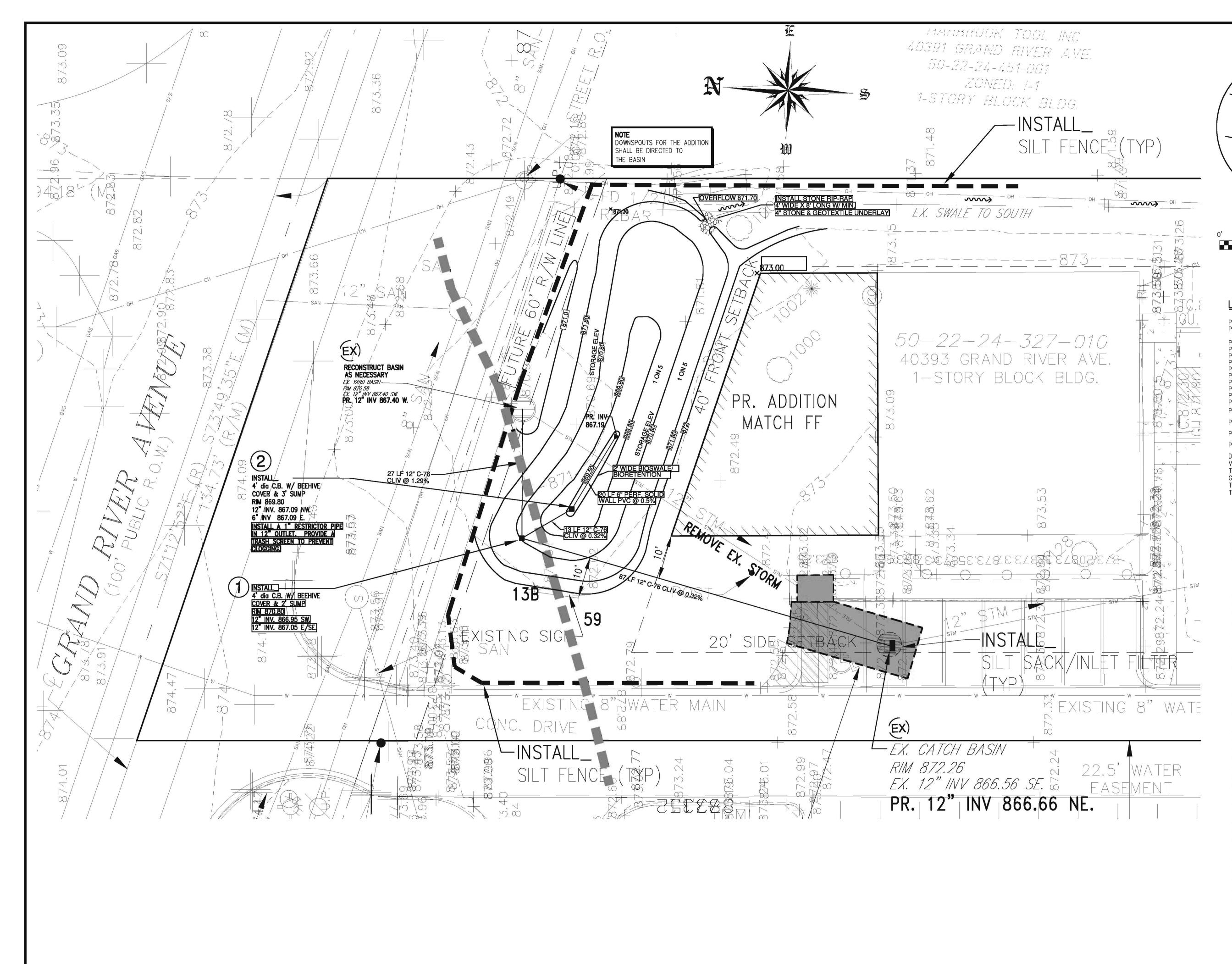
City of Novi inspecting engineers shall verify the beoring capacity of the native soils to verify an adequate bedding depth is provided.

It is the intent that oll proposed grades shown where new pavement abuts existing pavement represent existing grades (i.e Match Existing).



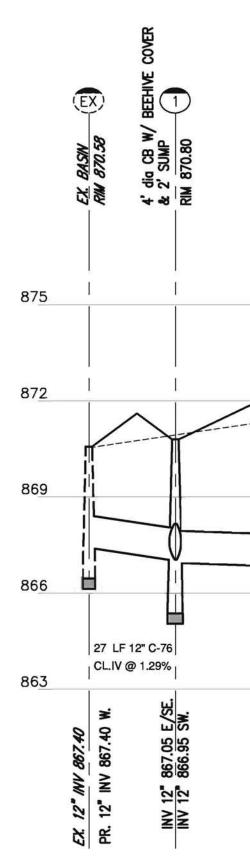
ī	
1-696/275	
GRAND OU	12/36
SITE	
LOCATION NO SCALE	MAP
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55ALL. 1 - 50	
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PR. HYDRANT PR. GATE VALVE PR. CATCH BASIN PR. MANHOLE PR. R.Y.C.B. PR. REVERSE CURB ===	¥ € ₩
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= CONIFEROUS TREE = CURB AND GUTTER = TREE LINE = SET IRON & CAP #3150.3	*
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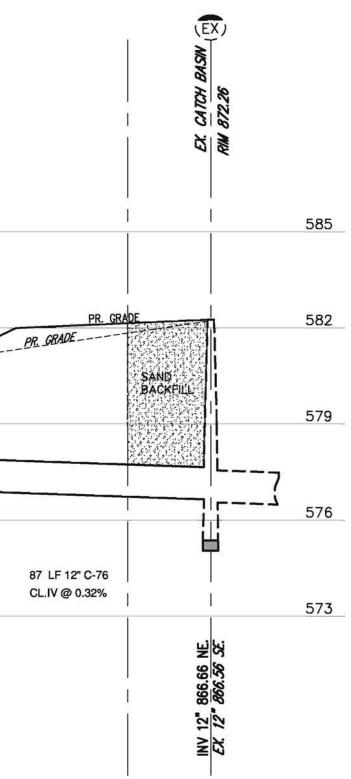
MEI
Mickalich Engineering, Inc. Civil Engineering Land Surveying Planning
15243 Hawley Road (586) 246-9872 Holly, MI 48442 amickalich@gmail.com
Engineer's Seal
ORIGINATURE SIGNATURE
Project Title
KROGER OFFICE FACILITY ENGINEERING EXPANSION NOVI, MI
Sheet Title SITE PLAN FOR NEW ADDITION
Client
JEFFERY A. SCOTT ARCHITECTS P.C.
Date Issued for By
08/22/13 DETENTION VOLUME
3 FULL WORKING DAYS BEFORE YOU DIG CALL 811 Know what's below
👝 Call before you dig
MISS DIG System, Inc. 1-800-482-7171 www.missdig.net
(TOLL FREE)
Drawn RPP
CheckedAPM
Approved <u>APM</u>
Date 08/20/13
13-073
Sheet no. 1 OF3

