



NOVI CONCRETE PLANT JSP22-08

NOVI CONCRETE PLANT JSP22-08

Public hearing at the request of Crown Enterprises, LLC, for Preliminary Site Plan, Wetland Permit, Woodland Permit, and Storm Water Management Plan approval for a new 8,700 square foot concrete plant with two silos. The subject property is approximately 20 acres and is located at 46844 Twelve Mile Road in Section 9, north of Twelve Mile Road and west of West Park Drive. The southern portion of the site is zoned I-1, Light Industrial District and the northern portion is zoned I-2, General Industrial District.

Required Action

Approve or deny the Preliminary Site Plan, Special Land Use Permit, Wetland Permit, Woodland Permit and Storm Water Management Plan.

REVIEW	RESULT	DATE	COMMENTS
Planning	Approval recommended	9-12-22	<ul style="list-style-type: none"> • Zoning Board of Appeals Variance from Section 3.1.19.D for a maximum building height of 90 feet (60 foot maximum in I-2 District) • Zoning Board of Appeals Variance from Section 5.4.3 for the placement of a loading area in the front yard • Items to be addressed by the applicant prior to Final Site Plan approval
Engineering	Approval recommended	9-6-22	<ul style="list-style-type: none"> • Items to be addressed by the applicant prior to Final Site Plan approval
Landscaping	Approval recommended	8-26-22	<ul style="list-style-type: none"> • Landscape Waiver for a lack of building foundation landscaping (<i>not supported by staff</i>) • Landscape Waiver for a lack of perimeter trees in the planting strip between the parking lot and the operations area (<i>not supported by staff</i>) • Landscape Waiver for a lack of screening berms or walls provided on the east, west, and north sides of the site (<i>supported by staff as the applicant intends to maintain the woods as screening and is proposing a 12 foot tall screening wall</i>) • Landscape Waiver for a lack of screening around the transformer (<i>supported by staff because the transformer will be adequately screened by the building</i>) • Items to be addressed by the applicant prior to Final Site Plan approval
Wetlands	Approval recommended	8-29-22	<ul style="list-style-type: none"> • Non-minor Wetland Permit required • Wetland Buffer Authorization • EGLE Wetland Permit and mitigation likely required • Items to be addressed by the applicant prior to Final

			Site Plan approval
Woodlands	Approval recommended	8-29-22	<ul style="list-style-type: none"> • Woodland Permit required • Items to be addressed by the applicant prior to Final Site Plan approval
Traffic	Approval recommended	8-31-22	<ul style="list-style-type: none"> • Same Side Driveway Spacing Waiver of 107.6 feet to the west (122.4 feet proposed, 230 feet required) (supported by staff as the site could not be accessed from Twelve Mile Road without a waiver) • Items to be addressed by the applicant prior to Final Site Plan approval
Façade	Approval recommended	7-6-22	<ul style="list-style-type: none"> • Section 9 waiver for overage of metal panels on all elevations (supported by staff) • Items to be addressed by the applicant prior to Final Site Plan approval
Fire	Approval with conditions	8-29-22	<ul style="list-style-type: none"> • Items to be addressed by the applicant prior to Final Site Plan approval

MOTION SHEET

Approval – Preliminary Site Plan

In the matter of Novi Concrete Plant JSP22-08, motion to **approve** the Preliminary Site Plan based on and subject to the following:

- a. Zoning Board of Appeals Variance from Section 3.1.19.D for a maximum building height of 90 feet (60 foot maximum in I-2 District) as recommended by staff *because the building is a sufficient distance from the surrounding properties and impacts the overall function of the proposed project;*
- b. Zoning Board of Appeals Variance from Section 5.4.3 for the placement of a loading area in the front yard as recommended by staff *because the site has sufficient screening from Twelve Mile Road;*
- c. **1.** Landscape Waiver for a lack of building foundation landscaping *because the applicant feels that this requirement is not compatible with the proposed use of the property and significant plantings are proposed for the remainder of the site, which is hereby granted;* and **(Applicant Requested)**

OR

- 2.** Landscape Waiver for a lack of building foundation landscaping contingent upon the applicant planting vines that can climb the 12-foot tall screening wall *because it will help soften the screening as intended in the ordinance, which is hereby granted;* **(Staff Preferred)**
- d. **1.** Landscape Waiver for a lack of perimeter trees in the planting strip between the parking lot and the operations area *because a fence is proposed down the middle of the proposed planting area and limits the planting area, which is hereby granted;* **(Applicant Requested)**

OR

- 2.** The applicant shall comply with the ordinance requirement and provide perimeter trees in the planting strip between the parking lot and the operations area to meet the ordinance requirement; **(Staff Preferred)**
- e. Landscape Waiver for a lack of screening berms or walls provided on the east, west, and north sides of the site *because a majority of the woods are proposed to be preserved and a 12-foot tall screening wall is proposed, which is hereby granted;*
- f. Landscape Waiver for a lack of screening around the transformer *because the transformer will be adequately screened by the building, which is hereby granted;*
- g. Same Side Driveway Spacing Waiver of 107.6 feet to the west (122.4 feet proposed, 230 feet required) *because the site could not be accessed from Twelve Mile Road without a waiver, which is hereby granted;*
- h. Section 9 Façade Waiver for an overage of metal panels on all elevations *because the proposed screening wall obscures the site and the overall design is consistent with the intent and purpose of the Façade Ordinance, which is hereby granted;*
- i. 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
- j. *(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 – Wetland Permit

In the matter of Novi Concrete Plant JSP22-08, motion to **approve** the Wetland Permit 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 12, Article V of the Code of Ordinances and all other applicable provisions of the Ordinance.)

-AND-

Approval – Woodland Permit

In the matter of Novi Concrete Plant JSP22-08, motion to **approve** the Woodland Permit based on and subject to the following:

- a. Any proposed woodland replacement trees shall be placed in a Woodland Conservation Easement as indicated in the Woodland Protection Ordinance;
- b. 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
- c. *(additional conditions here if any)*

(This motion is made because the plan is otherwise in compliance with Chapter 37 of the Code of Ordinances and all other applicable provisions of the Ordinance.)

- AND -

Approval – Stormwater Management Plan

In the matter of Novi Concrete Plant JSP22-08, 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 – Preliminary Site Plan

In the matter of Novi Concrete Plant JSP22-08, 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 – Wetland Permit

In the matter of Novi Concrete Plant JSP22-08, motion to **deny** the Wetland Permit...
(because the plan is not in compliance with Chapter 12, Article V of the Code of Ordinances and all other applicable provisions of the Ordinance.)

-AND-

Denial – Woodland Permit

In the matter of Novi Concrete Plant JSP22-08, motion to **deny** the Woodland Permit...
(because the plan is not in compliance with Chapter 37 of the Code of Ordinances and all other applicable provisions of the Ordinance.)

-AND-

Denial – Stormwater Management Plan

In the matter of Novi Concrete Plant JSP22-08, 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

JSP22-08 NOVI CONCRETE PLANT

LOCATION



LEGEND

 Subject Property



City of Novi

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

Map Author: Christian Carroll
Date: 9/19/22
Project: NOVI CONCRETE PLANT
Version #: 1

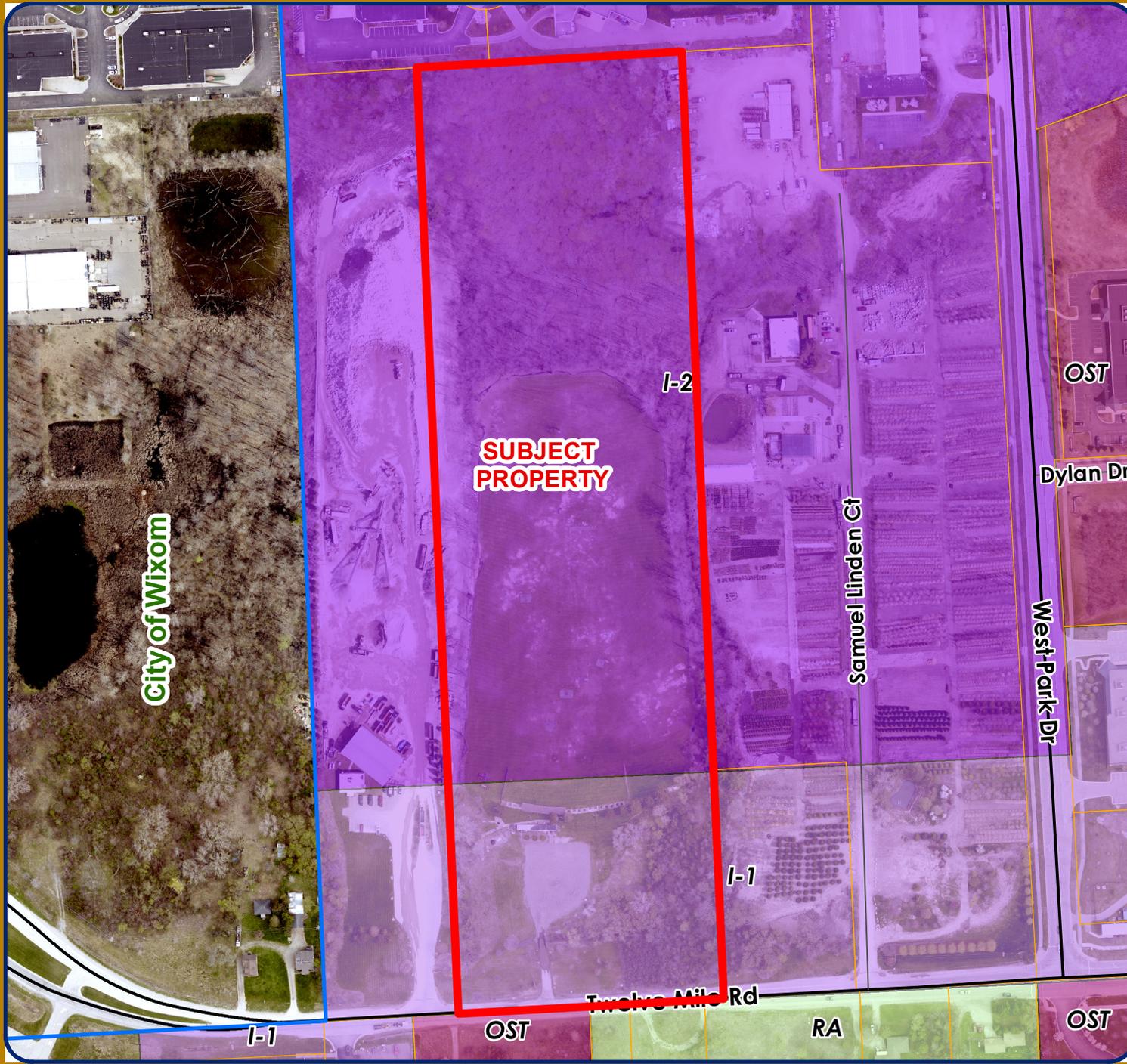


MAP INTERPRETATION NOTICE

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.

JSP22-08 NOVI CONCRETE PLANT

ZONING



LEGEND

- R-A: Residential Acreage
- R-1: One-Family Residential District
- B-2: Community Business District
- B-3: General Business District
- EXO: OST District with EXO Overlay
- FS: Freeway Service District
- I-1: Light Industrial District
- I-2: General Industrial District
- OSC: Office Service Commercial
- OST: Office Service Technology
- Subject Property



City of Novi

Dept. of Community Development
 City Hall / Civic Center
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 Novi, MI 48375
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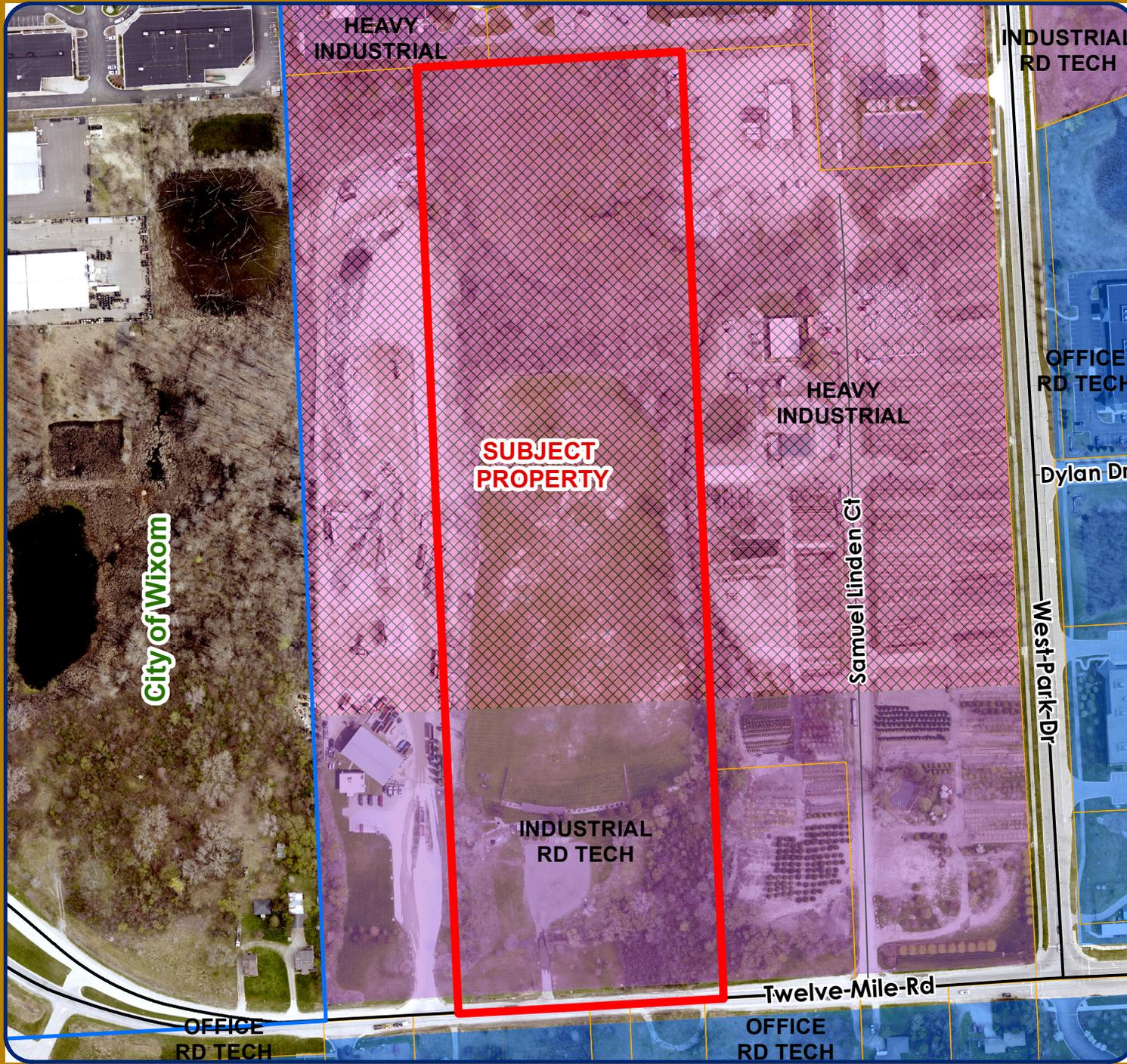


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JSP22-08 NOVI CONCRETE PLANT

FUTURE LAND USE



LEGEND

- Office Research Development Technology
- Office Commercial
- Industrial Research Development Technology
- Heavy Industrial
- Local Commercial
- City West
- Public Park
- Private Park
- Subject Property

City of Novi
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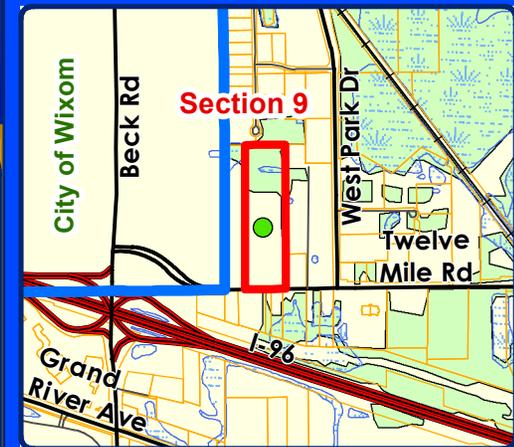
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0 60 120 240 360 Feet
1 inch = 270 feet

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JSP22-08 NOVI CONCRETE PLANT

NATURAL FEATURES



LEGEND

- WETLANDS
- WOODLANDS
- Subject Property



City of Novi

Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
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SITE PLAN & ELEVATIONS
(Full plan set available for viewing at the Community Development Department.)

GENERAL NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
2. REFER TO SHEET CS-501 FOR ON-SITE PAVING DETAILS.
3. "NO PARKING-FIRE LANE" SIGN SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF NOVI CURRENT STANDARDS AND REGULATIONS.
5. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

6. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
7. 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 WILL NOT BE PAID FOR SEPARATELY.

CITY OF NOVI FIRE DEPARTMENT NOTES:

1. ALL WEATHER ACCESS ROADS CAPABLE OF SUPPORTING 35 TONS ARE TO BE PROVIDED FOR FIRE APPARATUS PRIOR TO CONSTRUCTION ABOVE THE FOUNDATION.
2. ALL WATER MAINS AND FIRE HYDRANTS ARE TO BE INSTALLED AND BE IN SERVICE PRIOR TO CONSTRUCTION ABOVE THE FOUNDATION.
3. THE BUILDING ADDRESS IS TO BE POSTED FACING THE STREET THROUGHOUT THE CONSTRUCTION. THE ADDRESS IS TO BE AT LEAST 3 INCHES HIGH ON CONTRASTING BACKGROUND.

SITE SOILS INFORMATION:

ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SITE SOIL SURVEY FOR OAKLAND COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:

- 10B MARLETTE SANDY LOAM, 1 TO 6 PERCENT SLOPES
- 11B CAPAC SANDY LOAM, 0 TO 4 PERCENT SLOPES

NAME OF NEAREST WATERCOURSE: DAVIS DRAIN

DISTANCE TO NEAREST WATERCOURSE IN FEET: 75'+

NOTE:
ALL WORK WITHIN THE 12 MILE RIGHT-OF-WAY IS UNDER THE JURISDICTION OF THE ROAD COMMISSION FOR OAKLAND COUNTY AND REQUIRES A PERMIT FROM BOTH ROAD COMMISSION FOR OAKLAND COUNTY AND THE CITY OF NOVI.

NOTE:
OUTDOOR STORAGE OF ANY EQUIPMENT OR MATERIAL SHALL NOT EXTEND TO A GREATER HEIGHT THAN THE ON-SITE OBSCURING SCREEN.

SIGNS NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

1. TRAFFIC SIGNS IN THE ROAD COMMISSION FOR OAKLAND COUNTY (RCOC) RIGHT-OF-WAY WILL BE INSTALLED BY RCOC.
2. SIGNS 12"x18" OR SMALLER IN SIZE SHALL BE MOUNTED ON A GALVANIZED 2 LB. U-CHANNEL POST.
3. SIGNS GREATER THAN 12"x18" SHALL BE MOUNTED ON A GALVANIZED 3 LB. OR GREATER U-CHANNEL POST.
4. SIGNING SHALL BE PLACED 2' FROM THE FACE OF CURB OR EDGE OF THE NEAREST SIDEWALK TO THE NEAR EDGE OF THE SIGN.

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

NOTES:

- 1) DIRECT CONSUMER RETAIL IS PROHIBITED.
- 2) LONG TERM DELIVERY TRUCK PARKING IS PROHIBITED.
- 3) USE OF BUILDING MUST COMPLY WITH SECTION 5.14 PERTAINING TO LIGHTING, NOISE VIBRATION AND ODOR.
- 4) IF DEWATERING IS ANTICIPATED OR ENCOUNTERED DURING CONSTRUCTION, A DEWATERING PLAN MUST BE SUBMITTED TO THE ENGINEERING DIVISION FOR REVIEW.

SIGN LEGEND/QUANTITY TABLE:

12"x18" "NO PARKING FIRE LANE" SIGN (LR7-22)	1	77 EA.
30"x30" "STOP" SIGN	2	1 EA.
12"x18" "BARRIER FREE PARKING" SIGN (R7-8)	3	6 EA.
12"x6" "VAN ACCESSIBLE" SIGN (R7-8P)	4	2 EA.

REFER TO SHEET CS-500 FOR SIGN DETAILS.
SIGN TOTALS ARE QUANTITIES NEEDED FOR THE NEW DEVELOPMENT. ALL SIGNS WILL COMPLY WITH THE LATEST EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD)

SIDEWALK RAMP LEGEND:

- SIDE WALK RAMP "TYPE R"
- SIDE WALK RAMP "TYPE P"

REFER TO LATEST M.D.O.T. E-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS ON SHEET CS-500

PARKING CALCULATIONS:

INDUSTRIAL ESTABLISHMENTS & RELATED OFFICES = 1 SPACE PER 700 S.F. USABLE FLOOR AREA
TOTAL PARKING REQUIRED = 8,300 S.F. / 700 S.F. = 12 SPACES

OR = 5 SPACES + 1 SPACE FOR EACH 1.5 EMPLOYEES IN THE LARGEST WORKING SHIFT, WHICHEVER IS GREATER
TOTAL PARKING REQUIRED = 5 SPACES + 40 EMPLOYEES / 1.5 -> 27 = 32 SPACES REQUIRED

TOTAL PROPOSED VEHICLE PARKING SPACES = 46 SPACES
BICYCLE PARKING REQUIRED: 5% OF REQUIRED VEHICLE PARKING = 5% X 50 SPACES = 2.3 SPACES

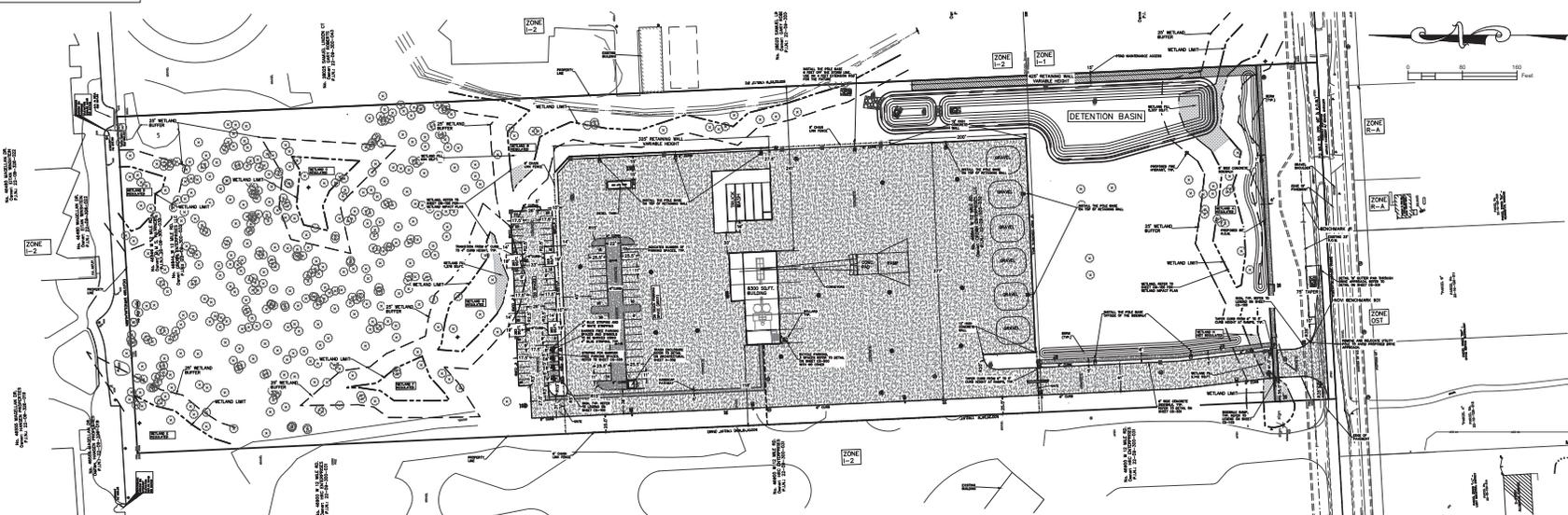
TOTAL PROPOSED BICYCLE PARKING SPACES = 3 SPACES

NOTE:
PROVIDE A 4" WHITE LINE NEXT TO 4" BLUE LINE WHERE BLUE LINE IS ABUTTING WHITE LINE

LEGEND

- = PROP. GV & W, OR T S V & W
- = EX. GV & W, OR T S V & W
- = PROP. FIRE HYDRANT
- = EX. FIRE HYDRANT
- = PROP. SANITARY MH
- = EX. SANITARY MH
- = CLEANOUT
- = PROP. MANHOLE
- = EX. MANHOLE
- = PROP. REAR YARD CB
- = PROP. CATCH BASIN
- = EX. CATCH BASIN
- = END SECTION
- = STORM SEWER STRUCTURE NUMBER
- = SANITARYSEWER STRUCTURE NUMBER
- = EXISTING SHRUB
- = EXISTING LIGHTING POLE
- = PUBLIC PHONE
- = TELEPHONE MANHOLE
- = PROPOSED RIP-RAP
- = PROPOSED CONCRETE
- = PROPOSED GRASS
- = PROPOSED SWALE
- = PROPOSED TOP OF PAVEMENT
- = PROPOSED FINISH GRADE
- = PROPOSED TOP & GUTTER
- = PROPOSED TOP OF WALK
- = PROPOSED HIGH POINT LINE
- = PROPOSED CONTOUR LINE
- = EXISTING CONTOUR LINE
- = PROPOSED SANITARY PIPE
- = PROPOSED STORM PIPE
- = PROPOSED WATER PIPE

LEGEND
 = WETLAND TO BE FILL



CLIENT



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ISSUES

No.	DESCRIPTION	DATE
1	PRE APPLICATION SET	02-27-2022
2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-09-2022
4	REVISED PRELIMINARY SET	09-19-2022

NOT FOR CONSTRUCTION



CONSULTANTS



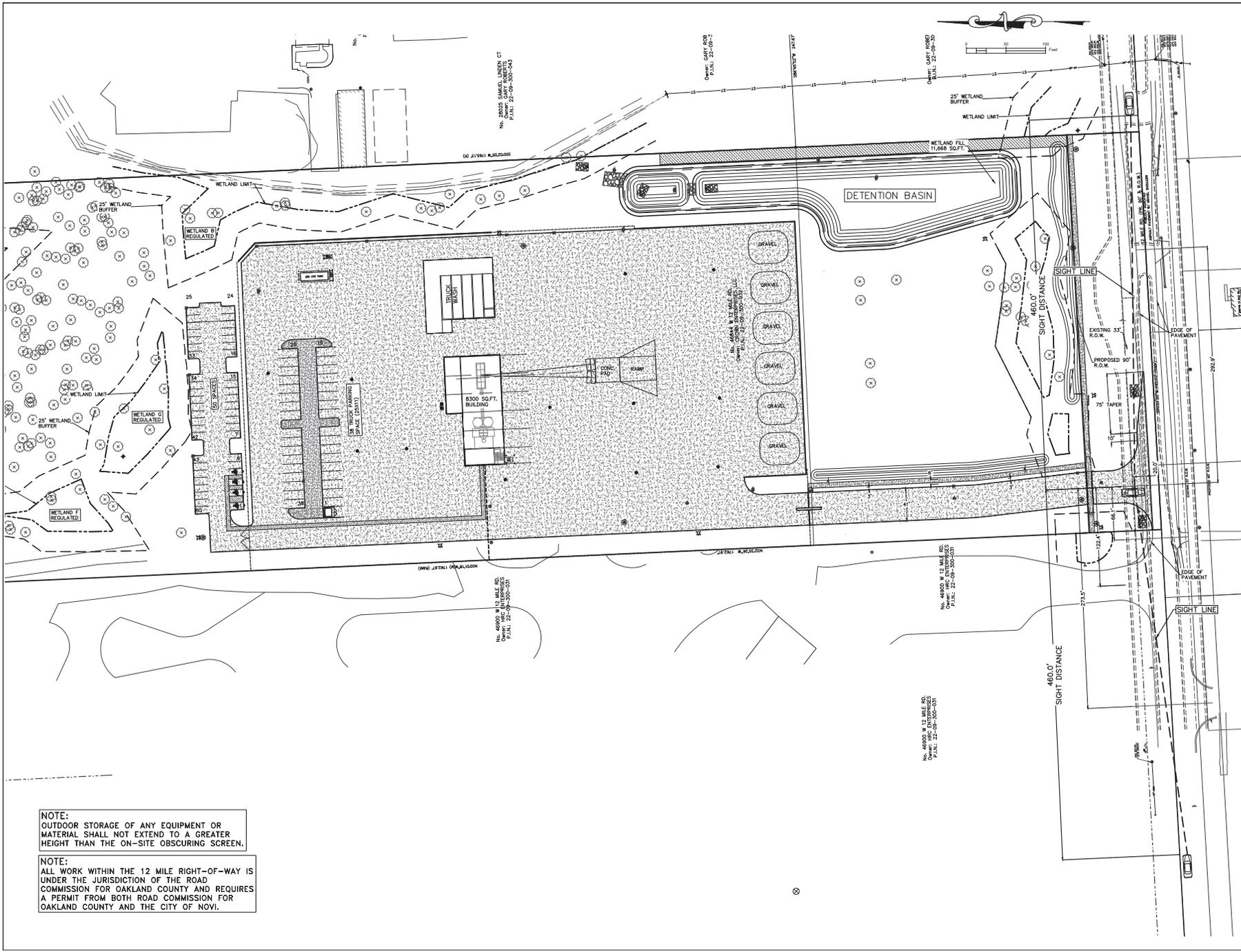
Angle Design & Engineering
22417 Custerwood Drive, Novi, Michigan 48375
Phone: (313) 238-3036 Email: Paul@angledesignLLC.com

PROJECT
NOVI CONCRETE PLANT
46844 12 MILE RD.
NOVI, MI 48377
SECTION 9

PROJECT NO: 2022-102 SCALE: 1"=80'
DRAWN BY: M.K. CHECKED BY: F.K.
PROJECT MGR: F.K. APPROVED BY: F.K.

SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER: CS-100 ISSUE



NOTE:
 OUTDOOR STORAGE OF ANY EQUIPMENT OR MATERIAL SHALL NOT EXTEND TO A GREATER HEIGHT THAN THE ON-SITE OBSCURING SCREEN.

NOTE:
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ISSUES	No.	DESCRIPTION	DATE
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3	REVISED PRELIMINARY SET	08-09-2022	
4	REVISED PRELIMINARY SET	09-19-2022	

NOT FOR CONSTRUCTION



CONSULTANTS



Angle Design & Engineering
 23417 Crosswicks Drive, Novi, Michigan 48375
 Phone: (313) 228-3036 Email: Paul@AngleDesignLLC.com

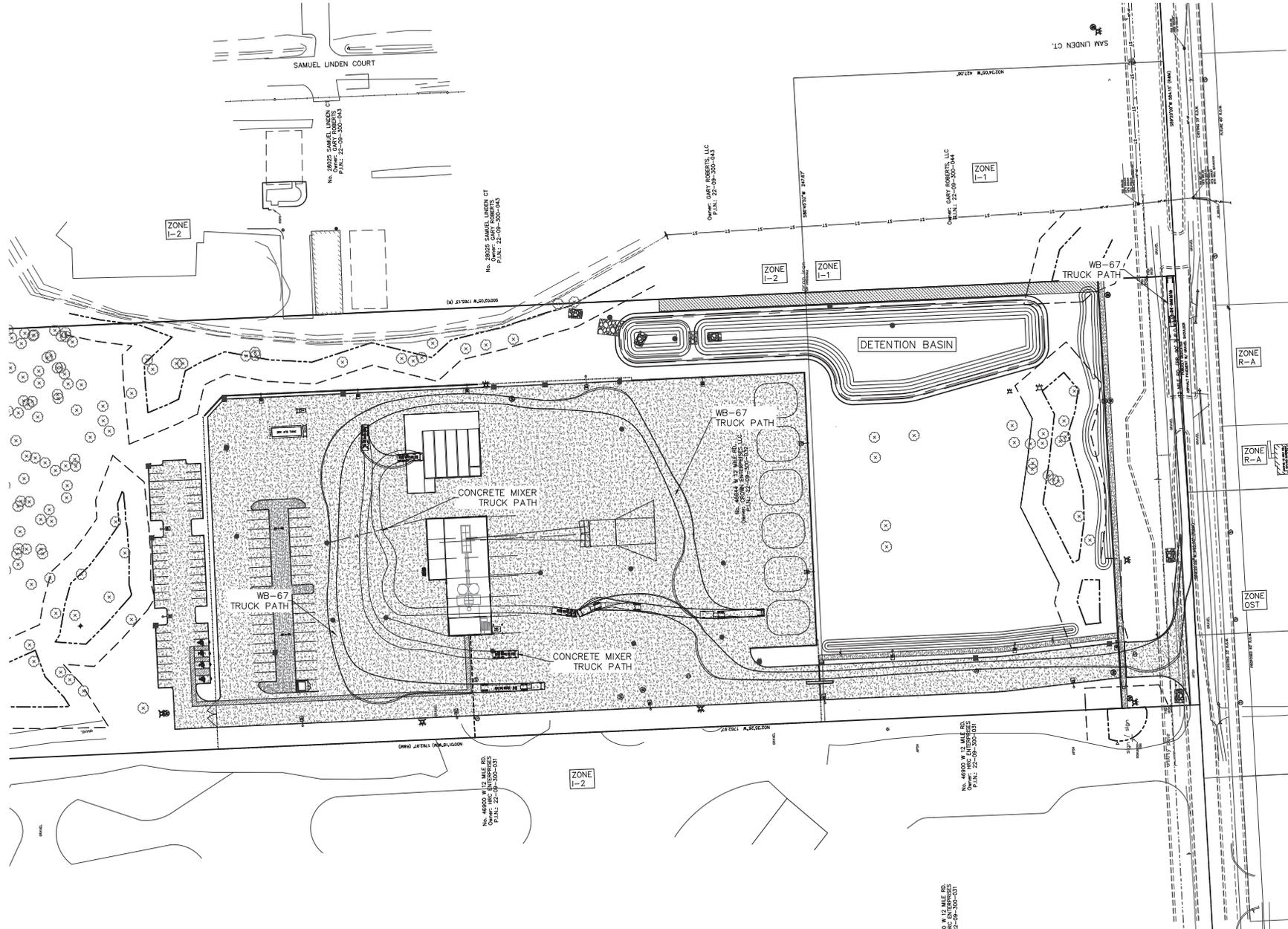
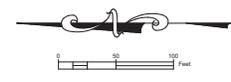
PROJECT
 NOVI CONCRETE PLANT
 46844 12 MILE RD.
 NOVI, MI 48377
 SECTION 9

PROJECT NO:	SCALE:
2022-102	1"=50'
DRAWN BY:	CHECKED BY:
M.K.	F.K.
PROJECT MGR:	APPROVED BY:
F.K.	F.K.

SHEET TITLE
 SIGHT DISTANCE

SHEET NUMBER	ISSUE
CS-102	

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



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ISSUES

No.	DESCRIPTION	DATE
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2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-09-2022
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NOT FOR CONSTRUCTION



CONSULTANTS



Angle Design & Engineering
22417 Cranbrook Drive, Novi, Michigan 48375
Phone: (313) 228-3036 Email: Paul@angledesignLLC.com

PROJECT
NOVI CONCRETE PLANT
46844 12 MILE RD.
NOVI, MI 48377
SECTION 9

PROJECT NO: 2022-102	SCALE: 1"=50'
DRAWN BY: M.K.	CHECKED BY: F.K.
PROJECT MGR: F.K.	APPROVED BY: F.K.

CIRCULATION PLAN

SHEET NUMBER **CS-103** ISSUE

GENERAL GRADING AND EARTHWORK NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
- THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CITY OF NOVI. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE CITY PRIOR TO CONSTRUCTION.
- ALL EARTHWORK AND GRADING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS INVESTIGATION AND REPORT PREPARED BY PEA, INC. DATED SEPTEMBER 28, 2018.
- 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 WILL NOT BE PAID FOR SEPARATELY.
- ALL SLOPES EXCEEDING 1:6 MUST BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
- ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

EARTHWORK BALANCING NOTE:

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

NOTE:

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

LEGEND

- ⊙ = PROP. GV & W; OR T S V & W
- ⊙ = EX. GV & W; OR T S V & W
- ⊙ = PROP. FIRE HYDRANT
- ⊙ = EX. FIRE HYDRANT
- ⊙ = PROP. SANITARY MH
- ⊙ = EX. SANITARY MH
- ⊙ = CLEANOUT
- ⊙ = PROP. MANHOLE
- ⊙ = EX. MANHOLE
- ⊙ = PROP. REAR YARD CB
- ⊙ = PROP. CATCH BASIN
- ⊙ = EX. CATCH BASIN
- ⊙ = EX. CATCH BASIN
- ⊙ = STORM SEWER STRUCTURE NUMBER
- ⊙ = SANITARYSEWER STRUCTURE NUMBER
- ⊙ = EXISTING SHRUB
- ⊙ = EXISTING LIGHTING POLE
- ⊙ = PUBLIC PHONE
- ⊙ = TELEPHONE MANHOLE
- ▨ = PROPOSED RIP-RAP
- ▨ = PROPOSED CONCRETE
- ▨ = PROPOSED GRASS
- ▨ = PROPOSED SWALE
- TP-xxx.xx = PROPOSED TOP OF PAVEMENT
- FG-xxx.xx = PROPOSED FINISH GRADE
- TC-xxx.xx = PROPOSED TOP & GUTTER
- EP-xxx.xx = PROPOSED TOP OF WALK
- TW-xxx.xx = PROPOSED HIGH POINT LINE
- 970--- = EXISTING CONTOUR LINE
- 970--- = PROPOSED CONTOUR LINE
- 970--- = END SECTION
- 970--- = PROPOSED SANITARY PIPE
- 970--- = PROPOSED STORM PIPE
- 970--- = PROPOSED WATER PIPE

CLIENT



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ISSUES

No.	DESCRIPTION	DATE
1	PRE APPLICATION SET	02-27-2022
2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-09-2022
4	REVISED PRELIMINARY SET	09-19-2022

NOT FOR CONSTRUCTION



CONSULTANTS

SEAL



Angle Design & Engineering

22417 Crestwood Drive, Novi, Michigan 48375
Phone: (313) 226-2026 Email: Fkasper@angleandeng.com

PROJECT

NOVI CONCRETE PLANT
46844 12 MILE RD.
NOVI, MI 48377
SECTION 9

PROJECT NO:

2022-102

SCALE: **1"=50'**

DRAWN BY:

M.K.

CHECKED BY:

F.K.

PROJECT MGR:

F.K.

APPROVED BY:

F.K.

SHEET TITLE

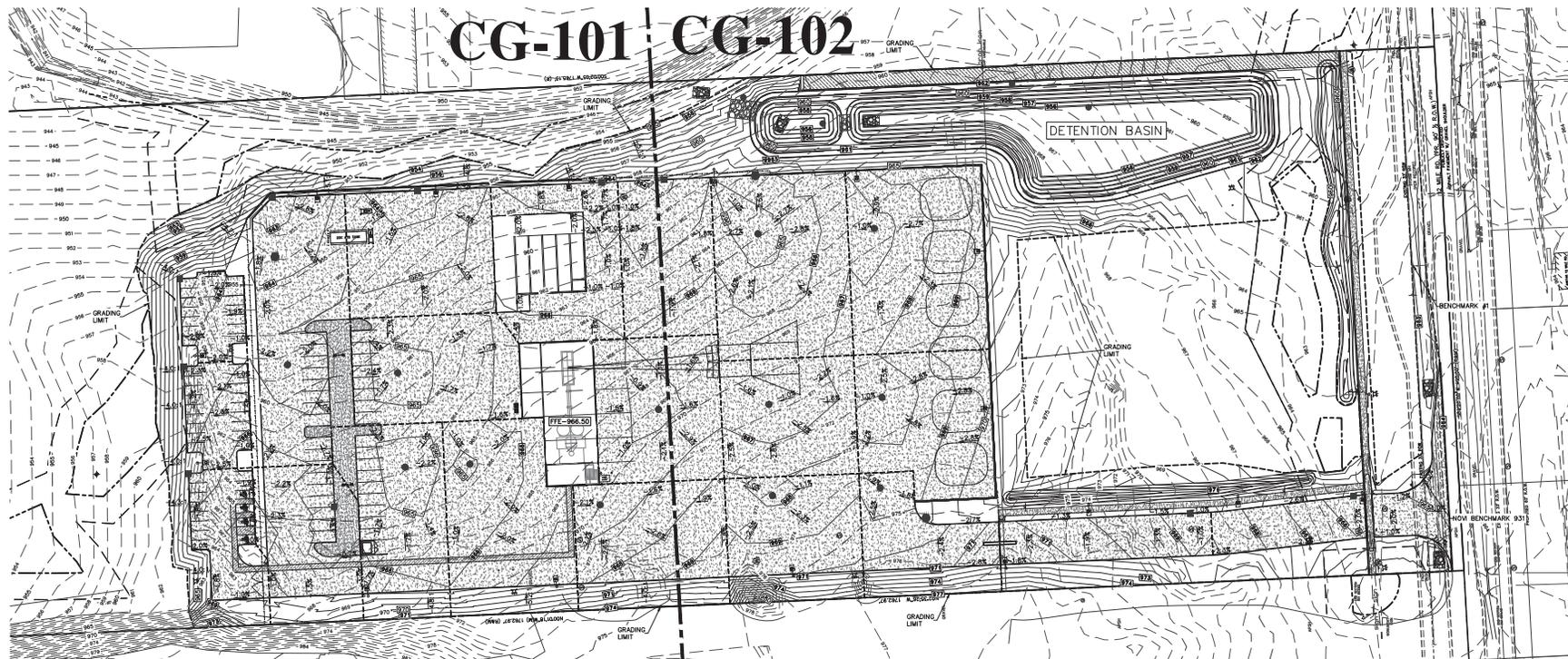
OVERALL GRADING PLAN

SHEET NUMBER

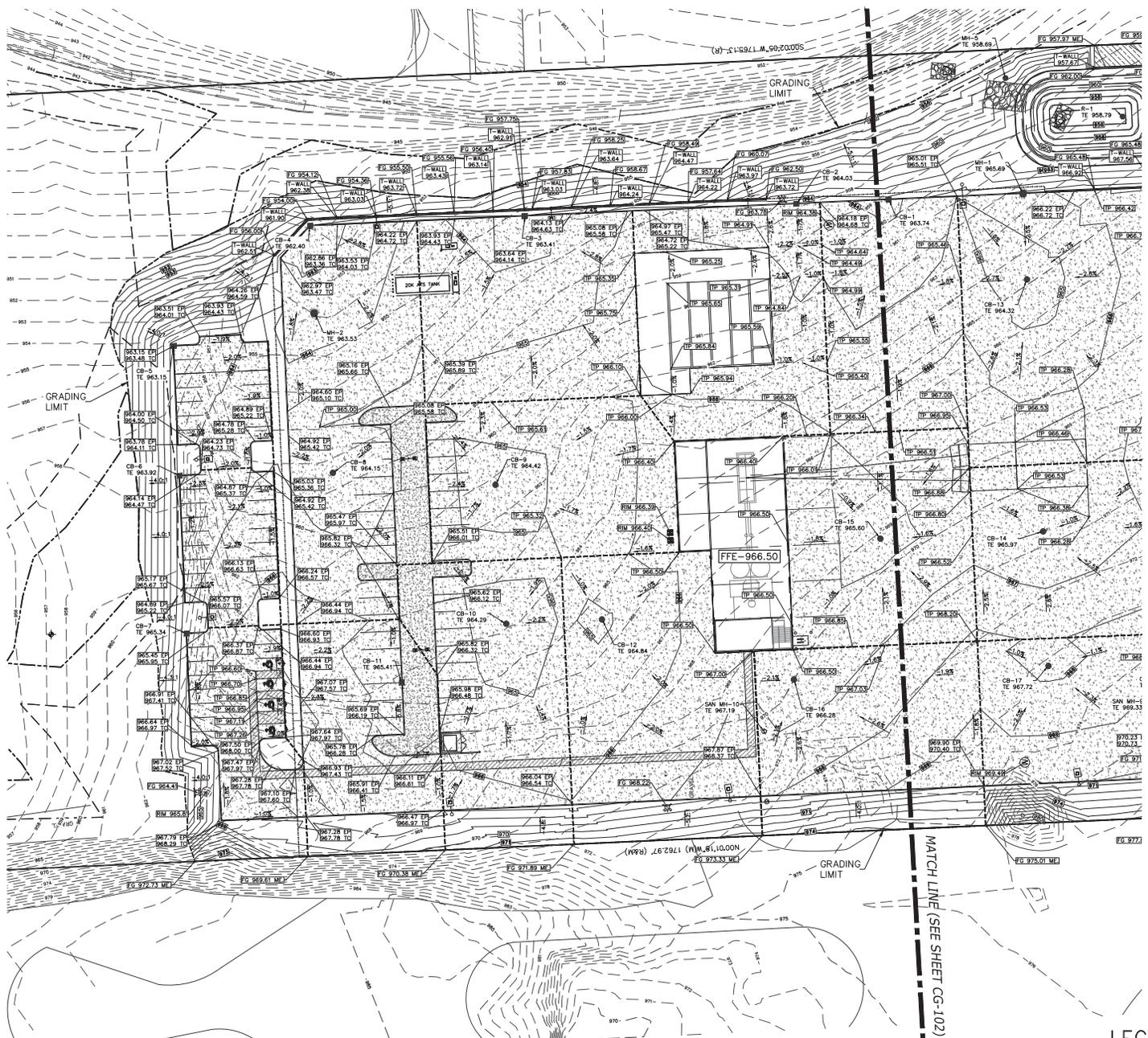
CG-100

ISSUE

CG-100



LEGEND
--- = PROPOSED HIGH POINT LINE



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ISSUES

No.	DESCRIPTION	DATE
1	PRE APPLICATION SET	02-27-2022
2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-28-2022
4	REVISED PRELIMINARY SET	09-19-2022

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SEAL

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PROJECT

NOVI CONCRETE PLANT
 46844 12 MILE RD.
 NOVI, MI 48377
 SECTION 9

PROJECT NO: 2022-102 SCALE: 1"=30'

DRAWN BY: M.K. CHECKED BY: F.K.

PROJECT MGR: F.K. APPROVED BY: F.K.

SHEET TITLE

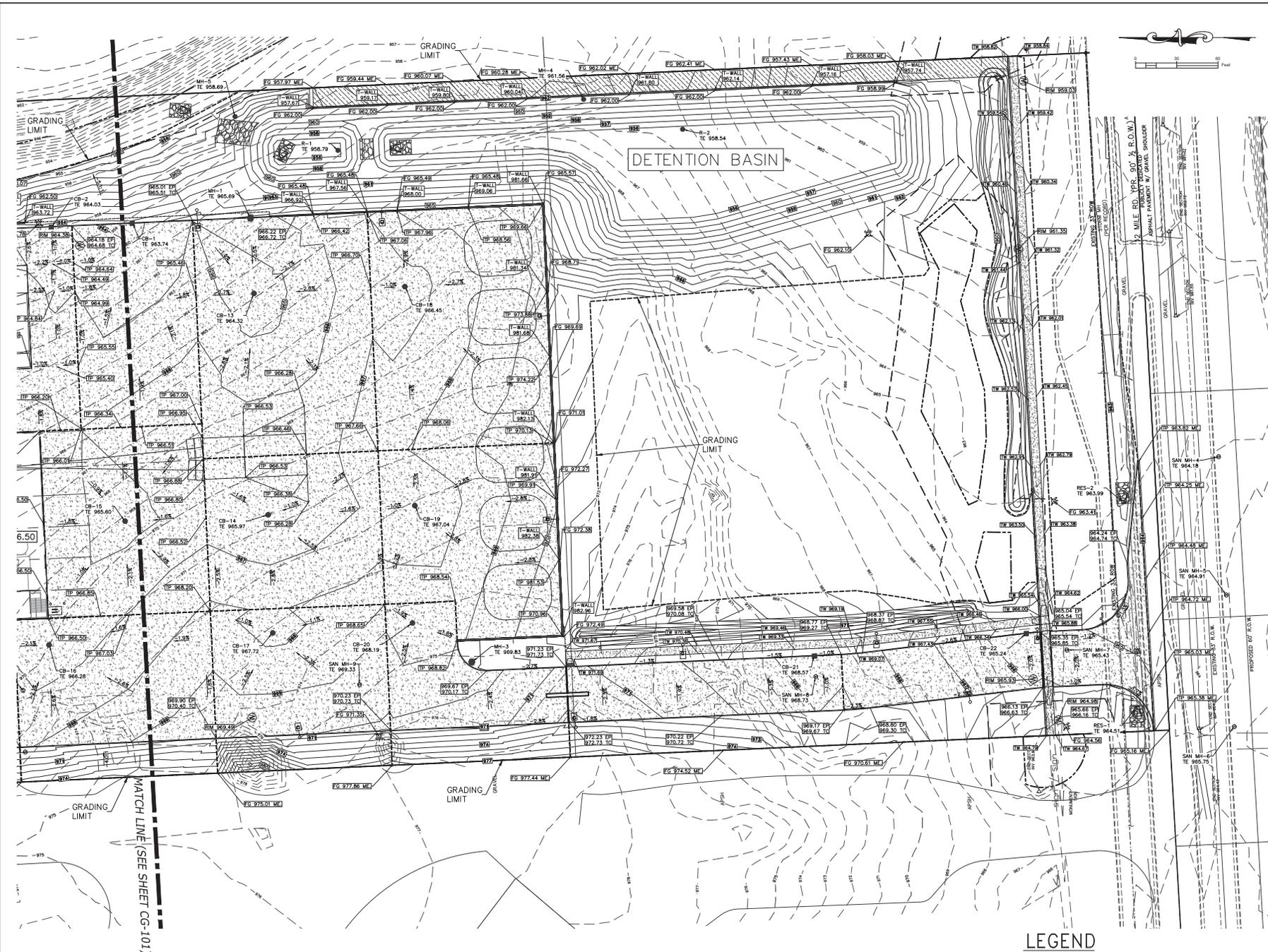
PART GRADING PLAN

SHEET NUMBER

CG-101

LEGEND

----- = PROPOSED HIGH POINT LINE



LEGEND
 - - - - - = PROPOSED HIGH POINT LINE

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ISSUES	DESCRIPTION	DATE
1	PRE APPLICATION SET	02-27-2022
2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-09-2022
4	REVISED PRELIMINARY SET	09-19-2022

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MISSDIG 811

CONSULTANTS

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PAUL A. ADAMS
 REGISTERED PROFESSIONAL ENGINEER
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PROJECT

NOVI CONCRETE PLANT
 46844 12 MILE RD.
 NOVI, MI 48377
 SECTION 9

PROJECT NO: 2022-102 SCALE: 1"=30'

DRAWN BY: M.K. CHECKED BY: F.K.