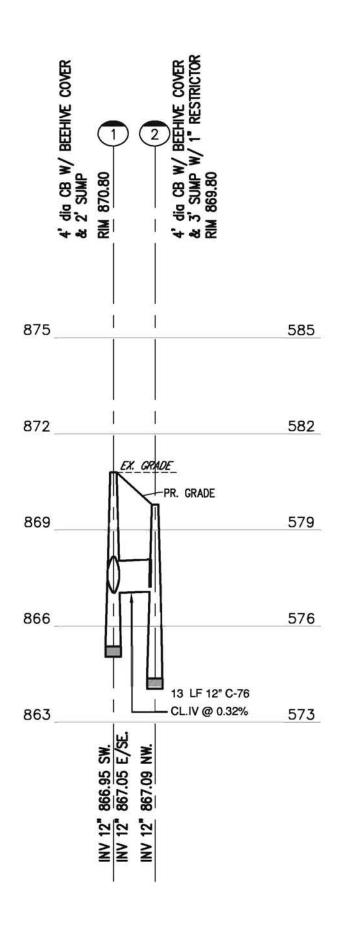


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SITE	ND RIVER
LOCATION NO SCAL	MAP 60' 90'
SCALE: 1" =	30'
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 WATER LINE WATER VALVE FIRE HYDRANT MONITORING WELL GAS METER 	
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	CALL MISS DIG 1-800-482-7171 (TOLL FREE)

	MEI
	Mickalich Engineering, Inc. Civil Engineering Land Surveying Planning
	15243 Hawley Road (586) 246-9872 Holly, MI 48442 amickalich@gmail.com
/	Engineer's Seal
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	Project Title
0.00	KROGER OFFICE FACILITY ENGINEERING EXPANSION NOVI, MI
(Sheet Title
♥ ● ■ ●	STORM WATER MANAGEMENT PLAN
	Client
	JEFFERY A. SCOTT Architects P.C.
(.I.F.).00).00).00).00	
	Date Issued for By 08/22/13 DETENTION VOLUME
	09/23/13 MUNICIPAL REVIEW
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	Know what's below
	Call before you dig MISS DIG System, Inc.
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	Date08/20/13
	Jab. no.
	13-073
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	2 OF 3
© 2013	







Proposed Storm Water Management

the same as previous.

from 3.96 ft/day to 11.9 ft/day.

Surface Area required:

Af = 18.75 sf surface area

Restrictor Calculation

- $A = \frac{Q}{0.62 \times (2gh)^{1/2}}$
- $A = 0.0024 \, sf$
- clogging.

Detention Calculation Drainage area = 0.15

Weighted runoff coef

Qo = 0.15/0.95 =

T100 = -25 + ((10)) $Vs = \frac{16,500(230.5)}{230.5 + 2}$

VT = 13,430 x 0.15

VOLUME PROVIDED

The existing storm catch that is located at the north property line shall remain and continue to except runoff from the Grand River right—of—way. The existing 12" pipe from the catch shall be removed, a new system of pipes and catch basins shall be installed in conjunction with a detention basin and bioretention swale for water quality. The outlet from this system shall remain

Bioretention: The existing soil conditions in the area of the proposed bioswale is at the boundary of two classifications of soils per the USDA soil map, 13B and 59. The material for 13B has been identified as a soil that has a High transmit coefficient with rates

Af = Vff x dfk(hf + df)tf relative to existing soils $Af = 81 \times 1$ 2(0.3 + 1.0)(1.66)

k = 2.0 ft/day this conservative tf = 1.66 (40hrs per EPA reqmts)