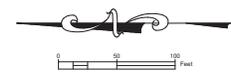
PROJECT MGR: F.K. APPROVED BY: F.K.

SHEET TITLE

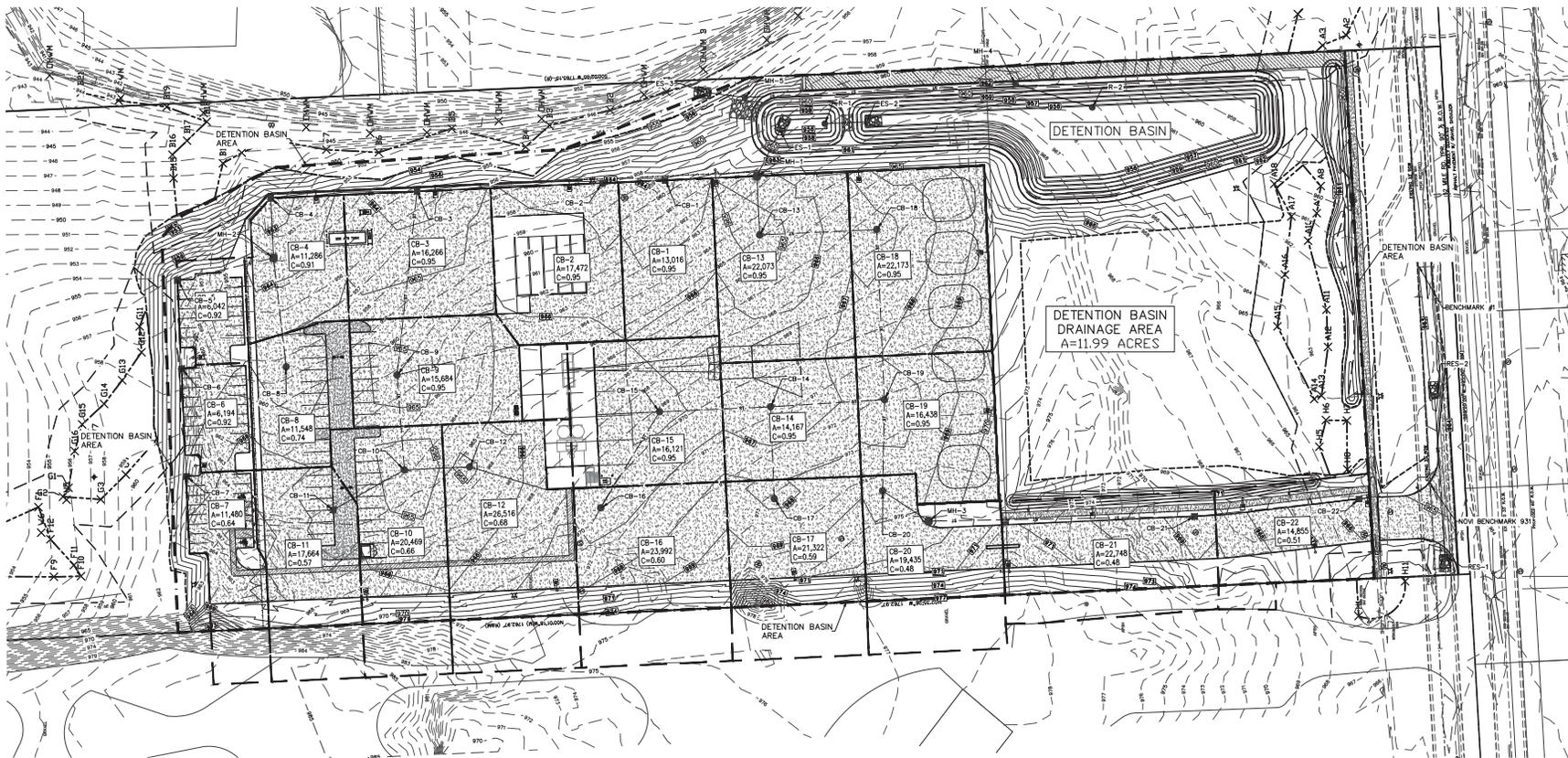
PART GRADING PLAN

SHEET NUMBER ISSUE

CG-102



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



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ISSUES	DESCRIPTION	DATE
1	PRE APPLICATION SET	02-27-2022
2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-08-2022
4	REVISED PRELIMINARY SET	09-19-2022

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PROJECT
NOVI CONCRETE PLANT
46844 12 MILE RD.
NOVI, MI 48377
SECTION 9

PROJECT NO:	2022-102	SCALE:	1"=50'
DRAWN BY:	M.K.	CHECKED BY:	F.K.
PROJECT MGR:	F.K.	APPROVED BY:	F.K.

SHEET TITLE
DRAINAGE AREA PLAN

SHEET NUMBER **ISSUE**
CG-103

SANITARY STRUCTURES	
STRUCTURE NAME:	DETAILS:
SAN MH-1	48" DIA RIM = 959.64 10" W INV. 953.51 10" E INV. 953.41
SAN MH-2	48" DIA RIM = 960.55 10" W INV. 954.29 10" E INV. 953.97
SAN MH-3	48" DIA RIM = 960.86 10" W INV. 955.00 10" E INV. 954.90
SAN MH-4	48" DIA RIM = 954.18 10" W INV. 956.06 10" E INV. 955.96
SAN MH-5	48" DIA RIM = 964.91 10" W INV. 956.24 8" N INV. 956.35 10" E INV. 956.36
SAN MH-6	48" DIA RIM = 965.75 10" E INV. 956.53
SAN MH-7	48" DIA RIM = 965.43 8" N INV. 956.94 8" S INV. 956.84
SAN MH-8	48" DIA RIM = 968.73 8" N INV. 957.78 8" S INV. 957.68
SAN MH-9	48" DIA RIM = 969.33 8" N INV. 959.21 8" S INV. 959.11
SAN MH-10	48" DIA RIM = 967.19 6" E INV. 960.35 8" W INV. 960.29 8" S INV. 960.19
SAN MH-11	48" DIA RIM = 968.97 8" N INV. 961.66 8" E INV. 960.56

SAND BACKFILL NOTE:

ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557)

NOTE:

ALL SANITARY SEWERS 10" AND LARGER IN DIAMETER ARE TO BE PUBLIC AND SHALL BE LOCATED IN A 20' WIDE EASEMENT.

NOTE:

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

NOTE:

TRAFFIC SIGNS IN THE ROAD COMMISSION FOR OAKLAND COUNTY (RCOC) RIGHT-OF-WAY WILL BE INSTALLED BY RCOC.

NOTE:

THE SANITARY LEADS WILL BE BURIED AT LEAST 5 FEET DEEP WHERE UNDER THE INFLUENCE OF PAVEMENT.

NOTE:

CONTRACTOR TO VERIFY ALL QUANTITIES.

SANITARY QUANTITIES			
ITEM	QUANTITY	UNITS	
6" PVC SDR 23.5	52	LF	
8" PVC SDR 26	939	LF	
10" PVC SDR 26	1,081	LF	
48" SAN MANHOLE	10	EACH	

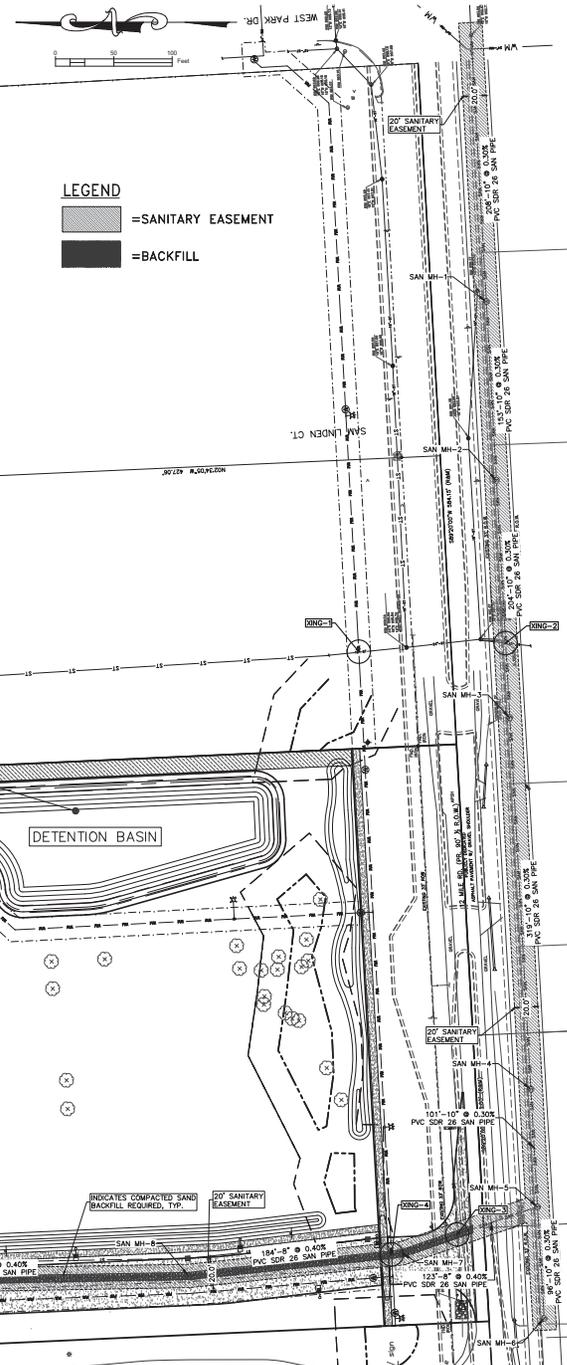
SANITARY SEWER LOAD CALCULATION	
Total Number of equivalent units REU	3.2
Population	3.5 person/lot/unit
Total Population	11.2 persons
Sanitary Flow	100 Gallon/Day/Capita
Average Sanitary Flow	1120 GPD
	0.0017 CFS
Peak Factor $PF=18+\sqrt{P/1000}+4\sqrt{P/1000}$	4.41 cfs
Peak Sanitary Flow = (ave. flow X Peak Factor of 4)	0.0076 cfs
Size of Sanitary Sewer Pipe	8 Inches
Slope	0.40%
Area	0.349 Sq ft
Hydraulic Radius = D/4 feet	0.17 feet
Manning Coefficient	0.011
Capacity = $[1.486/n] \times R^{2/3} \times A \times S^{0.5}$	0.90 CFS
Velocity	2.59 ft/sec

UTILITY CROSSING TABLE			
	STORM BOTTOM	SANITARY TOP	CLEARANCE (FEET)
XING-3	962.48	957.33	5.15

	STORM BOTTOM	WATER TOP	CLEARANCE (FEET)
XING-1	950.39	948.35	2.04
XING-6	961.20	959.17	2.03
XING-7	960.84	959.04	1.80
XING-8	956.66	954.65	2.01

	SANITARY BOTTOM	WATER TOP	CLEARANCE (FEET)
XING-4	956.95	955.43	1.52
XING-5	960.42	958.63	1.79

	SANITARY BOTTOM	STORM TOP	CLEARANCE (FEET)
XING-2	954.68	953.10	1.58



LEGEND

[Hatched Box] = SANITARY EASEMENT

[Solid Black Box] = BACKFILL

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ISSUES

No.	DESCRIPTION	DATE
1	PRE APPLICATION SET	02-27-2022
2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-28-2022
4	REVISED PRELIMINARY SET	09-19-2022

CONSULTANTS

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ANGIE DESIGN & ENGINEERING

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PROJECT

NOVI CONCRETE PLANT
46844 12 MILE RD.
NOVI, MI 48377
SECTION 9

PROJECT NO: 2022-102 SCALE: 1"=50'

DRAWN BY: M.K. CHECKED BY: F.K.

PROJECT MGR: APPROVED BY: F.K.

SHEET TITLE

SANITARY SEWER PLAN

SHEET NUMBER: CU-101 ISSUE

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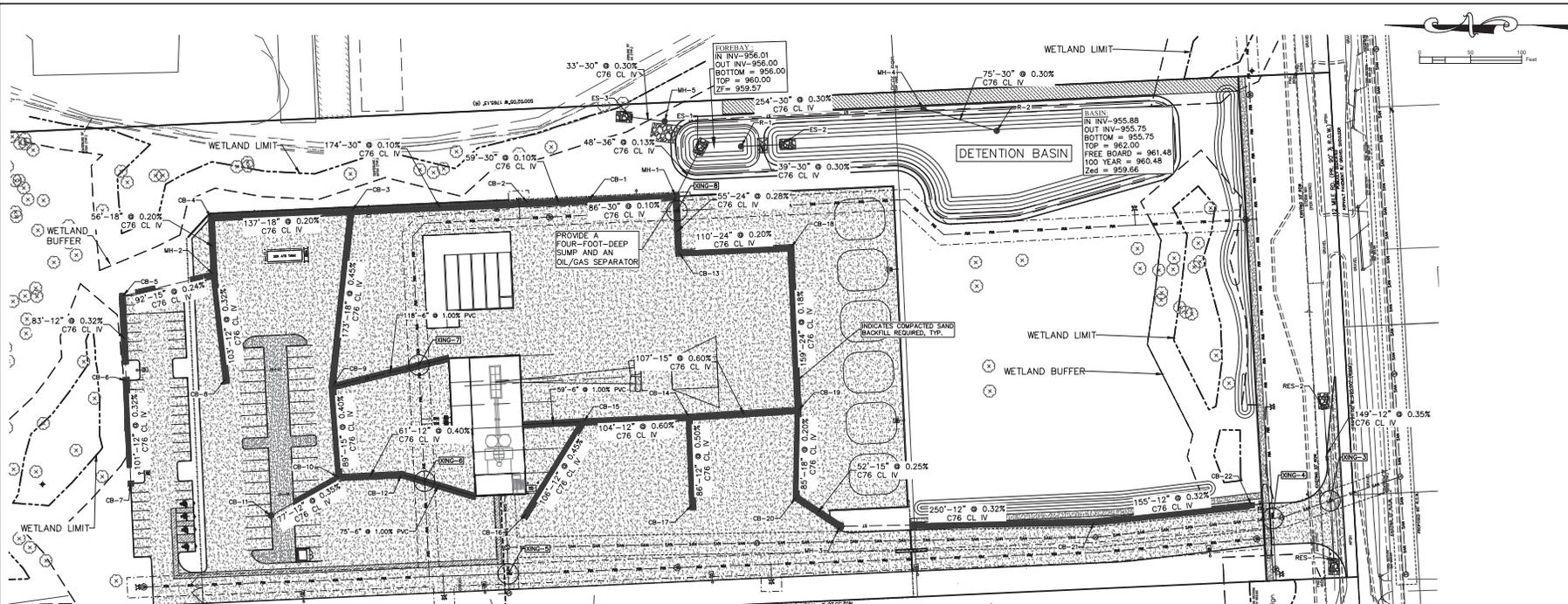
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ISSUES	DESCRIPTION	DATE
1	PRE APPLICATION SET	02-27-2022
2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-08-2022
4	REVISED PRELIMINARY SET	09-19-2022

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STORM STRUCTURES	
STRUCTURE NAME:	DETAILS:
CB-1	COVER: EJ 7045 TYPE M1 60" DIA 48" DIA 30" N INV. 956.56 30" S INV. 956.56
CB-2	COVER: EJ 7045 TYPE M1 60" DIA RIM = 963.74 30" N INV. 956.63 30" S INV. 956.62
CB-3	COVER: EJ 7045 TYPE M1 60" DIA RIM = 963.41 18" N INV. 957.59 18" W INV. 957.59 30" S INV. 956.79
CB-4	COVER: EJ 7045 TYPE M1 60" DIA RIM = 962.40 18" W INV. 957.97 18" S INV. 957.87
CB-5	COVER: EJ 7045 TYPE M1 48" DIA RIM = 963.15 12" W INV. 958.70 15" S INV. 958.50
CB-6	COVER: EJ 7045 TYPE M1 48" DIA RIM = 963.92 12" W INV. 960.60 12" E INV. 958.97
CB-7	COVER: EJ 7045 TYPE M1 48" DIA RIM = 965.34 12" E INV. 959.29
CB-8	COVER: EJ 1040 TYPE M1 48" DIA RIM = 964.15 12" E INV. 958.81
CB-9	COVER: EJ 1040 TYPE M1 48" DIA RIM = 964.42 15" W INV. 958.57 6" S INV. 960.00 18" E INV. 956.37

STORM STRUCTURES	
STRUCTURE NAME:	DETAILS:
CB-10	COVER: EJ 1040 TYPE M1 48" DIA RIM = 964.29 12" S INV. 958.33 12" NW INV. 959.13 15" E INV. 958.93
CB-11	COVER: EJ 7045 TYPE M1 60" DIA RIM = 965.41 12" SE INV. 959.40
CB-12	COVER: EJ 1040 TYPE M1 48" DIA RIM = 964.84 6" S INV. 961.00 12" N INV. 959.37
CB-13	COVER: EJ 1040 TYPE M1 60" DIA RIM = 964.32 24" S INV. 957.12 24" E INV. 957.02
CB-14	COVER: EJ 1040 TYPE M1 48" DIA RIM = 965.97 12" N INV. 959.17 12" W INV. 960.30 15" S INV. 958.97
CB-15	COVER: EJ 1040 TYPE M1 48" DIA RIM = 965.60 12" NW INV. 960.60 6" N INV. 961.00 12" S INV. 959.80
CB-16	COVER: EJ 1040 TYPE M1 48" DIA RIM = 966.28 12" SE INV. 961.08
CB-17	COVER: EJ 1040 TYPE M1 48" DIA RIM = 967.72 12" W INV. 961.33
CB-18	COVER: EJ 1040 TYPE M1 60" DIA RIM = 966.45 24" W INV. 957.44 24" N INV. 957.34

STORM STRUCTURES	
STRUCTURE NAME:	DETAILS:
CB-19	COVER: EJ 1040 TYPE M1 48" DIA RIM = 967.04 15" N INV. 958.33 18" W INV. 958.13 24" E INV. 957.13
CB-20	COVER: EJ 1040 TYPE M1 48" DIA RIM = 968.19 15" SW INV. 958.50 18" E INV. 958.30
CB-21	COVER: EJ 7045 TYPE M1 48" DIA RIM = 968.57 12" S INV. 958.63 12" N INV. 959.63
CB-22	COVER: EJ 7045 TYPE M1 48" DIA RIM = 965.24 12" N INV. 960.13
ES-1	36" DIA RIM = 962.17 36" NW INV. 956.01
ES-2	30" DIA RIM = 958.67 30" N INV. 955.88
ES-3	30" DIA RIM = 958.45 30" S INV. 954.66
MH-1	COVER: EJ 1040 TYPE B 72" DIA RIM = 965.69 24" W INV. 956.87 30" N INV. 956.47 36" SE INV. 956.07
MH-2	COVER: EJ 1040 TYPE B 48" DIA RIM = 963.53 15" N INV. 958.28 12" W INV. 956.48 18" E INV. 958.08

STORM STRUCTURES	
STRUCTURE NAME:	DETAILS:
MH-3	COVER: EJ 1040 TYPE B 48" DIA RIM = 969.83 12" S INV. 958.83 15" NE INV. 958.63
MH-4	COVER: EJ 1040 TYPE B 48" DIA RIM = 961.56 30" S INV. 955.52 30" N INV. 955.52
MH-5	COVER: EJ 1040 TYPE B 48" DIA RIM = 958.69 30" S INV. 954.76 30" N INV. 954.76
R-1	CMP RISER 48" DIA RIM = 958.79 30" S INV. 956.00
R-2	CMP RISER 48" DIA RIM = 958.54 30" N INV. 955.75
RES-1	12" DIA RIM = 964.51 12" E INV. 962.84
RES-2	12" DIA RIM = 963.99 12" W INV. 962.32

STORM SEWER QUANTITIES		
ITEM	QUANTITY	UNITS
12" RCP	1,645	LF
15" RCP	423	LF
18" RCP	525	LF
24" RCP	165	LF
30" RCP	720	LF
36" RCP	48	LF
4" DIA STR	20	EACH
5" DIA STR	6	EACH
6" DIA STR	1	EACH
48" CMP RISER	2	EACH
12" END SECTION	2	EACH
30" END SECTION	2	EACH
36" END SECTION	1	EACH

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45' LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557)

NOTE:
ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOVI STANDARDS AND SPECIFICATIONS.
NOTE:
TRAFFIC SIGNS IN THE ROAD COMMISSION FOR OAKLAND COUNTY (RCOC) RIGHT-OF-WAY WILL BE INSTALLED BY RCOC.
NOTE:
CONTRACTOR TO VERIFY ALL QUANTITIES.

UTILITY CROSSING TABLE			
	STORM	SANITARY	CLEARANCE
	BOTTOM	TOP	(FEET)
XING-3	962.48	957.33	5.15

	STORM	WATER	CLEARANCE
	BOTTOM	TOP	(FEET)
XING-1	950.39	948.35	2.04
XING-6	961.20	959.17	2.03
XING-7	960.84	959.04	1.80
XING-8	956.66	954.65	2.01

	SANITARY	WATER	CLEARANCE
	BOTTOM	TOP	(FEET)
XING-4	956.95	955.43	1.52
XING-5	960.42	958.63	1.79

	SANITARY	STORM	CLEARANCE
	BOTTOM	TOP	(FEET)
XING-2	954.68	953.10	1.58

LEGEND
[Hatched Box] = BACKFILL

SEAL



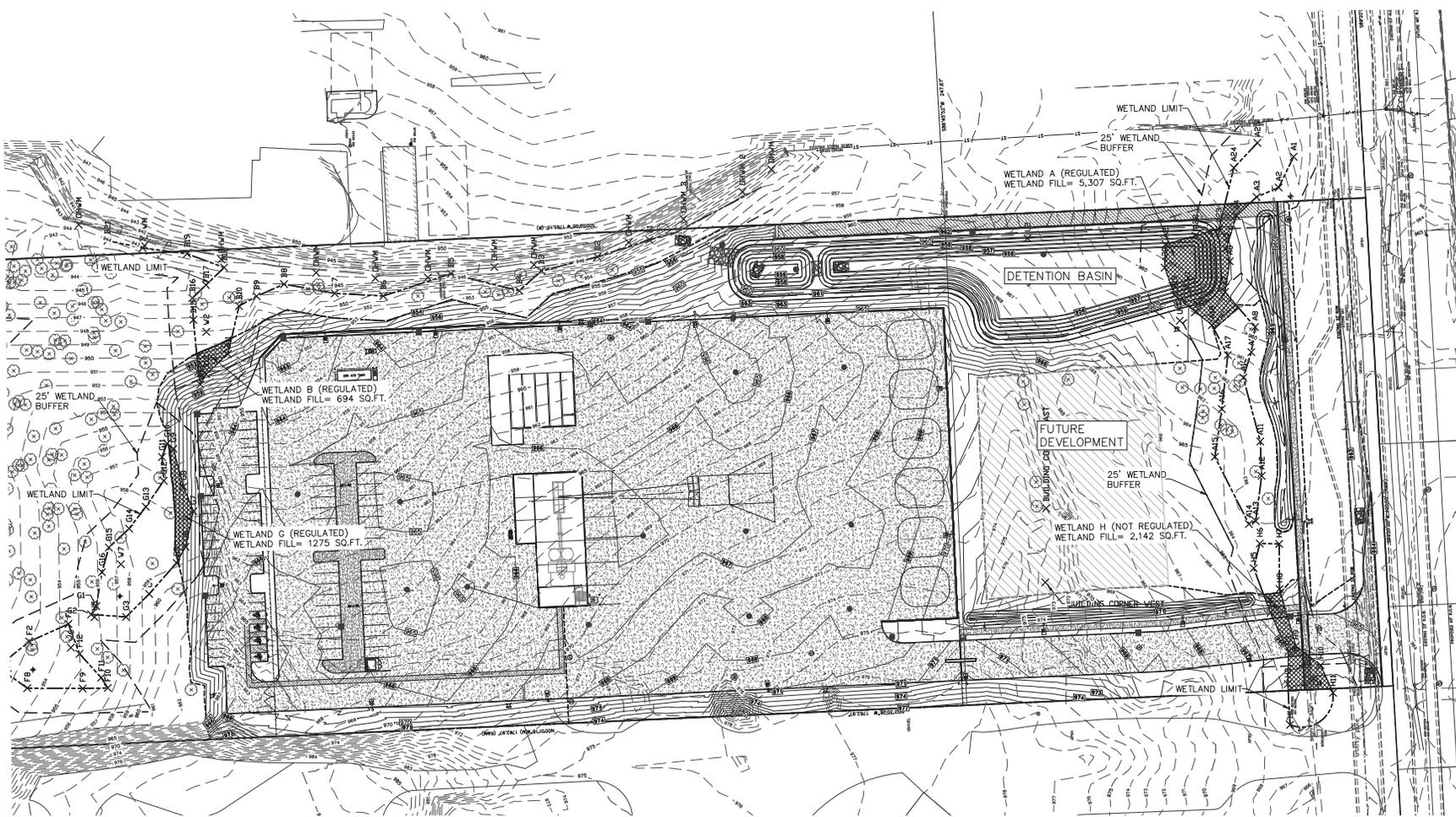
Angle Design & Engineering
22417 Crookwood Drive, Novi, Michigan 48375
Phone: (313) 228-2036 Email: Paul@AngleDesignLLC.com

PROJECT
NOVI CONCRETE PLANT
46844 12 MILE RD.
NOVI MI 48377
SECTION 9

PROJECT NO: 2022-102
SCALE: 1"=50'
DRAWN BY: H.K.
CHECKED BY: F.K.
PROJECT MGR: F.K.
APPROVED BY: F.K.