Vff = 81 cft

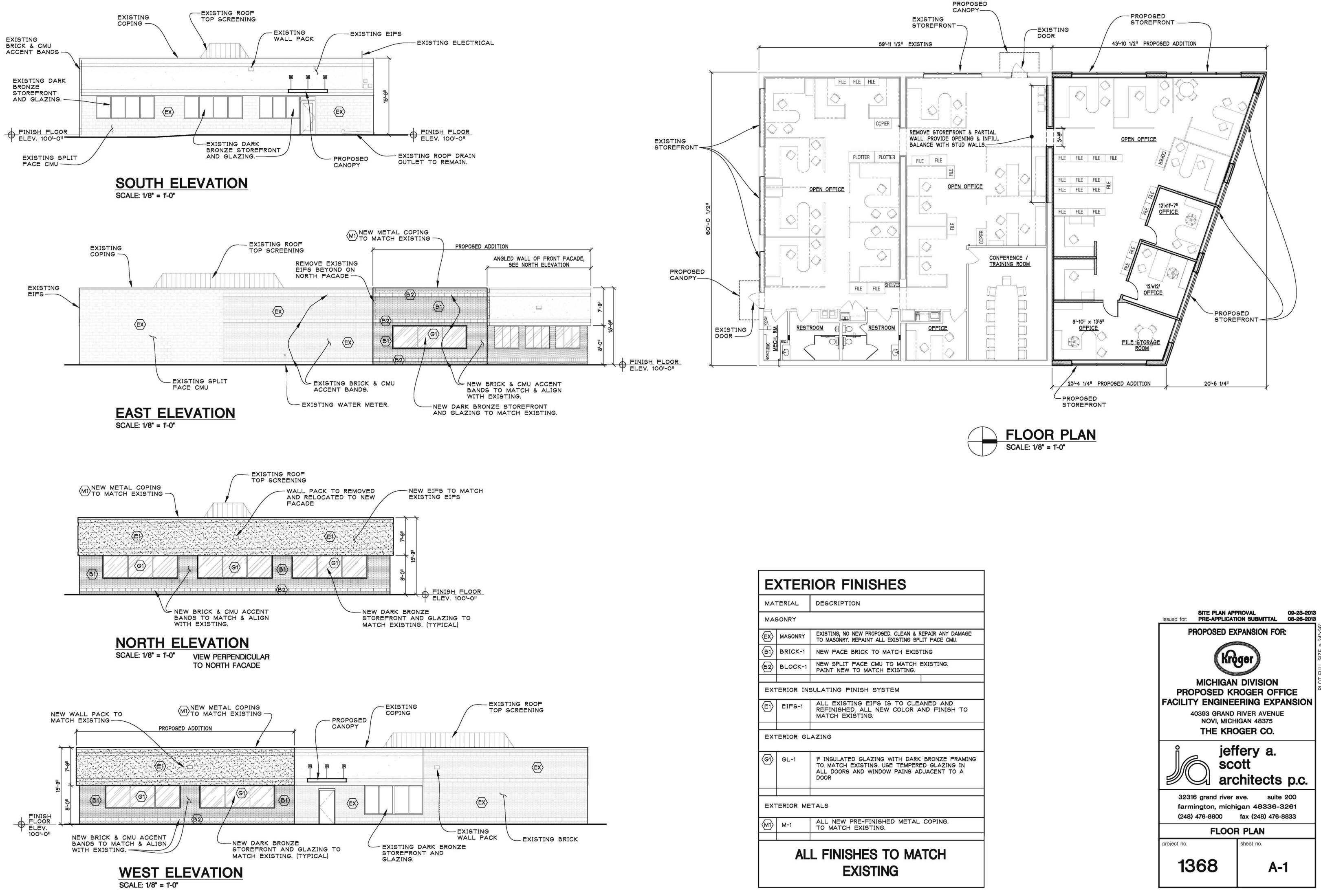
Q = 0.15 cfs/ac x 0.155 ac = 0.023 cfs

 $A = \frac{0.023}{0.62 \times (64.4 \times (870.80 - 867.09))1/2}$

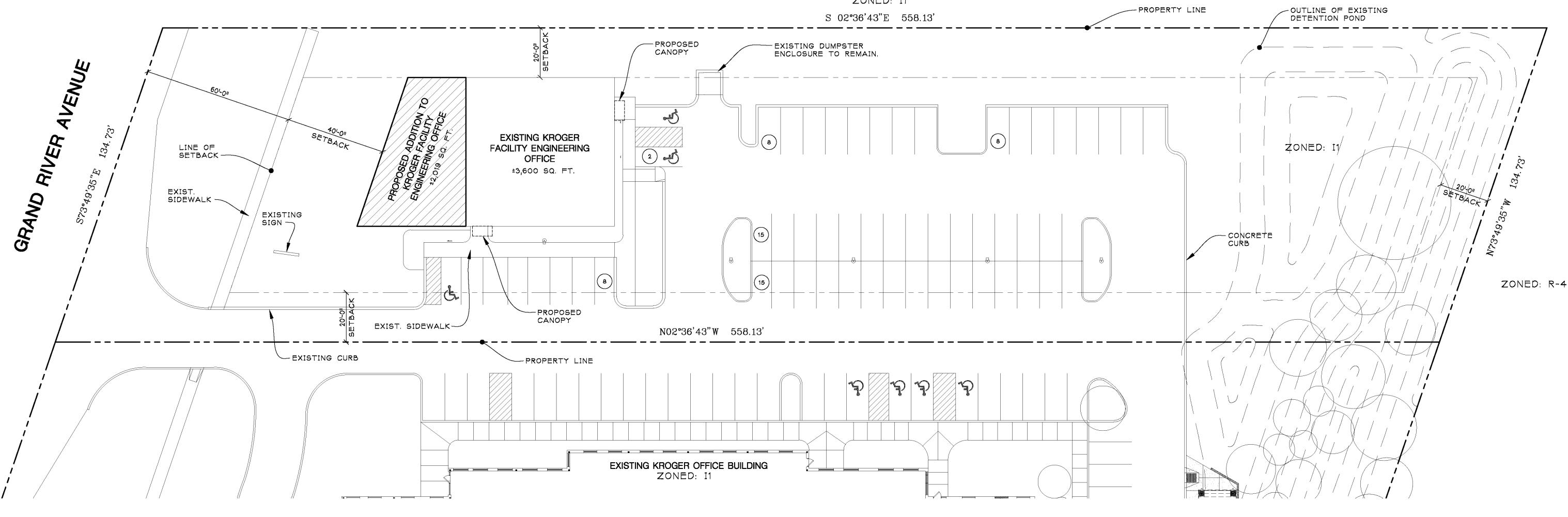
 $D = ((4 \times 0.0024)/3.14)1/2 \times 12 = 0.66$ ", use a 1" diameter restrictor to prevent

.155 ac.		
ef. = <u>0.109(</u>	(<u>.15) + 0.046(.95)</u> = 0.155	0.39
0.158		
0,312.5/0.1	58))1/2 = 230.5	
5 <u>)</u> + 25	40(0.158)(230.5)	= 13,428.8
55 x 0.39 =	= 812 cf	
942 CF		

	Μ	EI	
		Engineering, Land Surveying Pl d (586) 246-98	anning
	Holly, MI 48442	amickalich@gma	10-11-0
	Engineer's Seal	HATURE NATURE	
	Project Title KROGER OFFICE FACILITY ENGINEERING EXPANSION NOVI, MI		
	Sheet Title STORM WATER MANAGEMENT PLAN PROFILES		
	Client JEFFERY A. SCOTT ARCHITECTS P.C.		
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	Approved	APM	
	Date Job. no.	08/20/13	
		13-073	
	Sheet no.		
© 2013		3 OF 3	



DETAILS OF DEVELOPMENT				
DATA		REQUIRED	PROVIDED	
ZO	NING	11 - LIGHT INDUSTRIAL DISTRICT		
SETBACKS	FY	40'-0''	146'-1"	
	SY-EAST	20 ¹ -0 ¹¹	191-61 (EXISTING)	
	SY-WEST	20'-0"	47'-3 ¹¹	
	RY	20 ¹ -0 ¹¹	358'-7"	
NET LOT AREA (SQ.FT)		±71,191 SQ. FT.		
TOTAL A	CREAGE	±1,63 /	ACRES	
BUILDING COVERAGE		8%		
BUILDING HEIGHT		15'-11" ±6"		
GROSS FLOOR AREA		±5,619 SQ. FT.		
# OF PARKING SPACES		17	56 (3 HC)	



ZONED: I1





- PART OF THIS PROJECT.
- UNDER A SEPARATE SUBMITTAL.
- ON A-1.
- THE KROGER COMPANY.