STORM SEWER PLAN

SHEET NUMBER: CU-102
ISSUE:



LEGEND

- = WETLAND TO BE FILL
- = FUTURE DEVELOPMENT

WETLAND BUFFER IMPACT			
	FILL AREA SQ.FT.	FILL AREA Acres	Fill Volume (Cu.Yd.)
Wetland H (Not Regulated)	4,720	0.11	115.24
Total Fill	4,720	0.11	115.24
	FILL AREA SQ.FT.	FILL AREA Acres	Fill Volume (Cu.Yd.)
Regulated Wetland A	7,086	0.16	277.63
Regulated Wetland B	3,960	0.09	101.96
Regulated Wetland G	4,053	0.09	89.80
Total Fill	15,099	0.35	469.39

WETLAND IMPACT			
	FILL AREA SQ.FT.	FILL AREA Acres	Fill Volume (Cu.Yd.)
Wetland H (Not Regulated)	2,142	0.05	67.50
Total Fill	2,142	0.05	67.50
	FILL AREA SQ.FT.	FILL AREA Acres	Fill Volume (Cu.Yd.)
Regulated Wetland A	5,307	0.12	168.65
Regulated Wetland B	694	0.02	21.19
Regulated Wetland G	1,276	0.03	38.37
Total Fill	7,277	0.17	228.20

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ISSUES	DESCRIPTION	DATE
No.		
1	PRE APPLICATION SET	02-27-2022
2	PRELIMINARY SITE PLAN	06-07-2022
3	REVISED PRELIMINARY SET	08-09-2022
4	REVISED PRELIMINARY SET	09-19-2022

NOT FOR CONSTRUCTION

MISSDIG 811

CONSULTANTS

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PROJECT

NOVI CONCRETE PLANT
46844 12 MILE RD.
NOVI, MI 48377
SECTION 9

PROJECT NO:	SCALE:
2022-102	1"=50'

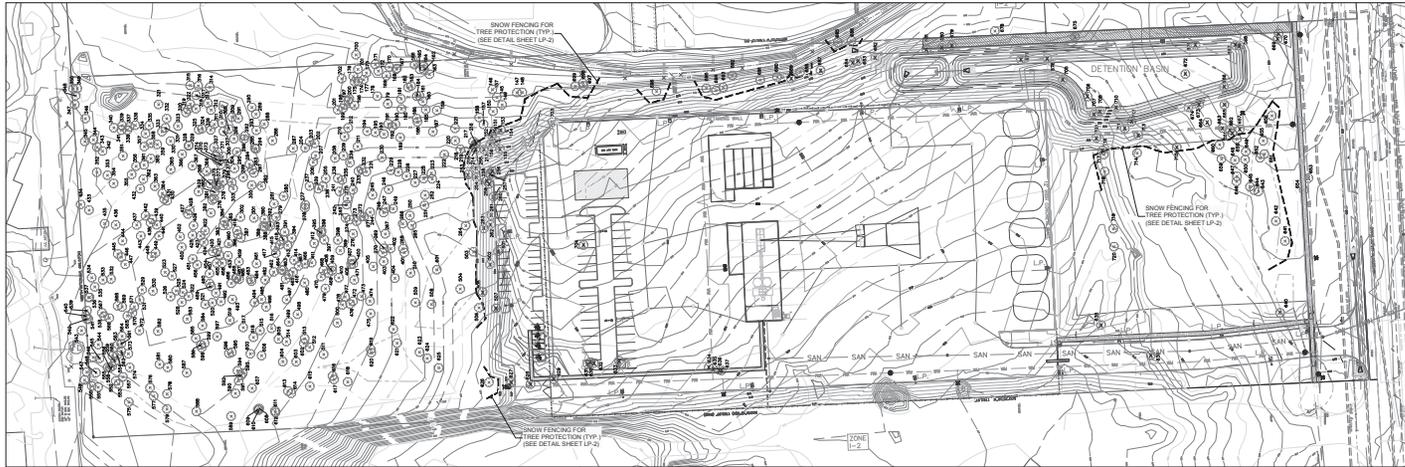
DRAWN BY:	CHECKED BY:
M.K.	F.K.

PROJECT MGR:	APPROVED BY:
F.K.	F.K.

SHEET TITLE

WETLAND IMPACT PLAN

SHEET NUMBER	ISSUE
CW-100	



OVERALL TREE PRESERVATION PLAN

scale: 1" = 80'

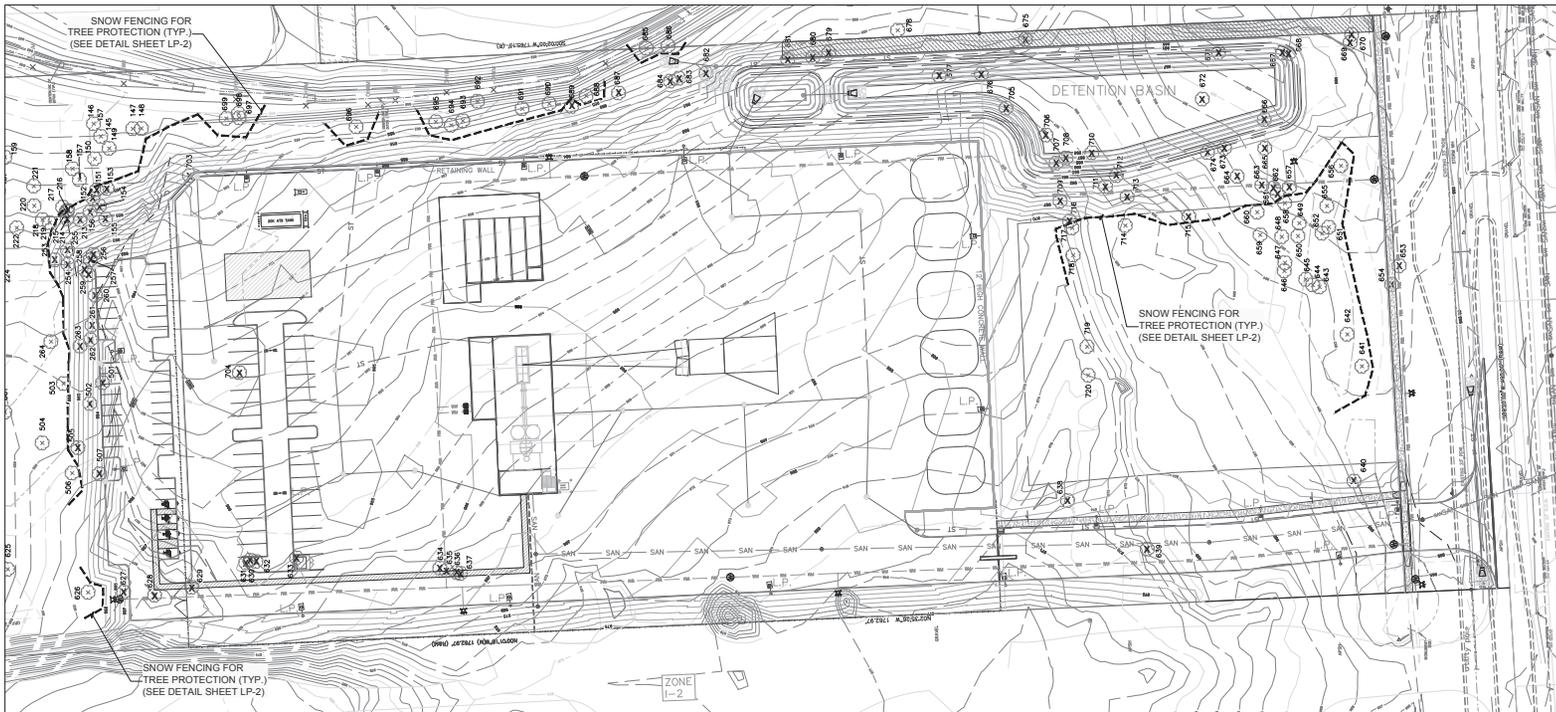
TREE SUMMARY

COLUMN 1: Total: 115	Save: 99	R1: 5	R2: 11	R3: 0	R4: 0	R(N.R.): 0	
COLUMN 2: Total: 115	Save: 111	R1: 3	R2: 1	R3: 0	R4: 0	R(N.R.): 0	
COLUMN 3: Total: 115	Save: 115	R1: 0	R2: 0	R3: 0	R4: 0	R(N.R.): 0	
COLUMN 4: Total: 115	Save: 111	R1: 1	R2: 2	R3: 0	R4: 0	R(N.R.): 1	
COLUMN 5: Total: 118	Save: 86	R1: 16	R2: 30	R3: 2	R4: 0	R(N.R.): 2	
TOTALS	576	502	R1: 25	R2: 44	R3: 2	R4: 0	R(N.R.): 3

GRAND TOTAL

Save:	Trees to be saved:	502
Remove1 (R1):	Tree >8" to <11" to be removed:	25
Remove2 (R2):	Tree >11" to <20" to be removed:	44
Remove3 (R3):	Tree >20" to <29" to be removed:	2
Remove4 (R4):	Tree >30" to be removed:	0
R(N.R.):	Non-Regulated tree (Ash, Callery Pear, & Condition rating at P, VP, D)	3
Replacement trees required:		
Remove1 (R1):	One (1) per >8" to <11" to be removed:	25
Remove2 (R2):	Two (2) per >11" to <20" to be removed:	88
Remove3 (R3):	Three (3) per >20" to <29" to be removed:	6
Remove4 (R4):	Four (4) per >30" to be removed:	0
	Replacement with 2-1/2" trees	119

* Removals and calculations by Nagy Devlin Land Design.



TREE PRESERVATION PLAN for CONSTRUCTION AREA

scale: 1" = 50'

NOTES:

- * See Sheet LP - 1: LANDSCAPE PLANTING PLAN for overall landscape plan, plant list, and calculations for landscape requirements.
- * See Sheet LP - 2: LANDSCAPE NOTES & DETAILS for landscape development notes, landscape planting details, detention pond notes, composition for seed mixes, landscape construction details, snow fencing for tree protection detail, and detail for proper pruning techniques.
- * See Sheet TPP - 1: TREE PRESERVATION PLAN for proposed action to be taken for existing trees and overall tree preservation plan.
- * See Sheet TPP - 2: TREE INVENTORY LIST for tag number, size, common name, botanical name, condition, proposed action, and chart for tree replacement calculations.

date: June 6, 2022
 revised:
 08-08-2022: Revise for site plan changes & City planning review.
 09-21-2022: Revise for site plan changes & City planning review.



PROJECT LOCATION:
 Novi Concrete Plant
 46844 West Twelve
 Mile Road
 Novi, Michigan

LANDSCAPE PLAN FOR:
 Angle Design
 & Engineering, L.L.C.
 22417 Cranbrooke Drive
 Novi, Michigan 48375
 (313) 258-2036

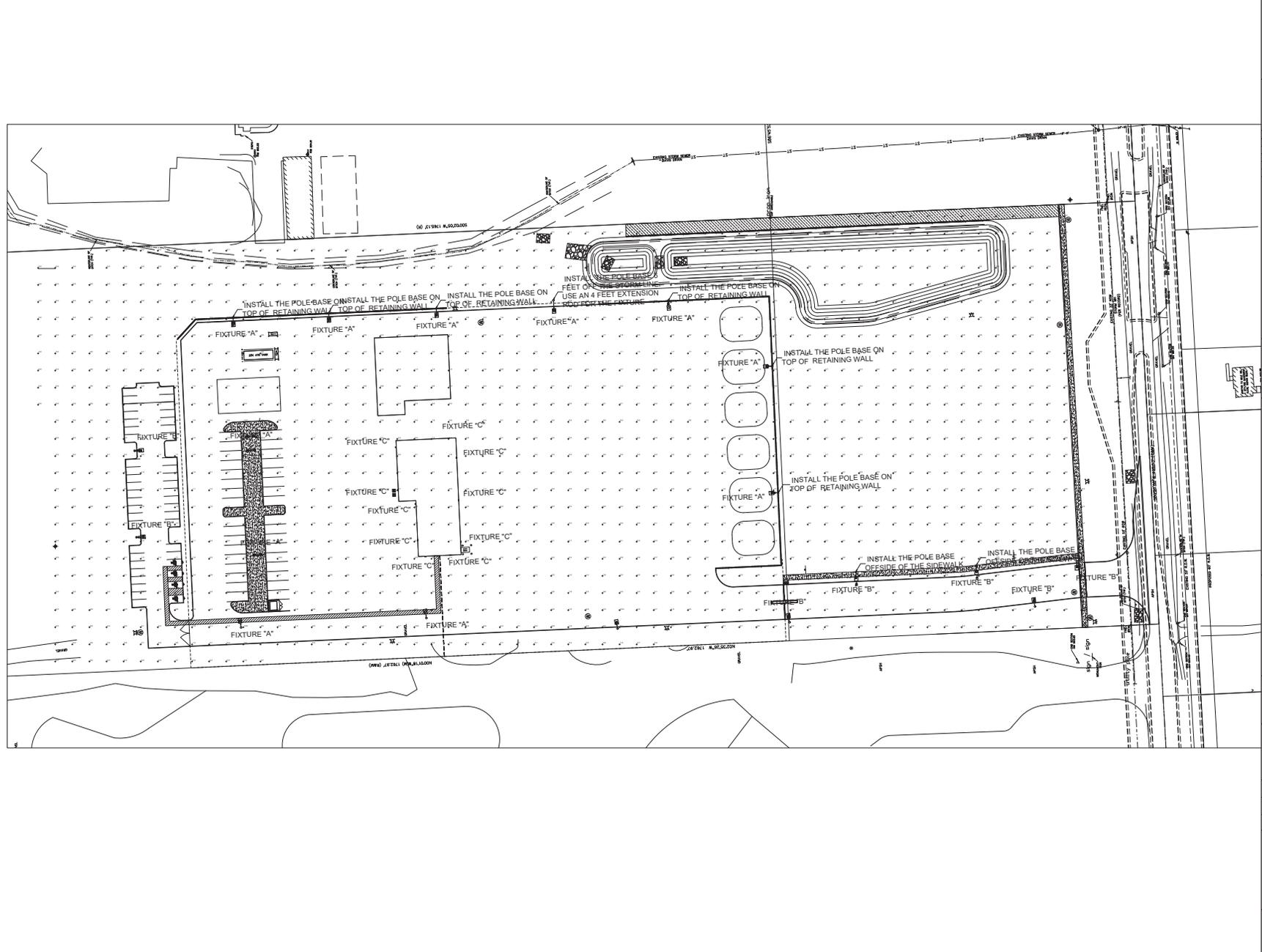
LANDSCAPE PLAN BY:
 Nagy Devlin Land Design
 31736 West Chicago Ave.
 Livonia, Michigan 48150
 (734) 634-9208



Nagy Devlin
 AUTHORIZED SIGNATURE
 ORIGINAL IN BLUE

TPP - 1: TREE PRESERVATION PLAN

* Base data provided by Angle Design & Engineering, L.L.C.



CLIENT



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ISSUES	No.	DESCRIPTION	DATE
	1	PRELIMINARY SITE PLAN	08-27-2022
	2	PRELIMINARY SITE PLAN	08-27-2022
	3		
	4		

NOT FOR CONSTRUCTION



CONSULTANTS

SEAL

Angle Design & Engineering
 22417 Craftbrook Drive, Novi, Michigan, 48375
 Phone: (313) 226-2636 Email: Fkj@angledesignllc.com

PROJECT
 NOVI CONCRETE PLANT
 48844 12 MILE RD.
 NOVI, MI 48377
 SECTION 9

PROJECT NO: 2022-102	SCALE: 1" = 80'-0"
DRAWN BY: VAW	CHECKED BY: VAW
PROJECT MGR: F.K.	APPROVED BY: F.K.

SHEET TITLE

SITE PHOTOMETRIC PLAN

SHEET NUMBER

ISSUE

E-1



MEDUSA



2

1

(506) 722-1886

Finish Legend

MATERIAL	MANUFACTURER	DESCRIPTION AND COLOR
ROOF		
STANDING SEAM INSULATED METAL ROOF PANELS	MICELROY METAL	STYLE: RIDGELINE INSULATED STANDING SEAM ROOF PANEL COLOR: REGAL WHITE
WALL		
INSULATED METAL WALL PANELS	KINGSFAN	STYLE: KINGSFAN K3 SERIES COLOR: RED
METAL WALL PANELS	MICELROY METAL	STYLE: MULTIB COLOR: WHITE

CLIENT



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ISSUES

NO.	DESCRIPTION	DATE
1	SITE PLAN SUBMITTAL	05/06/2022
2	PERMITS	05/27/2022
3	PERMITS REV1	08/02/2022

CONSULTANTS

FormSurfaces Design Group
10913 Marcello Lane
Whitehouse, LaSalle, MI 48318
www.fsdc.com

SYSTEMS SOLUTION ENGINEERING
3200 W. BEAVER RD Phone/Fax: 248.247.1193
SAC, MI 48061 www.sse-mi.com
SAC, MI 48061 www.sse-mi.com

Angle Design & Engineering
20411 Conestoga Drive, Novi, Michigan, 48375
Phone: (248) 239-2000 Email: Paul@anglead.com

conn engineering consultants, inc.
107 N. Ingalls
Livonia, MI 48150
p. 810.438.4030
www.conneng.com

SEAL



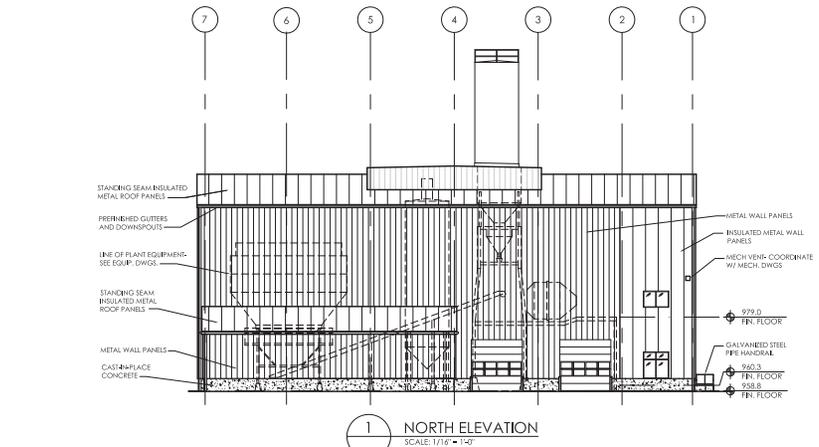
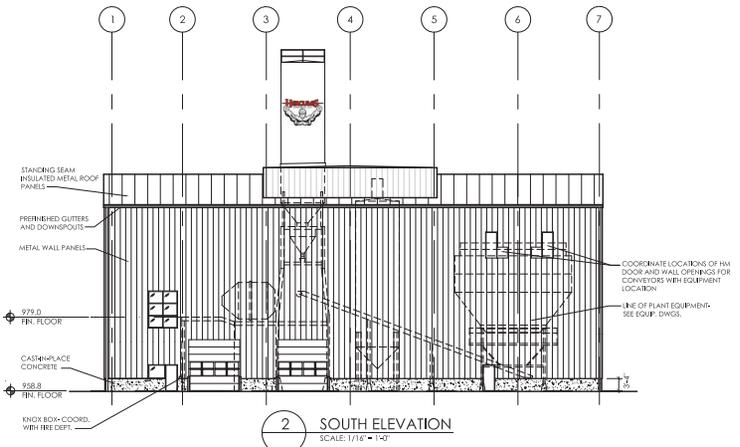
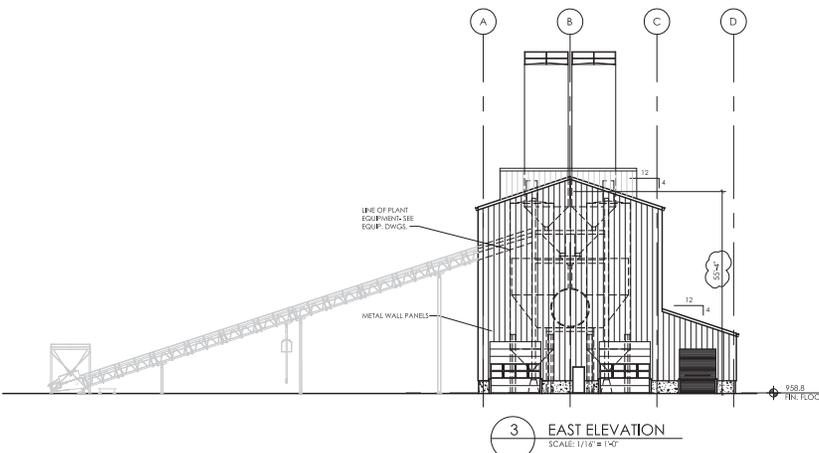
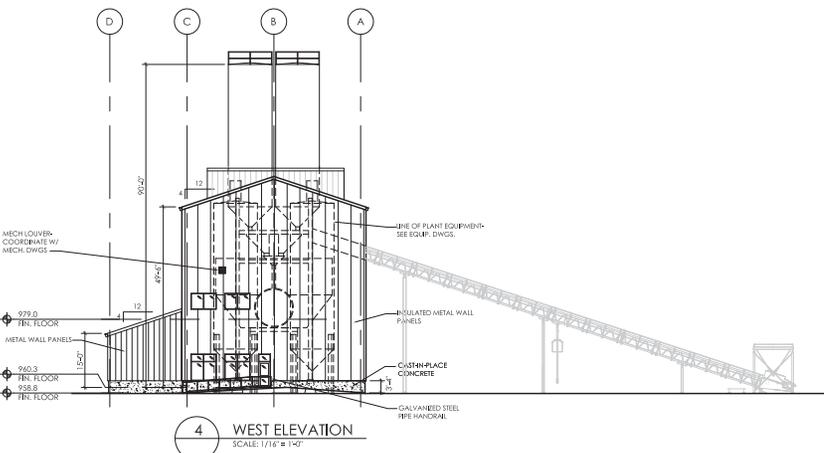
PROJECT
NOVI BATCH PLANT
46844 WEST 12 MILE ROAD
NOVI, MI 48377

PROJECT NO: 80-0007
PDSG PROJECT NO: 20220204 N
DRAWN BY: [blank]
CHECKED BY: [blank]

PROJECT MGR: [blank]
APPROVED BY: [blank]

SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NUMBER
A-201



PLANNING REVIEW



PLAN REVIEW CENTER REPORT

Planning Review NOVI CONCRETE PLANT

JSP 22-08
September 12, 2022

PETITIONER

Crown Enterprises, LLC

REVIEW TYPE

Revised Preliminary Site Plan

PROPERTY CHARACTERISTICS

Section	9	
Site Location	46844 Twelve Mile Rd; 22-09-300-032	
Site School	Novi Community School District	
Site Zoning	I-1 Light Industrial and I-2 General Industrial	
Adjoining Zoning	North	I-2 General Industrial
	East	I-1 Light Industrial and I-2 General Industrial
	West	I-1 Light Industrial and I-2 General Industrial
	South	OST Office Service Technology and RA Residential Acreage
Current Site Use	Driving Range/Vacant	
Adjoining Uses	North	Morrison Industries
	East	Great Oaks Landscape
	West	Copeland Paving & Novi Crushed Concrete
	South	Vacant
Site Size	20.08 acres	
Plan Date	August 10, 2022	

PROJECT SUMMARY

The applicant is proposing to construct an 8,300 square foot concrete plant with two concrete silos, the outdoor storage of associated concrete materials (i.e., aggregates), parking for employees and 35 concrete trucks, on-site diesel fueling tanks, and an on-site wash basin system. The site is located at 46844 Twelve Mile Road. The anticipated hours of operation will be between 6am and 6pm on weekdays with limited weekend operation as determined by the customer. The site has been previously used as a driving range for several years.

RECOMMENDATION

Approval of the Preliminary Site Plan is recommended by Planning staff contingent upon revisions being made to the Wetland Impact Plan and Landscape Plan. The plan mostly complies with the ordinance requirements. All reviewers recommend approval of the Revised Preliminary Site Plan.

ORDINANCE REQUIREMENTS

This project was reviewed for compliance with the City of Novi Zoning Ordinance and any other applicable provisions of the ordinance, as noted. The plans show general compliance with ordinance requirements. Please address any items in **bold** with the next review.

1. Uses Permitted (Sec. 3.1.19.B/C): A concrete plant is a principal permitted use in the I-2, General Industrial, Zoning District. **No portion of the site associated with such use shall extend beyond the I-2, General Industrial, Zoning District boundary except for site grading, landscaping, and stormwater management. Planning Commission approval of the Preliminary Site Plan is required.**
2. Building Height (Sec. 3.1.19.D): The proposed concrete plant has two roofs—one flat roof that has a maximum height of 90 feet and one gable roof that appears to have a height of approximately 50 feet. Currently, the roof measurement for the gable roof is from grade to bottom of the pitch. **The height measurement of the gable roof should be revised to be measured from established grade to the mean height level between the eaves and ridge of the gable roof. Please correct this on Sheet A201.** In addition, the maximum building height in the I-2 Zoning District is 60 feet. While the majority of the structure is 50 feet tall, the 90 foot tall concrete silos exceed the 60 foot height requirement. **The applicant is seeking a variance from the height requirement from the Zoning Board of Appeals.**
3. Loading Spaces (Sec. 5.4.3): The proposed concrete truck loading area is located in the front yard of the site, which is not permitted. **The applicant is seeking a Zoning Board of Appeals variance for the placement of a loading area in the front yard.**
4. Dumpster Enclosure (Sec. 21-145 (c), Code of Ordinances): The proposed dumpster enclosure appears to comply with ordinance standards. However, the height of the dumpster has not been confirmed. **Please provide a standard note on the plans indicating that the height of the enclosure will be a minimum of 1 foot taller than the height of the dumpster.**
5. Woodland Use Permit: A Woodland Use Permit will be required for this project as 82 regulated woodland trees are proposed to be removed. **This permit will require 138 Woodland Replacement Credits and Planning Commission approval. Please indicate if any woodland trees are proposed to be replace on-site in a proposed conservation easement. Any outstanding credits will be required to be paid into the City Tree Fund at \$400 per credit.**
6. Wetland Use Permit: A Major Wetland Use Permit **is still required** for this project as 0.25 acres of regulated wetland is proposed to be filled. **Please revise the plan to reduce the wetland impact below 0.25 acres if you wish to seek a Minor Wetland Use Permit and clearly indicate this in the response letter. In addition, the site plan notes a future development area near the Twelve Mile Road frontage. If this site were to be developed and the remainder of Wetland A were to be filled, a Major Wetland Use Permit and on-site mitigation would be required at that time (only if the current plan is revised to reduce current wetland impacts below 0.25 acres). Please refer to the Wetland Review letter for additional information.**
7. Same Side Driveway Spacing Waiver (Sec. 11-216.d.1.d): A same side driveway spacing waiver is required for the proposed access drive on Twelve Mile Road. The proposed driveway is 122.4 feet from the driveway to the west and 230 feet is required. The distance to the driveway to the east has not been indicated and 230 feet is required. **Please indicate the distance to the driveway to the east in the response letter and on the plans. AECOM and City Staff supports the waiver as the site could not be accessed from Twelve Mile Road without a waiver.**
8. Sidewalk – Distance to Back of Curb Waiver (EDM 7.4): The sidewalk distance to the back of the curb along the access drive is currently 3 feet from the edge of curb. % feet is required. The current plan does not meet this requirement and will require a waiver. **Please indicate if you wish to seek**

a waiver, which is not supported by staff and AECOM, or if you plan on revising the plans to address this issue in the next submittal.

9. Photometric Plan (Sec. 5.7): A photometric plan has been provided. **However, there are several items that need to be addressed:**
 - a. Fixture Height/Maximum Height (Sec. 5.7.A.2.ii, Sec. 5.7.3.A): **Please provide fixture height for each fixture.** The fixture height shall not exceed 25 feet on the I-1 portion of the site, and 60 feet on the I-1 portion of the site.
 - b. Hours of Operation (Sec. 5.7.A.2.ii): **Please provide the lighting hours of operation.**
 - c. Standard Notes (Sec. 5.7.3.B): **Please provide the following standard notes as listed below.**
 - i. "Electrical service to light fixtures shall be placed underground."
 - ii. "Flashing light shall not be permitted."
 - iii. "Only necessary lighting for security purposes & limited operations shall be permitted after a site's hours of operation."
 - d. Average Light Level (Sec. 5.7.3.E): The average light level of the site has not been provided. It shall not exceed a 4:1 ratio to maintain a consistent level of lighting across the site. **Please provide this calculation with the next submittal.**
 - e. Minimum Illumination (Sec. 5.7.3.K): The minimum illumination levels have not been met in the parking areas, loading areas, and walkways. **Please increase the minimum illumination levels in these areas to comply with the ordinance requirements.**
10. Façade: A Section 9 Façade Waiver is required for the overage of metal panels on all elevations, which is supported by staff. **This will require Planning Commission approval.**
11. Fuel Storage Tank: The proposed diesel fueling system and storage tank shall meet all Building and Fire Code Requirements.
12. Signage: For sign permit information please contact Maureen Underhill at 248-347-0438 or munderhill@cityofnovi.org in the Code Compliance Division for more information.
13. Planning Chart: Please refer to the attached Planning Chart for additional comments to address in the next submittal.

OTHER REVIEWS

- a. Engineering Review: Engineering is recommending approval of the Preliminary Site Plan with comments to be addressed as part of the Final Site Plan submittal.
- b. Landscape Review: Landscape is recommending **approval with conditions** of the Preliminary Site Plan provided that several landscape waivers are adequately addressed. All comments are to be addressed as part of the Final Site Plan Submittal and in a response letter.
- c. Woodland Review: Woodland is recommending approval of the Preliminary Site Plan with comments to be addressed as part of the Final Site Plan Submittal.
- d. Wetland Review: Wetland is recommending **approval with conditions** of the Preliminary Site Plan provided that the proposed Wetland impacts be reduced or clarified. All comments are to be addressed as part of the Final Site Plan Submittal and in a response letter.
- e. Traffic Review: Traffic is recommending **approval with conditions** of the Preliminary Site Plan with comments to be addressed as part of the Final Site Plan Submittal.
- f. Façade Review: Façade is recommending **approval with conditions** of the Preliminary Site Plan and a Section 9 Façade Waiver for the overage of metal panel on all elevations.
- g. Fire Review: Fire is recommending **approval with conditions** of the Preliminary Site Plan with comments to be addressed on the next submittal.

NEXT STEP: PLANNING COMMISSION AND RESPONSE LETTER

The Preliminary Site Plan, Major Wetland Use Permit, Woodland Use Permit, and Stormwater Management Plan will require a 5-day public hearing and approval from the Planning Commission. Based on the submittal of this request, the earliest tentative date for Public Hearing is **Wednesday, September 28, 2022, at 7pm if all outstanding comments have been addressed.** Please provide the following via email by **September 21, 2022**, once this stage is reached:

1. Site Plan submittal in PDF format (maximum of 10MB). **NO CHANGES MADE.**
2. A response letter addressing ALL the comments from ALL the review letters and a request for waivers/variances as you see fit.
 - a. Please let us know by the end of the day tomorrow if you plan on reducing the wetland impacts further, as it will impact the notice that goes to the paper.
3. A color rendering of the Site Plan (to be used for Planning Commission presentation).

NEXT STEP: ZONING BOARD OF APPEALS

After receiving Planning Commission's approval of the Preliminary Site Plan, at least two variances from the Zoning Board of Appeals will be necessary prior to the approval of the Final Site Plan. Please submit this application to Anita Wagner to go before the Zoning Board of Appeals. The deadline for Zoning Board of Appeals applications is typically the first of the month. **The deadline to submit for the October 11, 2022 Zoning Board of Appeals meeting, is September 1, 2022.**

FUTURE STEP: FINAL SITE PLAN SUBMITTAL

After receiving Planning Commission's approval of the Preliminary Site Plan, please submit the following for review:

1. **Seven** copies of Final Site Plan sets (24" x 36", folded, signed and sealed) addressing ALL comments from Preliminary Site Plan Review.
2. Response letter addressing ALL comments from ALL review letters and **refer to sheet numbers where the change is reflected.**
3. Final Site Plan Application
4. Final Site Plan Checklist
5. No Revision Façade Affidavit (only if no façade changes have been made)
6. An itemized engineering cost estimate including sanitary sewer, watermain, storm sewer, paving and grading costs, size 8.5" x 11" (The cost estimate should not include soil erosion or demolition costs.)
7. An itemized landscaping cost estimate including greenbelt and greenbelt ornamental trees, perennials, pond plantings, shrubs, edging, mulch, seed mix and seeded lawn, size 8.5" x 11" (The cost estimate should not include woodland trees, replacement trees or mitigation.)
8. An Other Agencies Checklist

FUTURE STEP: ELECTRONIC STAMPING SET SUBMITTAL AND RESPONSE LETTER

After receiving Final Site Plan approval, plans addressing the comments in all the staff and consultant review letters should be submitted electronically for informal review and approval prior to printing Stamping Sets. A letter from either the applicant or the applicant's representative addressing comments in this and other review letters and associated charts is to be submitted with the electronic stamping set. This letter should address all comments in ALL letters and ALL charts and **refer to sheet numbers where the change is reflected.** *If required, drafts for all legal documents with a legal transmittal are to be submitted along with stamping sets.*

FUTURE STEP: STAMPING SET APPROVAL

Stamping sets will be required for this project. After having received all the review letters from City staff the applicant should make the appropriate changes on the plans and submit **12 size 24" x 36" copies, folded, with signature and seal (may be electronic)** to the Community Development Department for final Stamping Set approval.

FUTURE STEP: PRE-CONSTRUCTION MEETING

At this time, **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, so it is suggested you contact Sarah Marchioni (248.347.0430 or smarchioni@cityofnovi.org) once the Final Site Plan has been approved to begin the Pre-Con checklist. If you have questions regarding the checklist or the Pre-Con itself, please contact Sarah.

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. 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 ccarroll@cityofnovi.org.



Christian Carroll, Planner



PLANNING REVIEW CHART: I-1 and I-2, Light Ind. & General Ind. Zoning District

Review Date: September 12, 2022
Review Type: Preliminary Site Plan Review
Project Name: **JSP22-08 NOVI CONCRETE PLANT**
 22-09-300-032; 46844 Twelve Mile Rd
Plan Date: August 10, 2022
Prepared by: Christian Carroll, Planner
E-mail: ccarroll@cityofnovi.org **Phone:** (248) 735-5607

Items in **Bold** need to be addressed by the applicant with next submittal. *Italicized* items should be noted.

Item	Required Code	Proposed	Meets Code	Comments
Zoning and Use Requirements				
Master Plan <i>(adopted July 27, 2017)</i>	Industrial Research Development and Technology/Heavy Industrial	Concrete Plant		
Zoning <i>(Effective January 8, 2015, as amended)</i>	I-1: Light Industrial District and I-2: General Industrial District	No Change	Yes	
Uses Permitted <i>(Sec 3.1.19.B & C)</i>	A Concrete Plant is a Principal Permitted Use in the I-2 Zoning District and is not a permitted use in the I-1 Zoning District.	Concrete Plant	Yes	Planning Commission approval of the Preliminary Site Plan is required.
Non-Residential Open Storage <i>(Sec 3.14.1.B.iv)</i>	Permitted as Special Land Use when conducted in conjunction with and accessory to otherwise permitted use in I-1	Open storage of materials proposed, not in I-1	NA	<i>A Concrete Plant is not a permitted use in the I-1 Zoning District.</i>
Outdoor Storage Yards <i>(Sec. 4.55)</i>	In the I-2 district, outdoor storage yards are permitted either as a principal as a use accessory to a principal use of a site when such yards are totally obscured by a masonry wall, landscaped earth berm, chain link fence with heavy screen plantings, or combinations thereof, the height, location and extent of which shall be according to the requirements of Section 5.5 of this Ordinance, except as hereinafter exempted in Section 3.15.2 for a location within a planned industrial park. Whenever outdoor storage is the principal use of the parcel, no outdoor storage shall extend into the required front yard setback of the district and no wall, fence or other screening devices shall extend into the required front yard setback.	Accessory use to Concrete Plant	Yes	<i>Permitted in the I-2 portion of the site only. Brick embossed aggregate screening wall shall be sufficient.</i>
Height, Bulk, Density, and Area Limitations <i>(Sec. 3.1.19.D)</i>				
Frontage on a Public Street <i>(Sec. 5.12)</i>	Frontage on a Public Street is required.	Frontage on Twelve Mile Road	Yes	
Access to a Major Throughfare <i>(Sec.</i>	Vehicular access shall be provided only to an existing or	Driveway onto Twelve Mile –	Yes	

Item	Required Code	Proposed	Meets Code	Comments
5.13)	planned major thoroughfare or freeway service drive OR access driveway on other street type is not across street from existing or planned single-family uses.	Arterial/Major Thoroughfare		
Minimum Zoning Lot Size for each Unit in Ac (Sec 3.6.2.D)	Except where otherwise provided in this Ordinance, the minimum lot area and width, and the maximum percent of lot coverage shall be determined on the basis of off-street parking, loading, greenbelt screening, yard setback or usable open space	20.04 acres gross; 9.92 acres net	Yes	
Minimum Zoning Lot Size for each Unit: Width in Feet			NA	
Open Space Area	----	----	----	----
Maximum % of Lot Area Covered (By All Buildings)	(Sec 3.6.2.D)	49.4%	Yes	
Building Height (Sec. 3.1.19.D)	40 ft. (I-1 max height) 60 ft. (I-2 max height)	50 ft (Bldg.) 90 ft (top of plant)	No	Please revise the height calculation for the gable roof (grade to the <u>middle</u> of the roof). The applicant is seeking a variance from the Zoning Board of Appeals.
Building Setbacks (Sec. 3.1.19.D) I-1 District/I-2 District				
Front (South)	40 ft. / 100 ft	~720 ft	Yes	
Side (West)	20 ft. / 50 ft	118 ft	Yes	
Side (East)	20 ft. / 50 ft	241 ft	Yes	
Rear (North)	20 ft. / 50 ft	~720 ft	Yes	
Parking Setbacks (Sec. 3.1.19.D) Refer to applicable notes in Sec. 3.6.2				
Front (South)	40 ft. (See 3.6.2.E)	~1,000 ft	Yes	
Side (West)	10 ft. / 20 ft. in I-2	67 ft	Yes	
Side (East)	10 ft. / 20 ft in I-2	145 ft	Yes	
Rear (North)	10 ft. / 20 ft in I-2	~500 ft	Yes	
Note to District Standards (Sec. 3.6.2)				
Exterior Side Yard Abutting a Street (Sec 3.6.2.C)	All exterior side yards abutting a street shall be provided with a setback equal to front yard.	Does not apply	NA	
Off-Street Parking in Front Yard (Sec 3.6.2.E)	Off-street parking is allowed in front yard if:			No parking in front yard shown.
	The site is a minimum 2 acre site	Complies (20 acres)	Yes	
	Does not extend into the minimum required front yard	Provided (40+ ft proposed)	Yes	
	Cannot occupy more than 50% of the area between min. front yard setback & bldg. setback,	Calculation not provided	NA	
	Must be screened by brick wall or landscaped berm 2.5 ft tall	No berm shown	NA	
Lighting compatible with	No lighting	NA		

Item	Required Code	Proposed	Meets Code	Comments
	surrounding neighborhood	shown		
Off-Street Parking in Side and Rear Yards (Sec 3.6.2.F)	Off-street parking is allowed in side and rear yards if the site does not abut residential. If it does, additional conditions apply: i. shall not occupy more than 50% of side yard area abutting residential ii. parking setback no less than 100 ft from res district	Side yards not adjacent to residential, located in rear yard	Yes	
Setback from Residential District - Building (Sec 3.6.2.H)	I-1 and I-2 districts, five (5) feet of horizontal setback for each foot of building height, or one-hundred (100) feet, whichever is greater. (unless separated by a thoroughfare or RR ROW)	Complies - separated by Twelve Mile Road.	Yes	<i>Building is over 720 feet from the roadway. If not separated by a thoroughfare, 450+ feet would be required.</i>
Wetland/Watercourse Setback (Sec 3.6.2.M)	A setback of 25ft from wetlands and from high watermark course shall be maintained	25 foot buffer shown	Yes	<i>See Wetland Review for more detailed comments.</i>
Additional Height (Sec 3.6.2.O)	Additional heights for selected buildings is allowed based on conditions listed in Sec 3.6.2.O.	Not permitted due to type of use	NA	
Parking setback screening (Sec 3.6.2.P)	Required parking setback area shall be landscaped per Sec. 5.5.3.	In rear yard and screened	Yes	<i>See Landscape Review.</i>
Modification of parking setback requirements (Sec 3.6.2.Q)	The Planning Commission may modify parking setback requirements based on conditions listed in Sec. 3.6.2.Q	Not applicable	NA	
I-2 District Required Conditions (Sec. 3.15)				
Building Setback Reductions (Sec. 3.15.1.A)	On sites located within planned industrial park > 40 acres, and is enclosed/screened, building setbacks may be reduced: Front: 50 feet Side: 30 feet Rear: 30 feet	Not part of an industrial park.	NA	
Landscape Screening Adjacent to I-2 District (Sec. 3.15.1.B)	Screening required between individual sites may be modified adjacent to other I-2 land: 3' landscape berm 5' high masonry or poured concrete with brick texture 5' high decorative fence of treated lumber, cedar or redwood	Adjacent to I-2 land	TBD	See Landscape Review.
Screening of Outdoor Storage (Sec. 3.15.2.A)	Outdoor storage of any equipment or material shall not extend to a greater height than the on-site obscuring screen	12 ft tall Brick embossed aggregate screening wall	Yes	
Loading Zone Screening	When any loading/unloading area shall be visible from any	Screened effectively	Yes	

Item	Required Code	Proposed	Meets Code	Comments
(Sec. 3.15.2.B)	residential or commercial district, or road or street, it shall be effectively screened from view			
Permitted Uses Adjacent to Residential (Sec. 3.15.2.C)	Where adjacent to residential district, berm height 10 feet minimum (except when separated by street, etc.)	Separated by Street	NA	Please refer to Sec. 3.14.5.E for standards and see Landscape Review for more information.
Parking and Loading Requirements				
Number of Parking Spaces (Sec. 5.2.12.E, as amended December 26, 2019)	Industrial Establishments & Related Offices: 1 space per 700 sf usable floor area OR 5 spaces + 1 space for each 1.5 employees in the largest working shift, whichever is greater 8,300 sf/700 sf = 12 spaces required 5 spaces + 40 employees/1.5 -> 27 = 32 spaces required	50 spaces provided and 38 truck parking spaces provided	Yes	
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" curb at these locations and along landscaping	9' x 17.5' spaces & 11' x 25.5' truck spaces with 4" curb	Yes	
End Islands (Sec. 5.3.12)	- 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 ft. wide, have an outside radius of 15 ft., and be constructed 3 ft. shorter than the adjacent parking stall	End islands provided	Yes	
Parking stall located adjacent to a parking lot entrance (public or private) (Sec. 5.3.13)	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	Complies	Yes	
Barrier Free Spaces (Barrier Free Code)	Based on the requirement of 32 spaces, 1 standard and 1 van-accessible spaces are required	2 van, 2 standard provided	Yes	
Barrier Free Space Dimensions (Barrier Free Code)	- 8' wide with an 8' wide access aisle for van accessible spaces - 8' wide with a 5' wide access aisle for regular accessible spaces	Complies	Yes	
Barrier Free Signs (Barrier Free Code)	One sign for each accessible parking space.	Complies	Yes	
Minimum number	Industrial: Five (5) percent of	2 spaces	Yes	

Item	Required Code	Proposed	Meets Code	Comments
of Bicycle Parking (Sec. 5.16.1)	required automobile spaces, minimum two (2) spaces	provided		
Bicycle Parking General requirements (Sec. 5.16)	No farther than 120 ft. from the entrance being served	Complies	Yes	
	When 4 or more spaces are required for a building with multiple entrances, the spaces shall be provided in multiple locations	2 spaces	NA	
	Spaces to be paved and the bike rack shall be inverted "U" design, 36" tall. Shall be accessible via 6 ft. paved sidewalk	36" tall, 6 ft walk	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	Complies	Yes	
Loading Spaces (Sec. 5.4.3)	All loading and unloading operations shall be conducted in the rear yard, except in those instances where: - The Industrial district abuts a residential district, in which case, the conditions of Section 3.14.5 shall apply, or, - An interior side yard is located adjacent to I district, EXPO district, or EXO Overlay district property, loading and unloading may be conducted in that interior side yard when located near the rear of the building. When loading and unloading is to be conducted within an interior side yard, the City may require aesthetic screening of the facility in accordance with the guidelines set forth in Section 5.5.	Concrete loading in the front yard, I-2 abuts I-1, which abuts RA (Residential)	No	Loading only allowed in the interior side yard and the rear yard. The applicant is seeking a variance from the Zoning Board of Appeals.
Dumpster, Accessory Structures, and Rooftop Equipment (Sec. 4.19)				
Dumpster (Sec 4.19.2.F)	- 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	Complies	Yes	
Dumpster Enclosure	- Screened from public view - A wall or fence 1 ft. higher than	Complies	Yes	Please add note stating that the enclosure will be

Item	Required Code	Proposed	Meets Code	Comments
(Sec. 21-145. (c) Chapter 21 of City Code of Ordinances)	<ul style="list-style-type: none"> - 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 			a minimum of 1 foot taller than the dumpster.
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	None proposed	NA	
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.	None proposed	NA	
Sidewalks and Other Requirements				
Non-Motorized Plan	5 foot sidewalk along Twelve Mile Road is required.	5 foot sidewalk shown	Yes	
Public Sidewalks (Chapter 11, Sec.11-256(b))	Connection from property to main sidewalk system is required.	6 foot path shown	Yes	
Building Code and Other Requirements				
Woodlands (City Code Ch. 37)	Replacement of removed trees	82 trees proposed for removal	TBD	Woodland Permit approval from the Planning Commission is required. See Woodland Review for more detail.
Wetlands (City Code Ch. 12, Art. V)	Mitigation of removed wetlands at ratio of 1.5:1 emergent wetland, 2:1 for forested wetlands	0.25 acres of wetland fill	TBD	Major Wetland Use Permit approval is currently required. See Wetland Review for more detail.
Design and Construction Standards Manual	Land description, Sidwell number (metes and bounds for acreage parcel, lot number(s), Liber, and page for subdivisions).	Complies	Yes	
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	<i>Additional sheets may be requested, as necessary.</i>
Economic Impact Information	<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 	\$5.5 million project, 10 temporary jobs, 40 full-time jobs	Yes	

Item	Required Code	Proposed	Meets Code	Comments
	known)			
Building Exits	Building exits must be connected to sidewalk system or parking lot.	Appear to be connected	Yes	
Phasing	All projects must be completed within two years of the issuance of any starting permit or phasing plan should be provided	Not proposed	NA	<i>Future development, if any, to be submitted separately.</i>
Other Permits and Approvals				
Development/ Business Sign (City Code Sec 28.3)	The leading edge of the sign structure shall be a minimum of 10 ft. behind the right-of-way. Entranceway shall be a maximum of 24 square feet, measured by completely enclosing all lettering within a geometric shape. Maximum height of the sign shall be 5 ft.	None shown	NA	Contact Maureen Underhill at 248.735.5602, munderhill@cityofnovi.org for more information.
Project & Street Naming Committee	Some projects may need approval from the Street & Project Naming Committee	Not required	Yes	Contact Ben Peacock at 248.347.0475 or via email bpeacock@cityofnovi.org
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	Provided	Yes	
Lighting Plan (Sec. 5.7.A.i)	Site plan showing location of all existing & proposed buildings, landscaping, streets, drives, parking areas & exterior lighting fixtures	Provided	Yes	
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.	Provided	Yes	
Lighting Plan (Sec.5.7.A.2.ii)	Specifications for all proposed & existing lighting fixtures	Provided	Yes	Please provide fixture height for each fixture and the lighting hours of operation.
	Photometric data	Provided	Yes	
	Fixture height	Not provided	No	
	Mounting & design	Provided	Yes	
	Glare control devices (Also see Sec. 5.7.3.D)	Provided	Yes	
	Type & color rendition of lamps	Provided	Yes	
Hours of operation	Not provided	No		

Item	Required Code	Proposed	Meets Code	Comments
	Photometric plan illustrating all light sources that impact the subject site, including spill-over information from neighboring properties	Spillover minimized	Yes	
Maximum Height (Sec. 5.7.3.A)	Height not to exceed maximum height of zoning district (or 25 ft. where adjacent to residential districts or uses	Not provided	No	Please provide the height of all fixtures. The fixture height shall not exceed 25 feet on the I-1 portion of the site, and 60 feet on the I-2 portion of the site.
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 	Not provided	No	Please provide these standard notes on the plan.
Security Lighting (Sec. 5.7.3.H)	<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 - Lighting for security purposes shall be directed only onto the area to be secured. 	Provided	Yes	
Average Light Level (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	Not provided	No	Please provide this calculation with the next submittal.
True Color Lighting (Sec. 5.7.3.F)	Use of true color rendering lamps such as metal halide is preferred over high & low pressure sodium lamps	Provided	Yes	
Min. Illumination (Sec. 5.7.3.K)	Parking areas: 0.2 min	0.1 fc	No	Increase minimum lighting levels in the parking area, loading/unloading area, and walkway (sidewalk).
	Loading & unloading areas: 0.4 min	0 fc	No	
	Walkways: 0.2 min	0 fc	No	
	Building entrances, frequent use: 1.0 min	2.7 fc	Yes	
	Building entrances, infrequent use: 0.2 min	--	NA	
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	Appears to comply	Yes	

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 - No direct light source shall be visible at the property line (adjacent to residential) at ground level	Complies	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. 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

09/06/2022

Engineering Review

Novi Concrete Plant
JSP22-0008

Applicant

Crown Enterprises, LLC

Review Type

Revised Preliminary Site Plan

Property Characteristics

- Site Location: North side of Twelve Mile Road, west of West Park Drive
- Site Size: 20.04 acres gross
- Plan Date: 08/09/2022
- Design Engineer: Angle Design & Engineering

Project Summary

- Construction of a concrete plant and approximately 8,300 square-foot building and associated parking. Site access would be provided via one proposed entrance on Twelve Mile Road.
- Water service would be provided by a 16-inch extension along the north Twelve Mile Road right-of-way from the existing 24-inch water main along the west side of West Park Drive, then looping an 8-inch main on-site. A 2-inch domestic lead for the building and a 4-inch lead for plant operations would be provided, along with five on-site hydrants and three right-of-way hydrants on Twelve Mile Road.
- Sanitary sewer service would be provided by an extension of the existing 10-inch sanitary sewer along the south side of Twelve Mile Road, then crossing Twelve Mile and traversing the site with an 8-inch main. A 6-inch lead would then be provided to serve the building from the 8-inch main, along with a monitoring manhole.
- Storm water would be collected by a single storm sewer collection system and conveyed/discharged to a single detention basin near the southeast corner of the parcel.