LEGAL DESCRIPTION

THE LAND REFERRED TO IS LOCATED IN THE CITY OF NOVI, COUNTY OF OAKLAND, STATE OF MICHIGAN, AND IS DESCRIBED AS FOLLOWS:

PART OF THE SOUTHWEST 1/4 OF SECTION 24, TOWN 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS: BEGINNING AT A POINT ON THE NORTH AND SOUTH 1/4 LINE OF SECTION 24, DISTANT DUE NORTH 1810.39 FEET FROM THE SOUTH 1/4 CORNER OF SECTION 24, TOWN 1 NORTH, RANGE 8 EAST, AND PROCEEDING THENCE NORTH 71 DEGREES 12 MINUTES 52 SECONDS WEST 134.73 FEET; THENCE DUE NORTH 558.13 FEET TO A POINT ON THE CENTERLINE OF GRAND RIVER AVENUE; THENCE ALONG CENTERLINE OF GRAND RIVER AVENUE SOUTH 71 DEGREES 12 MINUTES 52 SECONDS EAST 134.73 FEET; THENCE ALONG THE NORTH AND SOUTH 1/4 LINE OF SECTION 24 DUE SOUTH 558.13 FEET TO THE POINT OF BEGINNING. EXCEPT THAT PART, TAKEN, USED OR DEEDED FOR GRAND RIVER AVENUE.

ASSURANCE NOTE: THE ABOVE LEGAL DESCRIPTION DESCRIBES THE SAME PROPERTY AS IN SCHEDULE A OF TITLE COMMITMENT NO. N-105080 OF LAWYERS TITLE INSURANCE CORPORATION BEARING AN EFFECTIVE DATE OF OCTOBER 16, 2009 AT 8:00 A.M.

ZONING DATA:

ZONING CLASSIFICATION: THE PROPERTY IS ZONED: 11 - LIGHT INDUSTRIAL DISTRICT MAXIMUM BUILDING HEIGHT: 40 FEET

SETBACKS: FRONT SETBACK: 40 FEET SIDE SETBACK: 20 FEET REAR SETBACK: 20 FEET

NOTE: SIDE & REAR, IF ABUTTING A RESIDENTIAL ZONE FIVE (5) FEET OF HORIZONTAL SETBACK FOR EACH FOOT OF BUILDING HEIGHT, OR ONE HUNDRED (100) FEET, WHICHEVER IS GREATER.

PARKING: BUSINESS OFFICES: ONE (1) FOR EACH TWO HUNDRED TWENTY-TWO (222) SQUARE FEET GLA (4.5 SPACES PER 1,000 SQ. FT. GLA) FOR BUILDINGS UP TO 100,000 SQUARE FEET.

SOURCE: CITY OF NOVI ZONING ORDINANCE WEB SITE: HTTP://WWW.CITYOFNOVI.ORG/

1. MAJORITY OF LANDSCAPING WILL REMAIN AS EXISTING. SEE L-1 FOR NEW LANDSCAPE ITEMS.

2. EXISTING IRRIGATION SYSTEM TO BE MODIFIED TO SERVE THE CHANGE IN LANDSCAPING PROPOSED AS

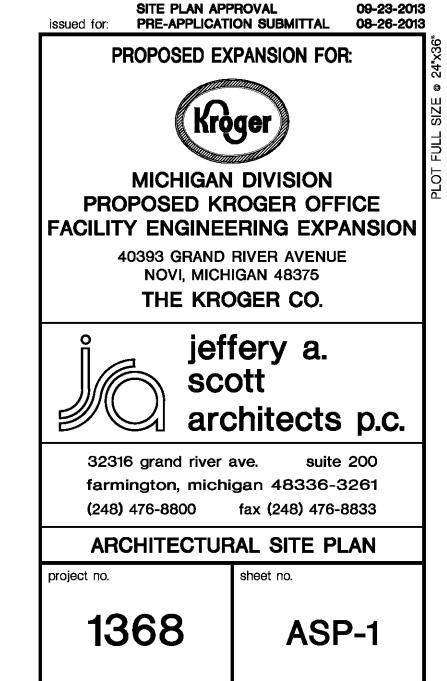
3. ANY CHANGES TO SITE SIGNAGE WILL BE ADDRESSED

4. NO CHANGES IN BUILDING SETBACKS PROPOSED.

5. ALL MATERIALS WILL MATCH EXISTING AS INDICATED

6. THE SITE PLAN IS BASED ON A SURVEY PREPARED BY LEDY DESIGN GROUP DATED 11-02-09 AS PROVIDED BY





LANDSCAPE PLANTING NOTES:

- PLANTING 1. Installation of all plant material shall be in accordance with the latest edition of the American Association of Nurserymen Standards for Nursery Stock and with the specifications set forth by the City of Novi, Michigan.
- 2. The plant materials shall conform to the type stated on the plant list. Sizes shall be the minimum stated on the plant list or larger. All measurements shall be in accordance with the latest edition of the American Association of Nurserymen Standards for Nursery
- 3. The plant material shall be nursery grown and inspected by the Owner's representative before planting. The Owner's representative reserves the right to reject any plant material at any time
- 4. Plants designated "B&B" shall be balled and burlapped with firm balls of earth. 5. Dig shrub pits one foot (1') larger than the shrub rootball, tree pits three (3) times the width of the tree rootball and backfill with one (1) part topsoil and one (1) part soil from excavated pit. Plant trees and shrubs at the same grade level at which they were planted at the nursery. If wet, clay soils are evident, plant trees and shrubs slightly higher.
- 6. The Contractor is responsible for planting the materials at the correct grades and
- spacing. The plants shall be oriented to give the best appearance. 7. When the plant has been properly set, the pit shall be backfilled with the topsoil mixture, gradually filling, patting, and settling with water.
- 8. Trees in lawn areas to have a four foot (4') circle of mulch, four inches (4') deep, and three inches (3") away from the trunk. Shrub beds are to be mulched with shredded bark mulch to a minimum depth of three inches (3"). Perennial beds are to be mulched with shredded bark mulch to a minimum depth of two inches (2"). Only natural color, finely shredded hardwood bark mulch will be accepted
- 9. Remove all twine, wire, and burlap from the top one third (1/3) of tree and shrub root balls and from tree trunks. Remove all non-biodegradable material such as plastic or nylon completely from branches and stems. All tree wrap, stakes, and guys are to be removed after one (1) winter season.
- 10. All plant materials shall be pruned and injuries repaired. The amount of pruning shall be limited to the removal of dead or injured limbs and to compensate for the loss of roots from transplanting. Cuts should be flush, leaving no stubs. Cuts over three quarters of an inch (3/4") shall be painted with tree paint. Shrubs along the site perimeter shall be allowed to grow together in a natural form.
- 11. Organic, friable topsoil shall be evenly distributed and fine graded over all areas to receive lawns at uniform depth of four inches (4") after settlement.
- 12. All lawn areas shall be sodded with a Grade A Kentucky Blue Grass blend over the topsoil
- 13. All plantings shall be completed no later than November 30 in the fall season. The date of intended installation for landscape plant materials is approximately Fall, 2011. Plantings shall thereafter be reasonably maintained, including permanence and health of plant materials to provide a screen to abutting properties and including the absence of weeds and refuse.
- 14. Plant trees and shrubs no closer than the following minimum distances from sidewalks,
- curbs, and parking stalls: a. Shade