Recommendation

Approval of the Revised Preliminary Site Plan is recommended, with items to be addressed at Final Site Plan submittal.

Comments:

The Preliminary 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 Final Site Plan submittal:

General

1. **As a reminder, the widening and boulevarding of Twelve Mile Road is currently in the planning/design/funding phase as a Road Commission for Oakland County project and would impact this development's frontage.**
 - a. **No timeframe for that project has been established.**
 - b. **The plans appear to reasonably account for the most current plans for the road project, including additional right-of-way and sidewalk location.**
 - c. **Please be aware that the Twelve Mile plans are still only "30% plans" and subject to change at any time. The Engineering Division will keep the developer apprised of the most current plans.**
2. **Only at the time of the printed Stamping Set submittal,** provide the City's standard detail sheets for water main (5 sheets), sanitary sewer (3 sheets), storm sewer (2 sheets), and paving (2 sheets). The most updated details can be found on the City's website at this location: <https://cityofnovi.org/services/public-works/engineering-division/engineering-standards-and-construction-details>
3. A right-of-way permit will be required from the City of Novi and Oakland County.
4. A same-side driveway spacing **Waiver**, granted by the Planning Commission, would be required for the proposed location of the entrance drive with respect to the adjacent drive to the west (approximately 120' proposed vs. 230' required). The Engineering Division supports this waiver request.
5. Provide a traffic control plan for the proposed road work activity on Twelve Mile Road (or per RCOC requirements).
6. Construction materials tables have been provided on the utility plans. Ensure they are revised throughout the plan review process if quantities change.
7. Generally, all proposed trees shall remain outside utility easements. Where proposed trees are required within a utility easement, the trees shall maintain a minimum 5-foot horizontal separation distance from any existing or proposed utility. All utilities shall be shown on the landscape plan, or other appropriate sheet, to confirm the separation distance.
8. **Regarding backflow prevention:**
 - a. **Although irrigation is not shown on the plans, an \$8,000 budget line for underground irrigation is indicated on sheet LP-1. Clarify whether irrigation will be connected to the public water supply or a well.**
 - b. **For common area irrigation systems connected to public water supplies:** Install a backflow prevention Reduced Pressure Zone Assembly (RPZ) with

an ASSE 1013 listing approval at each tap to the public water supply. A minimum clearance of 12-inches measured from the bottom of pressure relief valve to the finished landscaped grade shall be required. Provide a detail showing the RPZ installation setup and height above grade. If backflow preventer is to be enclosed, provide a detail of the enclosure with required drainage outlets. Show all locations on a site plan. A plumbing permit is required for the installation of the backflow preventer. Installation of the backflow preventer shall be in such a manner as to not require blowing out the system through the backflow preventer. Drain ports and blow out ports shall be included. Any deviations from these requirements must be approved through the Novi Water & Sewer Division Cross Connection Control Specialist (248-735-5661).

- c. For common area irrigation systems connected to wells, add the following note to the plans:** "Irrigation systems connected to a public water supply are governed by the City of Novi Cross-connection Control Program and subject to review and approval. Irrigation systems utilizing a pond, well or other private source of water supply are exempt from the City's CCCP. Any alterations to a private source of water to a public water supply shall be submitted to the Novi Water & Sewer Division for review and approval prior to any such connections. Plumbing permits will be required for these connections."
- d. See attachments from the City of Novi Water & Sewer Division for further information.**

Water Main

9. Water main basis of design noted on sheet CU-100. Noted that a hydrant flow test will be performed.
10. Once no further design changes are anticipated, three (3) sealed sets of revised utility plans along with the Michigan Department of Environment, Great Lakes & Energy (EGLE) permit application for water main construction, the Streamlined Water Main Permit Checklist, and electronic utility plan should be submitted to the Engineering Division for review. Utility plan sets shall include only the cover sheet, any applicable utility sheets, and the standard detail sheets.

Sanitary Sewer

11. Only once no further design changes are anticipated, three (3) sealed sets of revised utility plans along with the Michigan Department of Environment, Great Lakes & Energy (EGLE) permit application, electronic utility plan for sanitary sewer construction, and the Streamlined Sanitary Sewer Permit Certification Checklist should be submitted to the Engineering Division for review. Utility plan sets shall include only the cover sheet, any applicable utility sheets, and the standard detail sheets. It should be indicated with the application if an expedited EGLE review is requested. EGLE will charge a fee that can be paid directly to the State.

Storm Water Management Plan

12. **Noted that the Storm Water Management Plan (SWMP) for this development has been designed in accordance with both:**
 - a. **The Storm Water Ordinance and Chapter 5 of the Engineering Design Manual of the City of Novi.**
 - b. **The updated stormwater standards of the Oakland County Water Resources Commissioner (WRC); this is due to the fact that the ultimate discharge is to a County drain.**
13. Rather than a sediment forebay, a permanent water surface and storage volume are preferred. Refer to section 5.6.1 A. of the Engineering Design Manual for depth and volume requirements for wet detention basins.
14. An adequate maintenance access route to the basin outlet structure and any other pretreatment structures shall be provided (15 feet wide, maximum running slope of 1V:5H, maximum cross slope of 3%, and able to withstand the passage of heavy equipment). Verify the access route does not conflict with proposed landscaping.
15. Provide a 5-foot-wide stone bridge/access route allowing direct access to the standpipe from the bank of the basin during high-water conditions (i.e. stone 6-inches above high water elevation). Provide a detail and/or note as necessary.
16. As part of the Storm Drainage Facility Maintenance Easement Agreement, provide an access easement for maintenance over the storm water detention system and the pretreatment structure. Also, include an access easement to the detention area from the public road right-of-way.
17. The flow restriction shall be accomplished by methods other than a pipe restriction in an oversized pipe due to the potential for clogging and restrictor removal. A perforated standpipe, weir design, baffle wall, etc. should be utilized instead.
18. The primary outlet standpipe shall be designed with a secondary outer pipe with numerous holes. The stone filter would rest against this outer pipe and would help protect the outlet standpipe from clogging.
19. Provide a soil boring in the vicinity of the storm water basin to determine soil conditions and to establish the high-water elevation of the groundwater table. Note the bottom of the detention facility must be a minimum of three (3) feet above the groundwater elevation.
20. A 4-foot-wide safety shelf is required one foot below the permanent water surface elevation within the basin.

Paving & Grading

21. On the sidewalk detail on sheet CS-501, note that 21AA stone will be required for sidewalk in the right-of-way, whereas Class II sand is allowable on-site.
22. **Indicate the ingress/egress routing to the building from the barrier-free stalls, and verify the slopes. All barrier-free stalls and routes shall comply with**

Michigan Barrier-Free regulations. Noted this item will be addressed during final engineering.

23. Label specific ramp locations on the plans where the detectable warning surface is to be installed.
24. A License Agreement will be required for the portion of the retaining wall crossing the water main easement. Crossing detail noted.

Flood Plain

25. The 100-year floodplain does not appear to traverse the property.

Soil Erosion and Sediment Control

26. A SESC permit is required. A full review has not been completed at this time. The review checklist detailing all SESC requirements is attached to this letter. Please submit a SESC permit application under separate cover. The application can be found on the City's website at <http://cityofnovi.org/Reference/Forms-and-Permits.aspx>.

Off-Site Easements

27. If applicable, any off-site utility easements anticipated must be executed **prior to final approval of the plans**. If you have not already done so, drafts of the easements and a recent title search shall be submitted to the Community Development Department as soon as possible for review and shall be approved by the Engineering Division and the City Attorney prior to executing the easements.

Agreements

28. A license Agreement will be required for the retaining wall proposed within the water main easement. The agreement shall state that the wall and all site facilities within the influence of the wall that may be removed or damaged in the event the utility requires maintenance will be **the responsibility of the property owner** to repair or replace. Additionally, a cross-section shall be included with the agreement showing the distance between the wall foundation and the utility. A template agreement is available from the Engineering Division.

The following must be submitted with the Final Site Plan:

29. 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. **Additionally, a statement must be provided stating that all changes to the plan have been discussed in the applicant's response letter.**
30. An 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 yardage), right-of-way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pre-treatment 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 with a legal review transmittal form that can be found on the City's website. Partial submittals will not be accepted.)

31. A draft copy of the Storm Drainage Facility Maintenance Easement Agreement (SDFMEA), as outlined in the Storm Water Management Ordinance, must be submitted to the Community Development Department. Once the agreement is approved by the City's Legal Counsel, this agreement will then be sent to City Council for approval/acceptance. The SDFMEA will then be recorded at the office of the Oakland County Register of Deeds. This document is available on our website.
32. A draft copy of the 20-foot-wide easement for the water main to be constructed onsite must be submitted to the Community Development Department. This document is available on our website.
33. A draft copy of the 20-foot-wide easement for the sanitary sewer to be constructed onsite must be submitted to the Community Development Department. This document is available on our website.
34. A draft copy of the warranty deed for the additional proposed 90-foot wide right-of-way along Twelve Mile Road must be submitted for review and acceptance by the City.
35. Executed copies of any approved off-site utility easements must be submitted.

The following must be addressed prior to construction:

36. 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). **Be advised that scheduling the pre-construction meeting can take 2-4 weeks.**
37. 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). No fee is required for this permit.
38. Material certifications must be submitted to Spalding DeDecker for review prior to the construction of any onsite utilities. Contact Heather Gendron at 248-844-5400 for more information.
39. Construction inspection fees in an amount to be determined must be paid to the Community Development Department.
40. Legal escrow fees in an amount to be determined must be deposited with the Community Development Department. **All unused escrow will be returned to**

the payee at the end of the project (except for escrows that are \$50 or less). This amount includes engineering legal fees only. There may be additional legal fees for planning legal documents.

41. A storm water performance guarantee in an amount to be determined (equal to 120% of the cost required to complete the storm water management facilities) as specified in the Storm Water Management Ordinance must be posted at the Community Development Department.
42. Water and Sanitary Sewer Fees must be paid prior to the pre-construction meeting. Contact the Treasury Department at 248-347-0498 to determine the amount of these fees.
43. A street sign financial guarantee in an amount to be determined (\$400 per traffic control sign proposed) must be posted at the Community Development Department. Signs must be installed in accordance with MMUTCD standards.
44. 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.
45. A permit for all proposed work activities within the road right-of-way must be obtained from the City of Novi. This application is available from the City Engineering Division or on the city website and can be filed once the Final Site Plan has been submitted. Please contact the Engineering Division at 248-347-0454 for further information. Please submit the cover sheet, standard details, and plan sheets applicable to the permit only.
46. A permit for work within the road right-of-way of Twelve Mile Road must be obtained from the Road Commission for Oakland County (RCOC). Please contact the RCOC (248-858-4835) directly with any questions. The applicant must forward a copy of this permit to the city. Provide a note on the plans indicating all work within the road right-of-way will be constructed in accordance with the RCOC standards. **Be advised that review by the RCOC may take four weeks or longer.**
47. A permit for water main construction must be obtained from EGLE. This permit application must be submitted through the Engineering Division after the water main plans have been approved. Please submit the cover sheet, overall utility sheet, standard details, and plan/profile sheets applicable to the permit.
48. A permit for sanitary sewer construction must be obtained from EGLE. This permit application must be submitted through the Engineering Division after the sanitary sewer plans have been approved. Please submit the cover sheet, overall utility sheet, standard details and plan/profile sheets applicable to the permit. **Be aware that approval by both (1) Oakland County Water Resources Commissioner (OCWRC) and (2) Wayne County Department of Public Services (WCDPS) are required prior to submittal to EGLE.**

49. An NPDES permit must be obtained from EGLE since the site is over 5 acres in size. EGLE may require an approved SESC plan to be submitted with the Notice of Coverage.
50. An inspection permit for the sanitary sewer tap must be obtained from the Oakland County Water Resources Commissioner (OCWRC).
51. Permits for the construction of each retaining wall exceeding 48 inches in height (measured from bottom of the footing to top of the wall) must be obtained from the Community Development Department (248-347-0415).

The following must be addressed prior to issuance of a Temporary Certificate of Occupancy (TCO) approval for the development:

52. The amount of the incomplete site work performance guarantee for any outstanding site improvement items (limited to top course of pavement and other minor items), is calculated at 1.2 times the amount required to complete the site improvements (as specified in the Performance Guarantee Ordinance).
53. All easements and agreements referenced above must be executed, notarized and approved by the City Attorney and Engineering Division.
54. A Bill of Sale for the utilities conveying the improvements to the City of Novi must be submitted to the Community Development Department. This document is available on our website.
55. The City's consultant Engineer 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.
56. Submit to the Community Development Department, Waivers of Lien from any parties involved with the installation of each utility as well as a Sworn Statement listing those parties and stating that all labor and material expenses incurred in connection with the subject construction improvements have been paid.
57. Submit a Maintenance Bond to the Community Development Department in an amount to be determined (equal to 25 percent of the cost of the construction of the utilities to be accepted). This bond must be for a period of two years from the date that the Utility Acceptance Permit is issued by the City of Novi Engineering Division. This document is available on our website.
58. Submit an up-to-date Title Policy (dated within 90 days of City Council consideration of acceptance) for the purpose of verifying that the parties signing the Easement and Bill of Sale documents have the legal authority to do so. Please be sure that all parties of interest shown on the title policy (including mortgage holders) either sign the easement documents themselves or provide a Subordination Agreement. Please be aware that the title policy

may indicate that additional documentation is necessary to complete the acceptance process.

59. Provide a warranty deed for the additional proposed road right-of-way along Twelve Mile Road for acceptance by the City.

Prior to preparing stamping sets, the Applicant is advised to provide any revised sheets directly to the Engineering Division for an informal review and approval.

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 Victor Boron at (248) 735-5695 with any questions.



Victor Boron
Project Engineer

cc: Christian Carroll, Community Development
Kevin Roby, Water & Sewer
Linda Slepetski, Water & Sewer
Ben Croy, PE, Engineering
Humna Anjum, Engineering

LANDSCAPE REVIEW



PLAN REVIEW CENTER REPORT

August 26, 2022
Novi Concrete Plant
Preliminary Site Plan - Landscaping

Review Type

Revised Preliminary Site Plan Landscape Review

Job #

JSP22-0008

Property Characteristics

- Site Location: 46844 Twelve Mile Road
- Site Acreage: 20.04 ac.
- Site Zoning: I-1/I-2
- Adjacent Zoning: North: I-2, East, West: I-1/I-2, South: OST/RA
- Plan Date: 8/8/2022

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 revised Final Site Plan submittal. Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review and the accompanying landscape chart are summaries and are not intended to substitute for any Ordinance.

Some of the calculations use the old ordinance. **Please follow the requirements of the revised ordinance, which can be found here:**

REVISED LANDSCAPE ORDINANCE:

<https://cityofnovi.org/Reference/Code-of-Ordinances-and-City-Charter/Ordinance-18-293.aspx>

Recommendation:

This project is **recommended for approval for Preliminary Site Plan**. The only waivers required that is not supported by staff are easily corrected, and the applicant will hopefully agree to doing them. The other changes required can be made on the Final Site Plans.

LANDSCAPE WAIVERS PER THE PROPOSED PLAN

- Lack of building foundation landscaping – *would be supported by staff if the required area was provided on the south-facing side of the wall and included vines to grow on the wall.*
- Lack of perimeter trees in the planting strip between the parking lot and the operations area - *not supported by staff.*
- Lack of screening berms or walls provided on the east, west and north sides of the project - *supported by staff if the applicant intends to maintain the woods as the screening proposed on the sides, and the 12-foot wall on the south will sufficiently screen the site.*

Please correct the conditions that require the two unsupported waivers.

Ordinance Considerations

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

1. Provided
2. **Please plant as many replacement credits as possible on the site.**
3. **Woodland replacement trees may be used for the screening along the east and west sides of the site. They may also be used to meet the detention basin tree requirement.**
4. **Excess shrubs (those around the detention pond that exceed the 70% coverage requirement) may also be used toward the Woodland Replacements per the Reforestation Credit Table in Section 37-8.**
5. **Please clearly label all woodland replacement plantings as such on the plan view.**

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

The project is not adjacent to residentially-zoned property.

I-2 Buffering (Zoning Sec. 3.15)

1. The berm or walls required along the outer edges are not provided.
2. **A landscape waiver is required for that deficiency.**
3. *The waiver required for this deficiency is supported by staff because alternative screening, in the form of evergreen trees along the sides of the site is provided and about 570 feet of woodland is preserved on the north end of the site.*

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

1. The required berm is proposed on the landscape plan but not the grading plan. **Please copy the berm from the landscape plan to the grading plan.**
2. The greenbelt landscaping exceeds the requirement.
3. **Please revise the calculations per the current ordinance. The trees proposed can be reduced to the required 10 canopy and 13 subcanopy trees if desired**
4. **Please show the RCOC clear vision zone at the 12 Mile Road entry.**
5. **Please revise the street tree calculations, reduce the number of street trees proposed to the number required and spread them out as evenly as possible, outside of the turnaround area.**

Parking Lot Landscaping (Zoning Sec. 5.5.3.C)

1. **Please revise the calculations per the current ordinance (6%) and provide the required interior space, interior trees, parking lot perimeter space between the lot and the operations area, and parking lot perimeter trees.**
2. **Please label the interior area of all of the islands not including the perimeter area between the parking lot and the operations area and revise the calculations accordingly.**
3. **Please locate at least 8 of the perimeter trees in the area between the parking lot and the operations area, not including the island trees.**

Accessway Perimeter Trees (Zoning Sec. 5.5.3.C)

Please locate all of the accessway perimeter trees within 15 feet of the accessway, and use canopy tree species/cultivars that meet the requirement of a minimum mature height of 30 feet and mature canopy width of at least 20 feet. The Green pillar oaks and spruces do not meet this requirement.

Building foundation Landscaping (Zoning Sec 5.5.3.D)

1. No foundation landscaping is proposed for the operations building.
2. As the building is in the interior of the operations area, it is not visible from Twelve Mile Road and there is no good alternative place for the landscaping. **For this reason, the applicant is encouraged to request a landscape waiver for this deviation.** *It would be supported by staff if the area is located on the south side of the 12 foot wall and includes vines that can climb the wall.*

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

1. More than the required shrubs are provided. The excess shrubs can be counted toward the woodland replacement requirement using the Reforestation Credit Table in Section 37-8.
2. The detention pond trees need to be deciduous canopy trees to provide as much shade as possible for the pond. **Please change the evergreen trees to canopy trees. The one area where evergreen trees could be used is between the pond and the operations area, to help with screening of that area from the east. Woodland replacement trees can be used to meet the canopy tree requirement.**
3. **Please locate the shrubs and trees at about 10 feet away from the permanent water level.**

Plant List (LDM 4, 10)

1. 9 of 11 (82%) species used for non-woodland replacement trees are native to Michigan.
2. The tree diversity requirements of LDM Section 4 are not met. There are too many serviceberries and redbuds (19.6% of the non-woodland replacement trees used versus a maximum of 15% per species) and too many tuliptrees (35.3%). Maples may also be too plentiful if the number of extra trees (street and greenbelt) are reduced as discussed above.
3. **Please revise the species selections to meet the 15% species/25% genus requirement for all non-woodland replacement plantings. Picea abies may not be used as a woodland replacement as it is not on the woodland replacement chart of Section 37-8.**
4. A maximum of 10% of the woodland replacement credits planted on the site can be evergreens. **Please reduce the percentage of evergreen woodland replacements.**

Planting Notations and Details (LDM 10)

Please see the Landscape Chart for a discussion of the notes and details required.

Irrigation (LDM 10)

Please see the Landscape Chart for a discussion of the notes and details required.

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 rmeader rmeader@cityofnovi.org.



Rick Meader – Landscape Architect

LANDSCAPE REVIEW SUMMARY CHART – Revised Preliminary Site Plan

Review Date: August 26, 2022
Project Name: JSP22 – 0008: Novi Concrete Plant
Plan Date: August 8, 2022
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.

When the complete landscape plans are created, please use the current landscape ordinance and landscape design manual when completing the landscaping revisions. They can be found at these locations:

Some of the calculations use the old ordinance. **Please follow the requirements of the revised ordinance, which can be found here:**

REVISED LANDSCAPE ORDINANCE:

<https://cityofnovi.org/Reference/Code-of-Ordinances-and-City-Charter/Ordinance-18-293.aspx>

LANDSCAPE WAIVERS REQUIRED PER THE PROPOSED PLAN

- Lack of perimeter trees in the planting strip between the parking lot and the operations area - *not supported by staff.*
- Lack of building foundation landscaping – *would be if foundation landscaping was located along south-facing base of wall and included vines to climb on the wall.*
- Lack of screening berms or walls provided on the east, west and north sides of the project - *supported by staff as the applicant intends to maintain the woods as the screening on the north side, sufficient plantings are proposed on the sides, and the 12-foot wall on the south will screen the site.*

Item	Required	Proposed	Meets Code	Comments
Landscape Plan Requirements (Landscape Design Manual (LDM) and Zoning Ordinance (Zoning Sec))				
Landscape Plan <i>(Zoning Sec 5.5.2, LDM 2, 10)</i>	<ul style="list-style-type: none"> • 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 	Scale 1"=50'	Yes	
Project Information <i>(LDM 10)</i>	Name and Address	Yes	Yes	
Owner/Developer	Name, address and	• Name of	Yes	

Item	Required	Proposed	Meets Code	Comments
Contact Information (LDM 10)	telephone number of the owner and developer or association	Developer on Landscape Plan <ul style="list-style-type: none"> Contact information on cover. 		
Landscape Architect contact information (LDM 10)	Name, Address and telephone number of RLA/PLA/LLA who created the plan	Brian Devlin – RLA	Yes	
Sealed by LA. (LDM 10)	Requires original signature	No		<u>Live signature is required for the stamping sets.</u>
Miss Dig Note (800) 482-7171 (LDM 10)	Show on all plan sheets	Yes	Yes	
Zoning (LDM 10)	Include all adjacent zoning	Shown on Overall Site Plan Parcel: I-2/I-1 North: I-2 East, West: I-2/I-1 South: OST/RA	Yes	
Survey information (LDM 10)	<ul style="list-style-type: none"> Legal description or boundary line survey Existing topography 	<ul style="list-style-type: none"> Alta survey provided Site survey is included on Demolition Plan 	Yes	
Existing plant material Existing woodlands or wetlands (LDM 10)	<ul style="list-style-type: none"> Show location type and size. Label to be saved or removed. Plan shall state if none exists. 	<ul style="list-style-type: none"> Tree survey is provided and trees to be removed are shown on demolition plan Tree chart is provided Removals and replacements are on Sheet TP-1 The parking lot is a permanent encroachment into a wetland buffer. 	<ul style="list-style-type: none"> Yes Yes Yes No 	<ol style="list-style-type: none"> See DRG's letter for a complete woodland review. See Mannik & Smith's letter for a complete wetland review. Conservation easements must be created to protect all of the woodland replacement trees. Only 10% or fewer of the woodland replacement credits provided may be evergreen trees Woodland replacement trees may be used to meet the detention pond tree requirement. Excess shrubs (above the 70-75% coverage) may also be used to meet woodland

Item	Required	Proposed	Meets Code	Comments
				<p>replacement requirements per Section 37-8 (Reforestation Credit Table). If this is done, please show calculations.</p> <p>7. The applicant is encouraged to plant as many of the woodland replacement credits on the site as is reasonably possible.</p> <p>8. Please include on Sheet LP-1 how many credits will be planted on site and how many credits will be met through a contribution to the tree fund.</p>
Soil types (LDM10)	<ul style="list-style-type: none"> As determined by Soils survey of Oakland county Show types, boundaries 	<ul style="list-style-type: none"> Soil types are listed on cover sheet Soils map shown on Sheet CS-301 	Yes	
Existing and proposed improvements (LDM 10)	Existing and proposed buildings, easements, parking spaces, vehicular use areas, and R.O.W	Yes	Yes	
Existing and proposed utilities (LDM 10)	Overhead and underground utilities, including hydrants	Yes	Yes	
Proposed grading. 2' contour minimum (LDM 10)	Provide proposed contours at 2' interval	<ul style="list-style-type: none"> Spot elevations and contours on Sheet CG-100 The required greenbelt berm is not shown on the Grading Plan. 	<ul style="list-style-type: none"> Yes No 	<p>1. Please add the berm shown on the landscape plan to the grading plan. The contours should tie to existing contours.</p> <p>2. If the berm encroaches into the wetland buffer, the impact must be added to Sheet CW-100.</p>
Snow deposit (LDM 10)	Show snow deposit areas on plan	Yes	Yes	
LANDSCAPING REQUIREMENTS				

Item	Required	Proposed	Meets Code	Comments
Parking Area Landscape Requirements (Zoning Sec 5.5.3.C and LDM 5)				
General requirements (LDM 5)	<ul style="list-style-type: none"> • Clear sight distance within parking islands • No evergreen trees 	No obscuring plantings are proposed	Yes	
Name, type and number of ground cover (LDM 5)	As proposed on planting islands	Yes	Yes	Seed is indicated on islands.
General (Zoning Sec 5.5.3.C)				
Parking lot Islands	<ul style="list-style-type: none"> • A minimum of 200 SF to qualify • A minimum of 200sf unpaved area per tree planted in an island • 6" curbs • Islands minimum width 10' BOC to BOC 	Islands appear to be properly sized	TBD	<ol style="list-style-type: none"> 1. Please label SF of all individual islands' unpaved area (should not include sidewalks or the perimeter area between the parking lot and the work area. 2. Please increase width and/or area of islands as necessary to achieve required width and area.
Curbs and Parking stall reduction (Zoning Sec 5.3.12)	Parking stall can be reduced to 17' and the curb to 4" adjacent to a sidewalk of minimum 7 ft.	Spaces are 17 feet long	Yes	Please indicate that curbs are 4" tall.
Contiguous space limit (Zoning sec 5.5.3.C)	Maximum of 15 contiguous spaces	9 is maximum bay length	Yes	
Plantings around Fire Hydrant (Zoning sec 5.5.3.C)	<ul style="list-style-type: none"> • No plantings with matured height greater than 12' within 10 ft. of fire hydrants • Plant trees at least 5 ft from underground utility lines • Plantings near hydrants or FDCs should be no taller than 12" 	No trees or shrubs are encroaching onto fire hydrants.	Yes	
Landscaped area (Zoning sec 5.5.3.C)	Areas not dedicated to parking use or driveways exceeding 100 sq. ft. shall be landscaped	Seed is indicated for all non-built or landscaped areas	Yes	
Clear Zones (Zoning sec 5.5.3.B.ii Footnote 10)	Road Commission for Oakland County zone should be shown for both 12 Mile Road entries.	<ul style="list-style-type: none"> • No clear vision zone is provided. • The future 12 Mile Road expansion is shown with hatched lines. 	<ul style="list-style-type: none"> • No • Yes 	<ol style="list-style-type: none"> 1. Please indicate clear vision zone per RCOC regulations for 12 Mile Road entries 2. If RCOC does not allow some or all of

Item	Required	Proposed	Meets Code	Comments
				the 12 Mile Road street trees, the disallowed trees do not need to be planted, but documentation of that ruling must be provided.
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)				
A = Total square footage of vehicular use areas up to 50,000sf x 7.5%	<ul style="list-style-type: none"> A = x sf * 7.5 % = A sf 50,000 * 7.5% = 3750 sf 	NA		
B = Total square footage of additional paved vehicular use areas (not including A or B) over 50,000 SF) x 1 %	<ul style="list-style-type: none"> B = x sf * 1% = B sf (xxx – 50000) * 1% = xx sf 	NA		
Category 2: For: I-1 and I-2 (Zoning Sec 5.5.3.C)				
A. = Total square footage of vehicular use area up to 50,000 sf x 5%	$A = x \text{ sf} * 6\% = A \text{ sf}$ $A = 17,950 * 6\% = 1077 \text{ sf}$	The calculation uses 0.5% instead of 6%	No	Please show the area used in the calculation and correct the calculation per the revised ordinance.
B = Total square footage of additional paved vehicular use areas over 50,000 SF x 0.5%	$B = 0.5\% \times 0 \text{ sf} = B \text{ SF}$	No calculations provided	TBD	See above
All Categories				
C = A+B Total square footage of landscaped islands	<ul style="list-style-type: none"> C = A + B C = 1077 + 0 = 1077 SF 	650 sf	TBD	<ol style="list-style-type: none"> Please correct the calculations based on the above discussion. Please label each island's area in SF. It appears that, including the parking lot corners, the needed square footage is provided.
D = C/200 Number of canopy trees required	<ul style="list-style-type: none"> D = C/200 trees 1077/200 = 5 Trees 	10 trees in parking lot islands	Yes	<ol style="list-style-type: none"> Please correct the calculation. Please do not use Apollo maples as they do not have a sufficient mature size. Use more Legacy maples, oaks, or

Item	Required	Proposed	Meets Code	Comments
				some other canopy species and just put one tree per island instead of two, positioned toward the back(end) of the island where necessary per the light poles.
Parking Lot Perimeter Canopy Trees (Zoning Sec 5.5.3.C)	<ul style="list-style-type: none"> • 1 Canopy tree per 35 lf • $xx / 35 = xx$ trees • $640 / 35 = 18$ trees 	16 trees	No	<ol style="list-style-type: none"> 1. Please revise calculation. 2. Please provide the required canopy perimeter trees. At least 8 trees should be in the island between the parking lot and the work area to shade the parking lot. 3. Please uniquely label trees as parking lot perimeter trees
Accessway perimeter (Zoning Sec 5.5.3.C)	<ul style="list-style-type: none"> • 1 canopy tree per 35 lf on each side of road, less widths of access drives. • $(345 \text{ lf} * 2) / 35 = 20$ trees along the drive from 12 Mile Road 	<ul style="list-style-type: none"> • Calculations are provided. • A mix of evergreens, full-sized oaks and fastigate oaks are provided along both sides of the drive. 	<ul style="list-style-type: none"> • Yes • No 	Please replace the evergreens and Pillar oaks with canopy trees that have a minimum mature size of 30 feet and a minimum mature canopy width of 20 feet.
Parking land banked (Zoning Sec 5.2.14.D)	NA	None		
Berms, Walls and ROW Planting Requirements				
Berms (Zoning Sec 5.5.3.A & LDM 1)				
<ul style="list-style-type: none"> • 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 topsoil. 				
Cross-Section of Berms (LDM 10)				
Slope, height and width	<ul style="list-style-type: none"> • Label contour lines • Maximum 33% • Min. 3 feet flat horizontal area • Minimum 3 feet high • Constructed of loam with 6' top layer of topsoil. 	A cross-section detail for the greenbelt berm is provided.	Yes	
Type of Ground Cover		NA		Please indicate the groundcover to be used

Item	Required	Proposed	Meets Code	Comments
				on the berm.
Setbacks from Utilities	Overhead utility lines and 15 ft. setback from edge of utility or 20 ft. setback from closest pole	NA		Show location of overhead lines on the detail
Walls (Zoning Sec 5.5.3.A & LDM 10)				
Material, height and type of construction footing	Freestanding walls should have brick or stone exterior with masonry or concrete interior	12-foot concrete screening wall is proposed along south edge of concrete plant		A 12-foot tall concrete screening wall
Walls greater than 4 ft. should be designed and sealed by an Engineer		No details provided		<u>The wall construction details must be provided with the building review.</u>
ROW Landscape Screening Requirements (Zoning Sec 5.5.3.B.ii)				
Greenbelt width	25 feet	340 ft	Yes	Please make the property lines darker.
Min. berm crest width	Adj to Pkg: 3 ft	The required berm is proposed on the landscape plan but not the Grading Plan.	No	1. Please copy the proposed berm to the Grading Plan. 2. Please also show the berm on the Wetland Impact plan and include any encroachments into the calculations.
Minimum berm height	Adj to Pkg: 3 ft	No berm is provided	No	See above
3' wall	(2)(3)(4)	No		
Canopy deciduous or large evergreen trees	<ul style="list-style-type: none"> • <u>Not Adj to Pkg: 1 per 60 ft</u> • $(495-40)/60 = 8$ trees 	10 trees	Yes	1. Please revised the calculations per the current ordinance. 2. The number of trees provided can be reduce to the requirement if desired.
Sub-canopy deciduous trees)	<ul style="list-style-type: none"> • <u>Not Adj to Pkg: 1 per 40 ft</u> • $(495-40)/40 = 11$ trees 	13 trees	Yes	See above
Canopy deciduous trees in area between sidewalk and curb	<ul style="list-style-type: none"> • Parking & No Parking: 1 tree per 45 lf • $(495-60)/45 =$ $415/45 = 9$ trees 	15 trees	Yes	1. Please show the RCOC clear vision zone. 2. Please revise the calculation per the RCOC clear vision zone. 3. You may reduce the

Item	Required	Proposed	Meets Code	Comments
				<p>number of trees on the plan to the number required if desired.</p> <p>4. Please spread the trees out as much as possible.</p>
<p>Non-Residential Projects (Zoning Sec 5.5.3.F.iii) Refer to Planting in ROW, building foundation landscape, parking lot landscaping and LDM</p>				
<p>Screening of outdoor storage, loading/unloading (Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5)</p>	<p>Loading and storage areas must be completely screened from 12 Mile Road</p>	<p>A 12-foot concrete wall is proposed to screen the site from Twelve Mile Road</p>	<p>Yes</p>	<p>Planting Virginia Creeper or Boston Ivy along the base of the wall would soften the appearance of the wall, but is not required.</p>
<p>Transformers/Utility boxes (LDM 6)</p>	<ul style="list-style-type: none"> • 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 	<p>No</p>	<p>No</p>	<ol style="list-style-type: none"> 1. When transformer locations are finalized, screening shrubs per standard detail are required. 2. Please add detail to plans.
<p>I-2 Screening (Zoning Sec 3.15)</p>				
<p>Adjacent to land zoned for I-2 use (Zoning Sec 3.15.1.B)</p>	<ul style="list-style-type: none"> • 3-foot high landscaped berm OR • 5-foot high masonry wall OR • 5-foot high poured concrete wall with brick texture OR • 5-foot high decorative fence of treated lumber, cedar or redwood 	<ul style="list-style-type: none"> • Line of conceptual trees and a 6-foot chain link fence is shown around the paved area • Gravel is stored behind 12-foot concrete tall walls • No berm or wall is provided on north side but woodlands are preserved. 	<p>No</p>	<ol style="list-style-type: none"> 1. A landscape waiver is required to not provide the required berm on the north side. <i>2. It would be supported since over 570 feet of woods is being preserved and evergreen trees are proposed along the east and west sides of the site.</i> 3. Please extend the evergreen screening on the east side of the site down between the detention pond and the operations area. 4. Woodland replacement trees can be used for screening of the operations area.
<p>Building Foundation Landscape Requirements (Zoning Sec 5.5.3.D)</p>				

Item	Required	Proposed	Meets Code	Comments
<p>Interior site landscaping SF (Zoning Sec 5.5.3.D)</p>	<ul style="list-style-type: none"> • Equals to entire perimeter of the building x 8 with a minimum width of 4 ft. • A= 90 lf x 8ft = 720 SF 	<p>A: 0 sf</p>	<p>TBD</p>	<ol style="list-style-type: none"> 1. <u>Please provide detailed planting plans for foundation planting with final site plans.</u> 2. <u>Foundation plantings are to be included in cost estimate.</u> 3. A landscape waiver may be requested to locate the required plantings in a location outside of the fence where it won't be damaged by traffic around the building. <i>It would be supported by staff if it was located along the base of the 12-foot wall and included vines that could grow on the wall.</i>
<p><i>Building Frontage Landscaping (Zoning Sec 5.5.3.D)</i></p>	<p>If visible from public street a minimum of 60% of the exterior building perimeter should be covered in green space</p>	<p>The building foundation will be completely blocked from view by the 12-foot wall</p>	<p>Yes</p>	<p>As noted above, planting a vine to grow up on the wall would soften its appearance from 12 Mile Road and the I-1 property.</p>
<p>Detention/Retention Basin Requirements (Zoning Sec. 5.5.3.E & LDM 3)</p>				
<p>Planting requirements (Zoning Sec 5.5.3.E & LDM 3)</p>	<ul style="list-style-type: none"> • Clusters of large native shrubs shall cover 70-75% of the basin rim area at 10 lf from permanent water level • 10" to 14" tall grass along sides of basin • Refer to wetland for basin mix • Deciduous canopy tree 1/35 of east, south and west sides of pond at 10 feet from permanent water level • 945/35 = 27 trees 	<ul style="list-style-type: none"> • The shrubs proposed cover roughly 90% of the basin • 27 trees 	<ul style="list-style-type: none"> • Yes • Yes 	<ol style="list-style-type: none"> 1. Please move the shrubs and trees to about 10 feet from the permanent water level per the revised ordinance. 2. Except between the detention basin and the work area, the trees must be canopy trees, not evergreens. 3. Woodland replacement trees can be used to meet the tree requirement 4. The excess shrubs can be counted toward the woodland replacement counts provided per the

Item	Required	Proposed	Meets Code	Comments
				Reforestation Credit Table in Section 37-8.
Phragmites and Japanese Knotweed Control (Zoning Sec 5.5.6.B)	<ul style="list-style-type: none"> Any and all populations of Phragmites australis and/or Japanese Knotweed on site shall be included on tree survey. Treat populations per MDEQ guidelines and requirements to eradicate the weed from the site. 	None indicated	TBD	<ol style="list-style-type: none"> Please survey the site for any populations of Phragmites australis and Japanese Knotweed If any is found, show it on the topo survey and add plans for its removal. If none is found, please indicate that on the survey.
LANDSCAPING NOTES, DETAILS AND GENERAL REQUIREMENTS				
Landscape Notes – Utilize City of Novi Standard Notes				
Installation date (LDM 10)	Provide intended date	Before Nov 15	Yes	
Maintenance & Statement of intent (Zoning Sec 5.5.6 & LDM 10)	<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 June, July and August for the 2-year warranty period. 	Yes	Yes	
Plant source (LDM 10 & 11)	Shall be northern nursery grown, No.1 grade.	Yes	Yes	
Irrigation plan (LDM 10)	<ul style="list-style-type: none"> A fully automatic irrigation system or a method of providing sufficient water for plant establishment and survival is required on Final Site Plans. If irrigation won't be used, note how trees will get sufficient water for establishment and long-term survival 	A note indicates that an automatic irrigation system will be provided on Final Site Plans	Yes	<ol style="list-style-type: none"> Please add irrigation plan or information as to how plants will be watered sufficiently for establishment and long-term survival. If xeriscaping is used, please provide information about plantings included. If an irrigation system is used, it must meet the requirements listed at the end of this chart.
Other information (LDM 10)	Required by Planning Commission			<ol style="list-style-type: none"> Please add a note stating that the landscape contractor shall provide proof of the seed mixes to be

Item	Required	Proposed	Meets Code	Comments
				used in the detention basin area and adjacent to wetlands for approval before installation. 2. Send proof in the form of photos of the seed bag and/or a copy of the seed invoice to rmeader@cityofnovi.org
Establishment period (Zoning Sec 5.5.6 & LDM 10)	2 yr. Guarantee	Yes	Yes	
Approval of substitutions. (Zoning Sec 5.5.5 & LDM 10)	City must approve any substitutions in writing prior to installation.	Yes	Yes	
Plant List (LDM 10 & 11) – Include all cost estimates				
Quantities and sizes	<ul style="list-style-type: none"> Refer to LDM suggested plant list At least 50% of species used shall be native to Michigan No more than 15% from one species and 25% from one genus 	Yes	Yes	
Root type		Yes	Yes	
Botanical and common names (LDM 4 & 11)		<ul style="list-style-type: none"> 19 of 23 species used (83%) for non-replacement trees are native to Michigan The tree diversity for non-woodland replacement trees meets the requirements of LDM 4 except for spruces. 	<ul style="list-style-type: none"> Yes No 	
Type and amount of lawn		Areas of different seeding are indicated with hatching	Yes	
Cost estimate (LDM 10)		For all new plantings, mulch and sod as listed on the plan	Yes	
Planting Details/Info (LDM Part III) – Utilize City of Novi Standard Details				
Canopy Deciduous Tree	Refer to LDM for detail drawings	Yes	Yes	
Evergreen Tree		Yes	Yes	
Multi-stem Tree		No	TBD	Please add if multi-stem trees will be used
Shrub		Yes	Yes	
Perennial/ Ground Cover		Yes	Yes	

Item	Required	Proposed	Meets Code	Comments
Tree stakes and guys. (Wood stakes, fabric guys)		Yes	Yes	
Tree protection fencing	Located at Critical Root Zone (1' outside of dripline)	<ul style="list-style-type: none"> Tree protection fencing is not shown on the Demolition Plan or the Grading Plan Detail on LP-2 	<ul style="list-style-type: none"> Yes Yes 	The fencing should be drawn at the trees' actual driplines, not just the outside edge of the CAD tree symbol.
Other Plant Material Requirements (LDM 11)				
General Conditions	Plant materials shall not be planted within 4 ft. of property line	Note has been added		
Plant Materials & Existing Plant Material (LDM 11)	Clearly show trees to be removed and trees to be saved.	<ul style="list-style-type: none"> Removals are indicated on the Tree Protection Plan and Tree Chart Calculations are on the Tree Protection Plan. 	<ul style="list-style-type: none"> Yes Yes 	
Landscape tree credit (LDM 11)	<ul style="list-style-type: none"> Substitutions to landscape standards for preserved canopy trees outside woodlands/ wetlands should be approved by LA. Refer to Landscape tree Credit Chart in LDM 	None taken		
Plant Sizes for ROW, Woodland replacement and others (LDM 11)	<ul style="list-style-type: none"> Size determined by use detailed in LDM Table 11.b.(2)a.i Indicate on plant list 	Yes – on plant list		
Plant size credit (LDM 11)	NA	None taken		
Prohibited Plants (LDM 11.b)	No plants on City Invasive Species List	No invasive plants are used.	Yes	
Recommended trees for planting under overhead utilities (LDM 11)	Label the distance from the overhead utilities	The only overhead lines are along 12 Mile Road – trees are well back from them.	Yes	
Collected or Transplanted trees (LDM 11)		None		
Nonliving Durable Material: Mulch (LDM 12)	<ul style="list-style-type: none"> Trees shall be mulched to 3" depth and shrubs, groundcovers to 2" depth Specify natural color, 	On details	Yes	

Item	Required	Proposed	Meets Code	Comments
	finely shredded hardwood bark mulch. Include in cost estimate. • Refer to section for additional information			

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.

Irrigation System Requirements

1. Any booster pump installed to connect the project's irrigation system to an existing irrigation system must be downstream of the RPZ.
2. The RPZ must be installed in accordance with the 2015 Michigan Plumbing Code.
3. The RPZ must be installed in accordance with the manufacture installation instructions for winterization that includes drain ports and blowout ports.
4. The RPZ must be installed a minimum of 12-inches above FINISHED grade.
5. Attached is a handout that addresses winterization installation requirements to assist with this.
6. A plumbing permit is required.
7. The assembly must be tested after installation with results recorded on the City of Novi test report form.

WOODLAND REVIEW



Corporate Headquarters
 295 South Water Street, Suite 300
 Kent, OH 44240
 800-828-8312

Local Office
 3381 Lapeer Rd. West
 Auburn Hills, MI 48326

To: Christian Carroll, City of Novi Planner
 Community Development Department, City of Novi

From: Kerry Gray, Principal Consultant
 Davey Resource Group

CC: Lindsay Bell, City of Novi Senior Planner
 Barbara McBeth, City Planner
 Rick Meader, City of Novi Landscape Architect
 Madeleine Daniels, City of Novi Planner
 Ben Peacock, City of Novi Planning Assistant
 Douglas Repen, Mannik and Smith Group
 Emily Hanson, Davey Resource Group

Date: August 29, 2022

RE: Novi Concrete Plant
 Preliminary Site Plan Woodland Review #2 – PSP22-0022

Davey Resource Group, Inc. (DRG) has conducted a review of the revised Preliminary Site Plan Submittal for the proposed **Novi Concrete Plant** located at 46844 Twelve Mile Road (Parcel No.22-09-300-032). The plan set prepared by Angle Design & Engineering (dated: 08/09/2022), proposes construction of a concrete plant on the site. DRG reviewed the preliminary site plan set for conformance with the City of Novi’s Woodland Protection Ordinance, Chapter 37. Based on our review of the pre-application site plan, and the City of Novi Official Regulated Woodlands Map (See Figure 1), **the proposed development contains City-Regulated Woodlands.**

Recommendation: DRG recommends approval contingent on addressing the Woodland Review comments. The Woodland Use Permit for the site will require Planning Commission approval.

The following Woodland Regulations apply to this site:

Woodland Regulation	Required
Woodland Permit (Chapter 37, Section 37-26)	YES
Tree Replacement (Chapter 37, Section 37-8) & Financial Guarantee (Chapter 26.5-5)	YES
Tree Protection (Fence) (Chapter 37, Section 37-9) & Financial Guarantee (Chapter 26.5-5)	YES
Woodland Conservation Easement (Chapter 37-30 (e))	YES

Woodland Impacts and Required Replacements

The site contains a mixture of City of Novi Regulated Woodland trees and non-regulated trees. Trees regulated by Chapter 37 include those that are 8-inches or greater DBH (diameter at breast height, 4.5-feet above existing grade) located within a regulated woodland and any tree 36-inches or greater DBH, irrespective of whether it is located in a regulated woodland.

The plan proposes disturbance and removal of 82 trees in the regulated woodland. The woodlands are considered moderate quality with a mix of upland and bottomland species including cottonwood, black walnut, basswood, sugar maple, red oak, American elm, black cherry and hophornbeam. Woodland trees on site range in size from 6” to 32” in diameter.

Woodland Review Comments

1. **A Woodland Use Permit is required** to perform construction on any site containing regulated woodlands. The Woodland Use Permit for this project requires Planning Commission approval.
2. **Tree Removals and Replacements.** The plan proposes the removal of 82 regulated woodland trees which requires 138 woodland replacement credits.

Tree Size (DBH)	Number of Trees	Ratio Replacement/ Removed Tree	Total Replacements Required
8-11”	30	1	30
>11-20”	48	2	96
>20-29”	4	3	12
>29+”		4	
Multi-Stem		Add Stems/8	
Woodland Replacement Trees		1	
Total Replacement Credits Required			138

3. **Woodland Replacements (Sheet LP-1).** The site is required to mitigate the removal of the 82 regulated woodland trees with 138 woodland replacement credits. Woodland replacement credits can be provided by:
 - a. Planting the woodland tree replacement credits on-site.
 - b. Payment to the City of Novi Tree Fund at a rate of \$400/woodland replacement credit.
 - c. Combination of on-site tree planting and payment into the City of Novi Tree Fund (\$400/woodland replacement credit).

The Plan (Sheet LP-1) proposes the planting of **20 replacement credit on-site** (detailed below). However, the Landscape Calculations state that 121 replacement credits are planted on site. **Tree plantings and landscaping required by the City of Novi cannot also be used to meet the woodland replacement credit requirements. Please revise plans to indicate which trees are meeting the woodland replacement requirements and which are meeting other City of Novi requirements.** Note that any woodland replacements that cannot be planted will require payment into the City of Novi

Tree Fund at a rate of \$400/woodland replacement credit.

- 5 – 2.5" cal. B&B Sugar maple (*Acer saccharum*)
- 2 – 2.5" cal. B&B American hornbeam (*Carpinus caroliniana*)
- 2 – 2.5" cal. B&B American hophornbeam (*Ostrya virginiana*)
- 7 – 2.5" cal. B&B Red Oak (*Quercus rubra*)
- 4 – 2.5" cal. B&B American basswood (*Tilia americana*)

4. Please see Woodland Review #1 for the **Financial Guarantees required for this site**. Note that the amount of the Woodland Replacement Financial will be determined when Comment #3 is addressed
5. **Conservation Easement.** The Applicant may be required to provide preservation/conservation easements as directed by the City of Novi Community Development Department for any areas of woodland replacement trees. The applicant shall demonstrate that all proposed woodland replacement trees and existing regulated woodland trees to remain will be guaranteed to be preserved as planted with a conservation easement or landscape easement to be granted to the city. This language shall be submitted to the City Attorney for review. The executed easement must be returned to the City Attorney within 60 days of the issuance of the City of Novi Woodland permit. Any associated easement boundaries shall be indicated on the Plan.