a. Shade/Canopy Trees	Five feet (5'
b. Ornamental/Flowering Trees	Ten feet (10
c. Evergreen Trees	Five feet (5'
d. Evergreen/Flowering Shrubs	Four feet (4

- d. Everg 15. Backfill directly behind all curbs and along sidewalks and compact to the to of curbs or walk to support vehicle and pedestrian weight without settling.
- 16. All landscape areas, especially parking lot islands and landscape beds next to buildings shall be excavated of all building materials and poor soils to a depth of twelve inches to eighteen inches

(12"-18") and backfilled with good, medium-textured planting soil (loam or light yellow clay). Add four inches to six inches (4"-6") of topsoil over the fill material and crown a minimum of six inches (6") above the top of curbs and/or walks after earth settling unless otherwise noted on the landscape plan.

- 17. Conversion of all asphalt and gravel areas to landscape planting beds shall be done in the following manner:
- a. Remove all asphalt, gravel, and compacted earth to a depth of six inches to eighteen inches (6"-18") depending on the depth of the sub base and dispose of off site; b. Call for an inspection prior to backfilling;
- c. Replace excavated material with good, medium-textured planting soil (loam or light yellow clay) to a minimum of two inches (2") above the top of the curb and sidewalk, add four inches to six inches (4"-6") of topsoil and crown to a minimum of six inches (6") above the adjacent curb and walk after earth settling, unless otherwise noted on the landscape plan.

If conversion from asphalt to landscape occurs in or between an existing landscape area(s), replace excavated material from four inches to six inches (4"-6") below adjacent existing grade with good, medium-textured planting soil (loam or light yellow clay) and add four inches to six inches (4"-6") of topsoil to meet existing grades after earth settling.

18. Edging shall consist of Perma-loc aluminum edging or approved equivalent. 19. Elevate the rootballs of Yew shrubs to allow for better drainage.

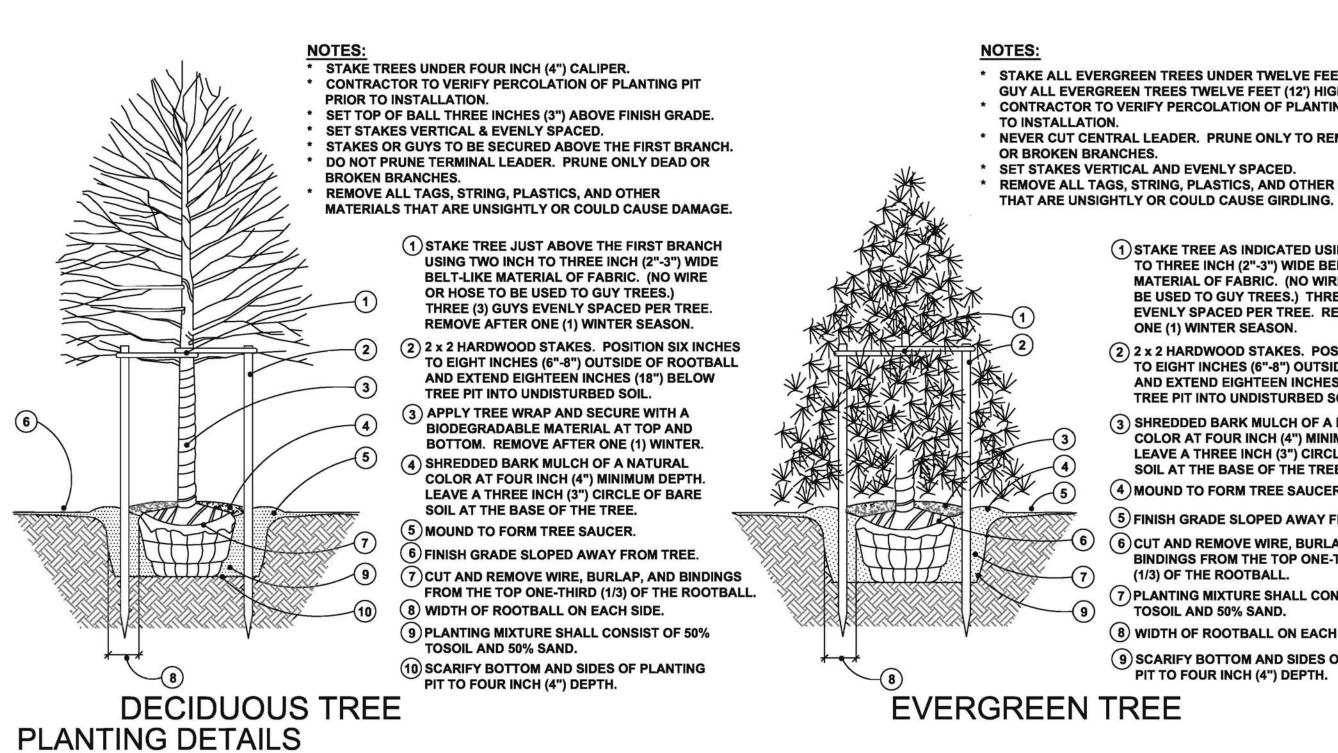
- MATERIAL
- 1. Plants shall not be located within four feet (4') of the property line.
- 2. Required landscape material shall satisfy the criteria of the American Association of Nurserymen Standards for Nursery Stock and be: a. Northern nursery grown;
- State Department of Agriculture inspected;
- c. No. 1 grade material with a straight, unscarred trunk, and well-develope
- uniform crown (park grade trees will not be accepted); d. Staked, wrapped, watered, and mulched according to the details provided; and e. Guaranteed for two (2) years.
- 3. Topsoil shall be friable, fertile soil of clayloam character containing at least five percent (5%) but not more than twenty percent (20%) by weight of organic matter with a pH range between 6.0 and 7.0. The topsoil shall be free from clay lumps, coarse sand, plant roots, sticks, and other foreign materials.
- 4. The seed mixture shall consist of the following types and proportions: Kentucky Blue Grass blend "Baron/Sheri/Adelphi" @ sixty percent (60%), Chewing Fescue @ twenty-five percent (25%), Creeping Red Fescue @ ten percent (10%), and Perennial Rye Grass @ five percent (5%). Weed content shall not exceed one percent (1%). The mix shall be applied at a rate of 200 pounds per acre.
- 5. Sod shall be two (2) year old "Baron/Sheri/Adelphi" Kentucky Blue Grass blend grown in a sod nursery on loam soil.
- 6. Proposed perennials shall be full, well-rooted plants.

GENERAL

- 1. Do not plant deciduous or evergreen trees directly over utility lines or under overhead wires. Maintain a six foot (6') distance from the centerline of utilities and twenty feet (20') from the centerline of overhead wires for planting holes. Call MISS DIG forty-eight (48) hours prior to landscape construction for field location of utility lines.
- 2. The Contractor agrees to guarantee all plant material for a period of two (2) years. At that time, the Owner's representative reserves the right for a final inspection. Plant material with twenty-five percent (25%) die back, as determined by the Owner's representative shall be replaced. This guarantee includes the furnishing of new plants, labor, and materials. These new plants shall also be guaranteed for a period of two (2) years.
- 3. The work shall consist of providing all necessary materials, labor, equipment, tools, and supervision required for the completion as indicated on the drawings.
- 4. Landscape areas shall be irrigated by an automatic underground irrigation system. Lawns and shrub/landscape areas shall be watered by separate zones to minimize overwatering. An irrigation plan for all landscape areas shall be provided within the final plan set.
- All written dimensions override scale dimensions on the plans.
- 6. All substitutions or deviations from the landscape plan must be approved by the City of Novi prior to installation
- 7. All bidders must inspect the site and report any discrepancies to the Owner's representative.
- 8. All specifications are subject to change due to existing conditions.
- 9. The Owner's representative reserves the right to approve all plant material. 10.All ground mounted mechanical units shall be screened on three (3) sides with living plant material.

MAINTENANCE

- 1. The Owner of the landscaping shall perpetually maintain such landscaping in good condition so as to present a healthy, neat, and orderly appearance, free from refuse and debris.
- 2. The Owner shall conduct a seasonal landscape maintenance program including regular lawn cutting (at least once per week during the growing season), pruning at appropriate times, watering, and snow removal during winter.
- 3. The Contractor is responsible for watering and maintenance of all seed areas until a minimum of ninety percent (90%) coverage, as determined by the Owner's representative.
- 4. All diseased and/or dead material shall be removed within sixty (60) days following notification and shall be replaced within the next appropriate planting season or within one (1) year, whichever comes first.
- 5. Any debris such as lawn clippings, fallen leaves, fallen limbs, and litter shall be removed from the site on a weekly basis at the appropriate season.
- 6. All planting beds shall be maintained by removing weeds, fertilizing, and replenishing mulch as needed.
- 7. Perennial beds shall be kept free of weeds and mulched with fine textured shredded bark as needed. Cut spent flower stalks from perennial plants at regular
- Snow shall be deposited in the areas indicated on the drawing.



MAINTENANCE OF THE BIOSWALE:

- 1. WEEDING: Weeding should be conducted on a regular basis and at least once a month. Weeding is particularly important during the establishment period to insure that unwanted plants do not become a problem. Weed once per month in April and May, twice per month in June and July, and once per month in August, September, and October. The native plants proposed should be marked at the time of planting to avoid confusion regarding unwanted plants.
- 2. WATERING: Watering should be performed as needed. During the establishment period after the initial planting, watering is very important and should be conducted every two to three (2-3) days. The initial planting should be checked regularly for appropriate moisture availability. Two (2) methods for determining adequate moisture levels include the following: a.) if the plants wilt during the day when the temperature is at its highest, but revive during the night, then watering is not necessary, and b.) by testing the soil moisture at a depth of four inches (4") by inserting a small rod into the soil. If the soil is moist at a depth of four inches (4"), then watering is not necessary. When possible, the best method for watering is by hand at the base of the plant.
- 3. MULCHING: Mulch should be placed around the base of each plant to a depth of two to three inches (2"-3") for complete coverage within the planting bed. The mulch inhibits weed species and helps to retain moisture. Natural organic mulch without coloring dyes should be used and may include shredded hardwood bark mulch, cedar bark mulch, and shredded leaves. Do not use mulch nuggets or large chunks of wood as they may float and move around during inundated conditions. It is suggested that the initial application consist of the shredded hardwood or cedar bark mulch with reapplications after the first year of shredded leaves twice a year.
- 4. EDGING: The edge of the bioswale should be maintained to avoid grass growing into the planting bed. The edge can be maintained with a V-notch cut edge or with steel or aluminum edging. If the V-notch system is used, the channel should be maintained at four inches (4") or greater and renewed every eight (8) weeks.
- 5. CUTTING BACK: Tall wildflowers should be cut back by one-third. Early flowering plants can be cut back in late June or early July and late flowering plants in late October
- 6. THINNING: After the bioswale has become established and thriving, it may be necessary to thin perennials by dividing individual plants in Spring or Fall.
- 7. **REPLACEMENT:** Any plants that die or become diseased should be replaced. Plant health should be checked regularly with very poor or dead plants replaced in the Spring or Fall.
- 8. INFILTRATION: Stormwater runoff should percolate through the system in four to six (4-6) hours. If pooling of water is evident after this time period check for blockages not allowing water seepage. If the problem is a result of fine sediments built up on the filter fabric, punch small holes in the filter fabric using a two foot to three foot (2'- 3') number four (#4) reinforcing rod. If the soils are the problem, install a sand filter at least one foot (1') in width between the mulch layer and the underdrain system. If a clean out pipe is installed as a part of the system, check for any blockages that may reduce water infiltration.
- 9. **REMOVAL OF LITTER AND DEBRIS:** Litter, trash, and debris should be removed on a regular basis to insure that inlets remain free flowing and to keep the area in a neat and attractive appearance.
- 10. INORGANIC APPLICATIONS: In general, bioswales do not need fertilization as nutrients from surrounding areas is usually at an elevated level. If soil fertility appears to be an issue, the soil should be tested and appropriate actions taken based on the results. Insecticides, herbicides, fungicides, and rodenticides should not be used in the bio-retention pond. If a plant is diseased or infested with insects, it should simply be removed and replaced. The planting should be monitored annually in late Spring until it is well established.

PLANT LIST

KEY QTY. BOTANICAL NAME	COMMON NAME	SIZE	TOTAL MATERIALS SPECIF	IED:		
FOUNDATION PLANTING	Condochorne		* Deciduous Trees:	1	\$400	\$400.00
AC 2 Amelanchier canadensis RNW 11 Rosa sp. 'Nearly Wild'	Serviceberry Nearly Wild Rose	2" cal. B&B 24" ht., 3 gal. pot	* Evergreen Trees:	1	\$325	\$325.00
TMA 10 Taxus x media 'Angelica'	Angelica Yew	30" ht. B&B	* Ornamental Trees:	2	\$250	\$500.00
DETENTION POND PLANTINGS	an an 🖉 na an Arrya (agus ang		* Deciduous Shrubs:	57	\$50	\$2,850.00
Trees			* Evergreen Shrubs:	10	\$50	\$500.00
T 1 Liriodendron tulipifera	Tuliptree	3" cal. B&B			\$ 50	narra Chambros nos instantas
PG 1 Picea glauca	White Spruce	8' ht. B&B			\$1,000.00	
Shrubs IV 22 <i>Ilex verticillata</i>	Winterberry	24" ht., 3 gal. pot	* Emergent Plantings	116	\$5	\$580.00
CSB 24 Cornus sericea 'Baileyi'	Bailey Red-Twig Dogwood	24" ht., 3 gal. pot	* Tree Removal	2	\$300	\$600.00
Emergent Plantings	Dalley rea ring Degreed	24 mi, o gan por	* Transplants			\$1,000.00
ACA 16 Acorus calamus	Sweet Flag	Bare Root	* Shredded Hardwood Bark	8 cu. yds.	\$30	\$240.00
CP 18 Caltha palustris	Marsh Marigold	Bare Root	TOTAL	0 00. yuu.	φοσ	\$7,995.00
LC 20 Lobelia cardinalis	Cardinalflower	Bare Root	IOTAL			φ1,995.00
PC 24 Pontederia cordata	Pickeral Weed	Bare Root				
SA 16 Scirpus acutus	Hard-Stemmed Bulrush	Bare Root				
SL 22 Sagittaria latifolia	Broad-Leaf Arrowhead	Bare Root				
E FEET (12') HIGH.	GENEF	RAL NOTES FOR ALL PLANTINGS:				
	+ DO NO					

- GUY ALL EVERGREEN TREES TWELVE FEET (12') HIGH AND OVER. * CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR
- * NEVER CUT CENTRAL LEADER. PRUNE ONLY TO REMOVE DEAD
- **REMOVE ALL TAGS, STRING, PLASTICS, AND OTHER MATERIALS**
 - (1) STAKE TREE AS INDICATED USING TWO INCH TO THREE INCH (2"-3") WIDE BELT-LIKE MATERIAL OF FABRIC. (NO WIRE OR HOSE TO BE USED TO GUY TREES.) THREE (3) GUYS EVENLY SPACED PER TREE. REMOVE AFTER ONE (1) WINTER SEASON.
 - (2) 2 x 2 HARDWOOD STAKES. POSITION SIX INCHES TO EIGHT INCHES (6"-8") OUTSIDE OF ROOTBALL AND EXTEND EIGHTEEN INCHES (18") BELOW TREE PIT INTO UNDISTURBED SOIL.
 - (3) SHREDDED BARK MULCH OF A NATURAL COLOR AT FOUR INCH (4") MINIMUM DEPTH. LEAVE A THREE INCH (3") CIRCLE OF BARE SOIL AT THE BASE OF THE TREE. (4) MOUND TO FORM TREE SAUCER.
 - (5) FINISH GRADE SLOPED AWAY FROM TREE.
 - (6) CUT AND REMOVE WIRE, BURLAP, AND BINDINGS FROM THE TOP ONE-THIRD (1/3) OF THE ROOTBALL.
 - 7) PLANTING MIXTURE SHALL CONSIST OF 50% TOSOIL AND 50% SAND.
 - (8) WIDTH OF ROOTBALL ON EACH SIDE.
 - (9) SCARIFY BOTTOM AND SIDES OF PLANTING PIT TO FOUR INCH (4") DEPTH.

- * DO NOT CUT CENTRAL LEADER. * REMOVE ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER NON-BIODEGRADABLE MATERIALS (EXCEPT LABEL FOR PLANT NAME) FROM PLANT STEMS OR CROWN WHICH ARE UNSIGHTLY OR COULD CAUSE GIRDLING. * PLANTS SHALL BEAR THE SAME RELATION TO FINISH GRADE AS IT BORE TO THE PREVIOUS GRADE IN THE NURSERY. SET THE BASE OF THE PLANT SLIGHTLY HIGHER THAN EXISTING GRADE IF PLANTING IN CLAY SOILS. * CENTER THE ROOTBALL IN THE PLANTING HOLE. LEAVE THE BOTTOM OF THE PLANTING HOLE FIRM. USE WATER TO SETTLE THE PLANTING MIX AND REMOVE ANY AIR POCKETS AND FIRMLY SET THE TREE OR SHRUB. GENTLY TAMP IF NEEDED. * CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION. * THE PLANTING MIXTURE SHALL CONSIST OF 20% TOPSOIL, 60% SAND, AND 20% COMPOST. (1) SHREDDED BARK MULCH AT THREE INCH (3") MINIMUM DEPTH. MULCH SHALL BE NATURAL IN COLOR. 2)FORM A SAUCER WITH MULCH AND SOIL AROUND SHRUB BED. 3) CUT AND REMOVE BURLAP AND BINDINGS
 - FROM THE TOP ONE-THIRD (1/3) OF THE ROOTBALL. 4) 3/16" x 4" ALUMINUM EDGING (OR APPROVED EQUIVALENT)
 - OR SPADED EDGE.
 - 5) EXCAVATE PLANTING BED AND BACKFILL WITH PREPARED PLANTING MIX.
 - 6) UNDISTURBED SUBGRADE. (7) LAWN.
 - 8 SCARIFY SUBGRADE.

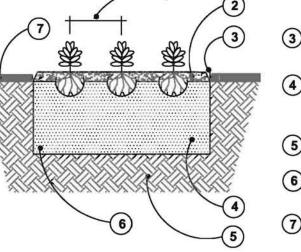


5 COST ESTIMATE

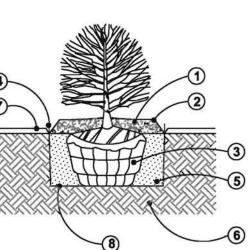
4.18 E N TH 41 V 24 PC-12 20 LC-Do 22 SL-AF & 1 LT-LANDSCAPE PLANTING PLAN

NOTE:

(1) SEE PLANT LIST FOR SPACING DISTANCE. (2) SHREDDED HARDWOOD BARK OF A NATURAL COLOR MULCH AT TWO INCH (2") MINIMUM DEPTH.

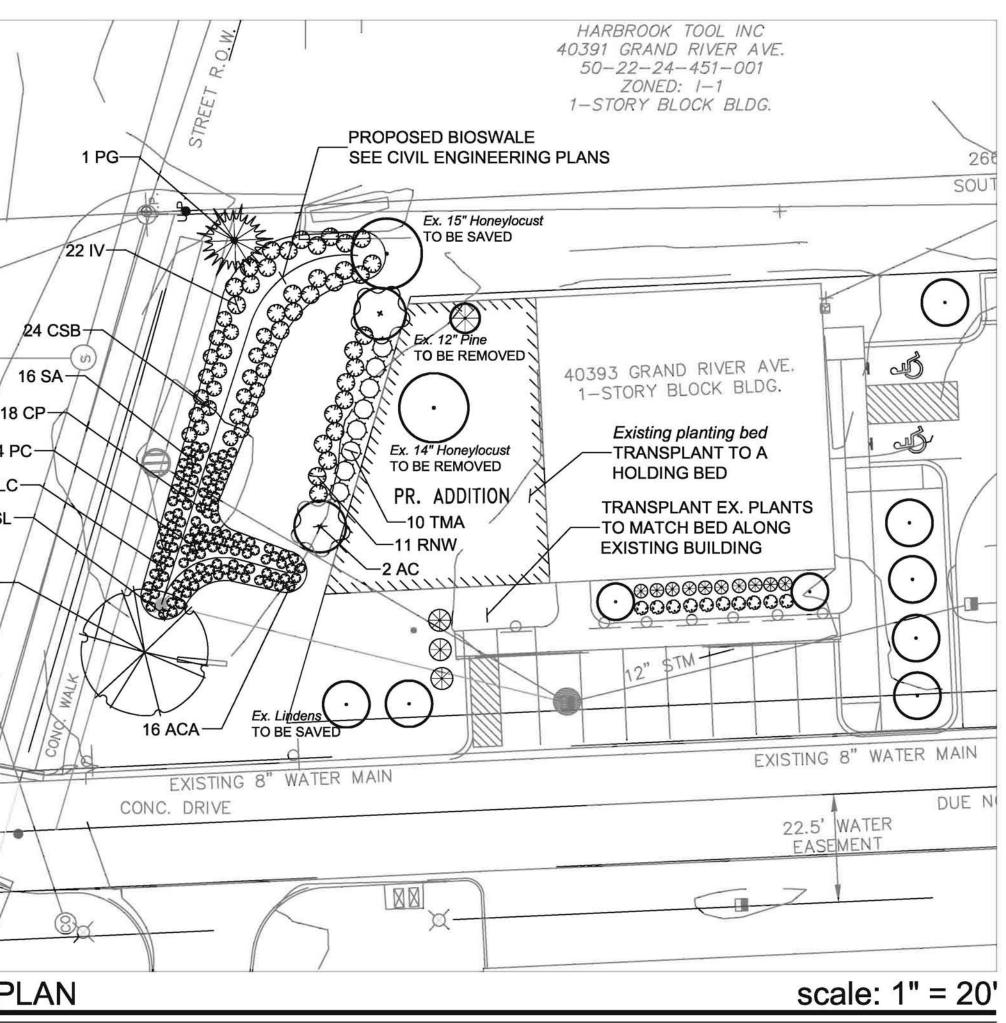


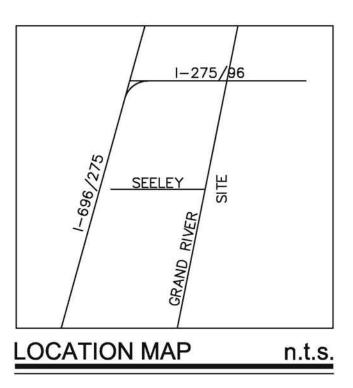
PERENNIAL / GROUNDCOVER



SHRUB

NOTE:





SOIL TYPE:

The soil on site consists of Urban Land (59) according to the Soil Survey of Oakland County.

date: August 22, 2013 revised:

Jeffery A. Scott

48336-3261

LANDSCAPE PLAN FOR:

Architects P.C.

32316 Grand River Ave.

Farmington, Michigan

J. Brian Devlin, R.L.A.

(734) 634-9208



- Scale: 1" = 20'
 - **PROJECT LOCATION: Proposed Kroger Division**
 - **Engineering Office** 40393 Grand River Avenue Novi, Michigan 48375
- LANDSCAPE PLAN BY: J. BRIAN 31736 West Chicago Ave. DFVI IN NO.1260 Livonia, Michigan 48150

- * CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION.
- PERENNIALS TO BE PLANTED UP TO THE EDGE OF
- THE SAUCER AROUND A TREE OR SHRUB BED. * THE PLANTING MIXTUE SHALL CONSIST OF 20%
- TOPSOIL, 60% SAND, AND 20% COMPOST.

 - 3) 3/16" x 4" ALUMINUM EDGING (OR APPROVED EQUIVALENT) OR SPADED EDGE.
 - 4) EXCAVATE PLANTING BED AND BACKFILL WITH PREPARED PLANTING MIX AT A TEN INCH (10") DEPTH.
 - (5) UNDISTURBED SUBGRADE.
 - 6 PLANTING MIX TO CONSIST OF EQUAL PARTS OF SAND, LEAF COMPOST, AND NATIVE SOIL. (7) LAWN.

not to scale

L - 1: LANDSCAPE PLANTING PLAN * Base data provided by Mickalich Engineering, Inc.