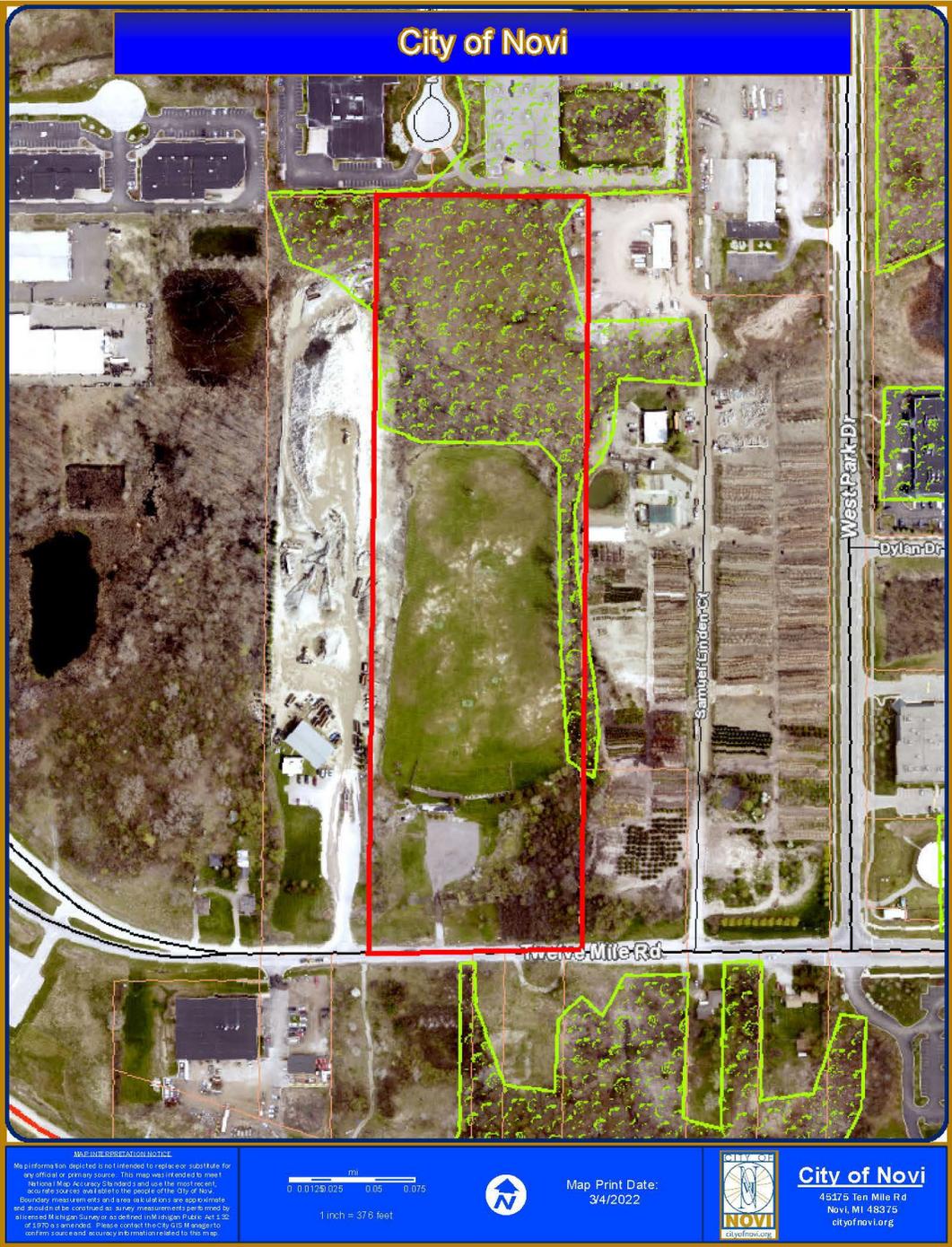


Figure 1. Novi Concrete Plant site (boundary outlined in red)
City of Novi Regulated Woodland Map
(Green hatched are regulated woodlands)

WETLAND REVIEW



August 29, 2022

Christian Carroll
City Planner
Department of Community Development
City of Novi
45175 W. Ten Mile Road
Novi, Michigan 48375

RE: Proposed Novi Concrete Plant; JSP22-08
Wetland Review of Revised Preliminary Site Plan
MSG Project No. N1030113

Dear Mr. Carroll:

The Mannik & Smith Group, Inc. (MSG) reviewed the revised Preliminary Site Plan (rPSP) set titled *Proposed Novi Concrete Plant* prepared by Angle Design and Engineering dated August 9, 2022. The project site (Site) is located at 46844 12 Mile Road, north of 12 Mile Road and east of Beck Road in Section 9. The subject parcel (22-09-300-032) is listed as having a gross area of 20.04 acres and a net area of 9.92 acres in area. The proposed rPSP includes the construction of a building, truck wash, detention pond, gravel storage, a concrete wall, parking lots, and associated infrastructure.

The *Site Plan* (Sheet CS-101) indicates the presence of four wetland areas located in the northern, eastern and southern portions of the Site. The rPSP and details of the wetlands provided on the *Wetland Impact Plan* (Sheet CW-100) do not show the total wetland areas on Site, but do indicate total proposed impacts of 0.25-acre wetland impact and 0.47-acre of 25-foot Natural Features Setback (wetland buffer) impact, as summarized in Table 1, below.

Table 1. Proposed Wetland Impacts

Wetland ID	Proposed Fill (acres)	Proposed Fill (cu. yds.)	Wetland Buffer Proposed Fill (acres)	Wetland Buffer Proposed Fill (cu. yds.)
Wetland A	0.12	242.19	0.16	275.59
Wetland B	0.04	64.41	0.10	105.72
Wetland G	0.03	42.06	0.10	91.83
Wetland H	0.05	67.60	0.11	115.09
Total	0.25	416.25	0.47	588.24

Published Data

MSG reviewed the City of Novi Wetlands Maps and the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wetlands Map Viewer for the Site. The City of Novi’s Regulated Wetland Map shows wetland areas present in the northern and eastern portions of the Site (Figure 1) and the EGLE Wetlands Map Viewer indicates forested wetland around the northeast corner of the Site (Figure 2).

MSG Wetland Boundary Verification

On June 24, 2022, MSG staff visited the Site to verify the presence or absence of wetlands and compare flagged boundaries to the boundaries displayed on the Site plans. Most of the Site consists of a former golf driving range,



currently unmown grass, with a small “clubhouse” building and parking lot. The northern and eastern edge of the Site are thickly wooded. Trees observed on the Site included cottonwood (*Populus deltoides*), black cherry (*Prunus serotina*), Basswood (*Tilia americana*), and American elm (*Ulmus americana*). Dominant ground cover vegetation observed included poison ivy (*Toxicodendron radicans*), and Virginia creeper (*Parthenocissus quinquefolia*) and unmown grass (*Poa pratensis*).

Wetlands G and B are found along the northern and eastern edges of the Site while Wetlands A and H are found in the southern portion of the Site. Wetlands G and B are forested whereas Wetland A has components of emergent and forested wetland. Wetland H has components of emergent (herbaceous) and scrub-shrub wetland communities. We believe the wetland boundaries are accurately mapped on Site and portrayed on the rPSP. Wetlands G and B, being forested, are the highest quality wetlands on the Site. Wetland B is associated with a steep grade adjacent to Davis Drain. Wetlands A and H display less vegetative community development and may have been disturbed, such as by mowing or driveway maintenance, in the past.

Permits and Regulatory Status

Based on the available information, the project as proposed requires the permits identified in Table 2, below.

Table 2. Anticipated Permits Required

Item	Required/Not Required/Not Applicable
Wetland Permit	Required (Non-Minor)
Wetland Buffer Authorization	Required
Wetland Mitigation	Required
EGLE Wetland Permit	Likely Required
Wetland Conservation Easement	To Be Determined

The revised Preliminary Site Plan is conditionally approved for wetlands with the following contingencies:

1. The Michigan Department of Environment, Great Lakes and Energy (EGLE) typically regulates wetlands within 500-feet of an inland lake, pond, stream or river and isolated wetlands and is not greater than 5 acres in size. The rPSP indicates Wetland H is “not regulated.” However, Wetland H is within 500 feet of Davis Drain and is therefore likely to be regulated by EGLE. If not regulated by EGLE, it would still be regulated under the City of Novi’s Wetland Ordinance. Therefore, MSG recommends that the client obtain verification from EGLE regarding state jurisdictional status.
2. **All areas of existing wetland and wetland buffer as well as areas of proposed impacts must be shown and quantified on future plan submittals (revised PSP or FSP, etc.).**
3. Proposed impacts to Wetlands A, B, and G, and possibly Wetland H, will likely require a permit from EGLE. The Novi Wetland Permit cannot be issued prior to issuance of the EGLE permit. Therefore, the applicant will need to submit the EGLE permit to the City prior to Final Site Plan approval.
4. The wetlands found on the Site include forested, emergent, and scrub-shrub components. **Because forested wetland has a higher compensatory wetland mitigation replacement ratio, the applicant needs to distinguish those types of wetland communities on the plan and quantify them accordingly.** The resulting areas of forested and non-forested wetlands would be used to calculate compensatory wetland requirements for both the EGLE and Novi Wetland Permits.

The revised Preliminary Site Plan is conditionally approved for wetlands. However, a Final Site Plan will not be approved until the above-noted items are addressed.

Please contact the undersigned if you have any questions regarding the matters addressed in this letter.

Sincerely,

The Mannik & Smith Group, Inc.



Keegan Mackin
Environmental Scientist



Douglas Repen, CDT
Project Manager
Certified Storm Water Management Operator

CC: Sarah Marchioni, City of Novi Project Coordinator
Barbara McBeth, City of Novi Planner
Lindsay Bell, City of Novi Planner
Madeline Daniels, City of Novi Planner
Ben Peacock, City of Novi Planning Assistant
Rick Meader, City of Novi Landscape Architect

FIGURES



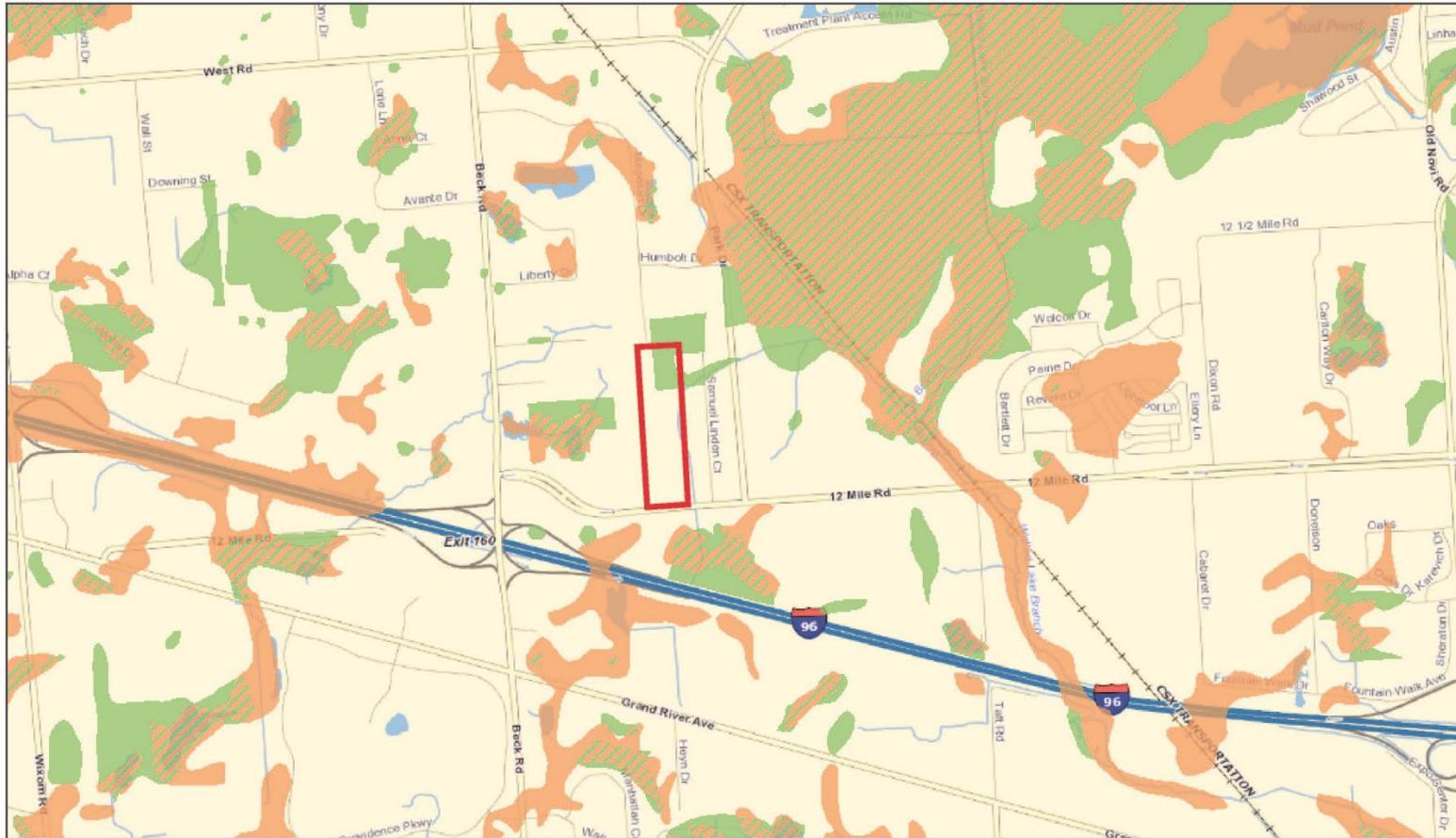
Figure 1

City of Novi Regulated Wetland Map. Approximate tax parcel boundaries are shown in red. Regulated Wetland areas are shown in blue.



Figure 2 | EGLE Wetlands Viewer Map. Approximate Site boundary is shown in red.

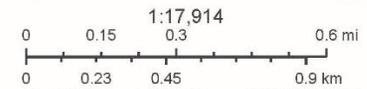
Wetlands Map Viewer



March 4, 2022

Part 303 Final Wetlands Inventory

- Wetlands as identified on NWI and MIRIS maps
- Soil areas which include wetland soils
- Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Disclaimer: This map is not intended to be used to determine the specific



2365 Haggerty Road South, Canton, Michigan 48188
 Tel: 734.397.3100 Fax: 734.397.3131

Novi Concrete Plant; JSP22-08
Wetland Review of Preliminary Site Plan
 MSG Project No. N1030113

TRAFFIC REVIEW



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

Project name:
 JSP22-08 – Novi Concrete Plant Revised
 Preliminary Site Plan Traffic Review

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

From:
 AECOM

Date:
 August 31, 2022

CC:
 Lindsay Bell, Madeleine Daniels, Victor Boron,
 Christian Carroll, Humna Anjum

Memo

Subject: JSP22-08 – Novi Concrete Plant Revised Preliminary Site Plan Traffic Review

The revised preliminary site plan was reviewed to the level of detail provided and AECOM recommends **approval with conditions** for the applicant to move forward as long as the **comments/potential variances** below are addressed to the satisfaction of the City.

GENERAL COMMENTS

1. The applicant, Crown Enterprises LLC, is proposing a 6,300 SF building.
2. The development is located on the north side of 12 Mile Road, between Beck Road and W Park Drive. 12 Mile Road is under the jurisdiction of Oakland County.
3. The site is zoned I-1 (Light industrial) and I-2 (General Industrial).
4. The following traffic-related deviations may be required:
 - a. Variance required for same side driveway spacing.
 - b. Possible variance required for sidewalk offset if plans are not revised.

TRAFFIC IMPACTS

1. AECOM performed an initial trip generation based on the ITE Trip Generation Manual, 11th Edition, as follows.

ITE Code: 140 (Manufacturing)
 Development-specific Quantity: 6,300 SF
 Zoning Change: No Change

Trip Generation Summary				
	Estimated Trips	Estimated Peak-Direction Trips	City of Novi Threshold	Above Threshold?
AM Peak-Hour Trips	13	10	100	No
PM Peak-Hour Trips	5	4	100	No
Daily (One-Directional) Trips	226	N/A	750	No

2. The City of Novi generally requires a traffic impact study/statement if the number of trips generated by the proposed development exceeds the City's threshold of more than 750 trips per day or 100 trips per either the AM or PM peak hour, or if the project meets other specified criteria.

Trip Impact Study Recommendation	
Type of Study:	Justification
-	N/A

TRAFFIC REVIEW

The following table identifies the aspects of the plan that were reviewed. Items marked O are listed in the City’s Code of Ordinances. Items marked with ZO are listed in the City’s Zoning Ordinance. Items marked with ADA are listed in the Americans with Disabilities Act. Items marked with MMUTCD are listed in the Michigan Manual on Uniform Traffic Control Devices.

The values in the ‘Compliance’ column read as ‘met’ for plan provision meeting the standard it refers to, ‘not met’ stands for provision not meeting the standard and ‘inconclusive’ indicates applicant to provide data or information for review and ‘NA’ stands for not applicable for subject Project. The ‘remarks’ column covers any comments reviewer has and/or ‘requested/required variance’ and ‘potential variance’. A potential variance indicates a variance that will be required if modifications are not made or further information provided to show compliance with the standards and ordinances. The applicant should put effort into complying with the standards; the variances should be the last resort after all avenues for complying have been exhausted. Indication of a potential variance does not imply support unless explicitly stated.

EXTERNAL SITE ACCESS AND OPERATIONS				
No.	Item	Proposed	Compliance	Remarks
1	Driveway Radii O Figure IX.3	35’	Met	In range
2	Driveway Width O Figure IX.3	40’ and 24’	Met	Within range
3	Driveway Taper O Figure IX.11			
3a	Taper length	75’	Met	
3b	Tangent	10’	Met	
4	Emergency Access O 11-194.a.19	1 access point	Not Met	2 access points required unless Fire allows for a single access point.
5	Driveway sight distance O Figure VIII-E	460’	Met	
6	Driveway spacing			
6a	Same-side O 11.216.d.1.d	122.4’ to the west, not indicated for driveway to the east	Not Met	Variance required, which AECOM would support.
6b	Opposite side O 11.216.d.1.e	273.5’, 292.9’	Met	
7	External coordination (Road agency)	Indicated	Met	Indicated coordination with RCOC for work within the 12 Mile Rd right-of-way.
8	External Sidewalk Master Plan & EDM	6’	Met	
9	Sidewalk Ramps EDM 7.4 & R-28-J	Indicated	Met	

EXTERNAL SITE ACCESS AND OPERATIONS				
No.	Item	Proposed	Compliance	Remarks
10	Any Other Comments:			

INTERNAL SITE OPERATIONS				
No.	Item	Proposed	Compliance	Remarks
11	Loading zone ZO 5.4	None indicated	Met	No loading zone required in I districts.
12	Trash receptacle ZO 5.4.4	In rear	Met	
13	Emergency Vehicle Access	Turning movements provided	Met	
14	Maneuvering Lane ZO 5.3.2	36' and greater in concrete area, 26' in parking area	Met	Parking area aisle width could be decreased to 24'.
15	End islands ZO 5.3.12			
15a	Adjacent to a travel way	15' outer radius, 3' shorter	Partially Met	End islands required for truck parking area where spaces are adjacent to drive aisles.
15b	Internal to parking bays	2.5' radius, 3' shorter	Met	May be length of parking spaces.
16	Parking spaces ZO 5.2.12	>25' setback indicated	Met	
17	Adjacent parking spaces ZO 5.5.3.C.ii.i	<15 adjacent spaces in both parking areas	Met	
18	Parking space length ZO 5.3.2	17' and 25'	Met	Show 2' clear overhang for 17' parking spaces. Curb at 17' spaces is indicated as 4" high.
19	Parking space Width ZO 5.3.2	9' typical in main parking area, 11' in truck area.	Met	
20	Parking space front curb height ZO 5.3.2	4" in main parking area, 6" in truck parking area	Met	4" curb indicated at 17' spaces and 6" curb indicated at 25' truck spaces.
21	Accessible parking – number ADA	4	Met	3 spaces required, 4 provided. Spaces closest to building of main parking area, however they could be moved to be next to the building.
22	Accessible parking – size ADA	8' with 5' and 8' aisles	Met	
23	Number of Van-accessible space ADA	1	Met	2 spaces indicated, however only 1 fits requirements for van accessible parking.
24	Bicycle parking			
24a	Requirement ZO 5.16.1	3	Met	

INTERNAL SITE OPERATIONS				
No.	Item	Proposed	Compliance	Remarks
24b	Location ZO 5.16.1	Adjacent to building, not grade separated	Partially Met	Bollards indicated on sheet CS-101. Detail on sheet CS-500 indicates sidewalk and a ramp. Detail should be updated.
24c	Clear path from Street ZO 5.16.1	>6' clear path available	Met	
24d	Height of rack ZO 5.16.5.B	36"	Met	
24e	Other (Covered / Layout) ZO 5.16.1	Detail provided, does not match other plan sheet	Inconclusive	Update detail to be consistent with plans.
25	Sidewalk – min 5' wide Master Plan	6'	Met	
26	Sidewalk ramps EDM 7.4 & R-28-J	Indicated	Met	
27	Sidewalk – distance back of curb EDM 7.4	3', 5' required	Not Met	Variance required if plans are not revised.
28	Cul-De-Sac O Figure VIII-F	N/A	-	-
29	EyeBrow O Figure VIII-G	N/A		
30	Minor/Major Drives ZO 5.10	N/A	-	-
31	Any Other Comments:	A crosswalk connection from the parking to the building would improve pedestrian safety. A 5' turnaround is provided at the end of the parking area.		

SIGNING AND STRIPING				
No.	Item	Proposed	Compliance	Remarks
32	Signing: Sizes MMUTCD	Included	Met	
33	Signing table: quantities	Included	Met	Only 4 R7-8 signs are present on the site plan, while the table indicates 6. Check the quantity of LR7-22 signs.
34	Signs 12" x 18" or smaller in size shall be mounted on a galvanized 2 lb. U-channel post MMUTCD	Included	Met	
35	Signs greater than 12" x 18" shall be mounted on a galvanized 3 lb. or greater U-channel post MMUTCD	Included	Met	
36	Sign bottom height of 7' from final grade MMUTCD	Included	Met	
37	Signing shall be placed 2' from the face of the curb or edge of the nearest sidewalk to the near edge of the sign MMUTCD	Included	Met	
38	FHWA Standard Alphabet series used for all sign language MMUTCD	Included	Met	
39	High-Intensity Prismatic (HIP) sheeting to meet FHWA retro-reflectivity MMUTCD	Included	Met	
40	Parking space striping notes	Partially present	Not Met	Include note on abutting white and blue lines.
41	The international symbol for accessibility pavement markings ADA	Included	Met	

SIGNING AND STRIPING				
No.	Item	Proposed	Compliance	Remarks
42	Crosswalk pavement marking detail	Present	Met	
43	Any Other Comments:			

Note: Hyperlinks to the standards and Ordinances are for reference purposes only, the applicant and City of Novi to ensure referring to the latest standards and Ordinances in its entirety.

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

Sincerely,

AECOM



Patricia Thompson, PE
Traffic Engineer



Paula K. Johnson, PE
Senior Transportation Engineer



Saumil Shah, PMP
Project Manager

FAÇADE REVIEW



July 6, 2022

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

Facade Review Status Summary:
Section 9 Waiver recommended

Re: **FACADE ORDINANCE – Novi Cement Plant, JSP22-08**
 Façade Region: 3, Zoning District: I-2

Dear Ms. McBeth;

The following is the Facade Review for the above referenced project. This review is based on the drawings prepared by Form Surfaces Design Group, dated 5/6/22. Material percentages that are in non-compliance with the Façade Ordinance are indicated in **red** in the chart below.

Building Façade Region 3	South Front	East	West	Northh	Ordinance Maximum (Minimum)
Metal Panels	79%	92%	92%	79%	50%
Concrete Base	6%	8%	8%	6%	0%
Standing Seam Roof	15%	0%	0%	15%	75%

As shown above the percentage of Metal Panels on the building exceeds the maximum amount allowed by the Ordinance on all facades. A Section 9 Waiver would be required for this deviation

12' High Screen Wall Façade Region 3	South Front	East	West	Northh	Ordinance Maximum (Minimum)
Brick (simulated)	100%	0%	0%	0%	100%

The applicant has provided illustration indicating that the screen wall will have the appearance of red brick with cement colored mortar joints. The applicant should clarify if this will be embossed concrete with painted brick color. Based on the rendering provided, the screen wall is in full compliance with the Façade Ordinance. It should be noted that this product, while being suitable for the screen wall, would not qualify as Brick if used on a building.

The proposed 12' high screen wall will substantially obscure the view of the building located north of said wall. Therefore, it is our recommendation the intent and purpose of the Façade Ordinance has been met and that a Section 9 Waiver be granted for the overage of Metal Panels on the building.

The applicant should submit samples of the proposed colors prior to construction. It should be noted that the Ordinance prohibits intense colors. The proposed red color indicated on the rendering must meet this requirement.

Façade 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>.

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

Sincerely,
DRN & Associates, Architects, PC



Douglas R. Necci, AIA

FIRE REVIEW



August 29, 2022

TO: Barbara McBeth - City Planner
Lindsay Bell - Plan Review Center
Christian Carroll - Plan Review Center
Madeleine Daniels – Plan Review Center
Ben Peacock – Planning Assistant

CITY COUNCIL

Mayor
Bob Gatt

Mayor Pro Tem
Dave Staudt

Laura Marie Casey

Hugh Crawford

Justin Fischer

Brian Smith

Ericka Thomas

City Manager
Peter E. Auger

**Director of Public Safety
Chief of Police**
Erick W. Zinser

Fire Chief
Jeffery R. Johnson

Assistant Chief of Police
Scott R. Baetens

Assistant Fire Chief
John B. Martin

RE: Novi Concrete Plant

PSP# 22-0073

PSP# 22-0061

PSP# 22-0022 (Pre-App)

Project Description:

Build a 2 story 8300 Sq. Ft. structure @ 46844 Twelve Mile

Comments:

- **All fire hydrants MUST** be installed and operational prior to any combustible material is brought on site. **IFC 2015 3312.1**
- For new buildings and existing buildings, you **MUST** comply with the International Fire Code Section 510 for Emergency Radio Coverage. This shall be completed by the time the final inspection of the fire alarm and fire suppression permits.
- **Corrected 8/29/22 KSP**-Water-mains shall be put on site plans for review.
- **Corrected 8/29/22 KSP**-The distribution system in all developments requiring more than eight hundred (800) feet of water main shall have a minimum of two (2) connections to a source of supply and shall be a looped system.
- **(D.C.S. Sec. 11-68(a))**
- **Corrected 8/29/22 KSP**-Fire apparatus access drives to and from buildings through parking lots shall have a minimum fifty (50) feet outside turning radius and designed to support a minimum of thirty-five (35) tons. **(D.C.S. Sec 11-239(b)(5))**
- Fire hydrant spacing shall be measured as "hose laying distance" from fire apparatus. Hose laying distance is the distance the fire apparatus travels along improved access routes between hydrants or from a hydrant to a structure.
- Hydrants shall be spaced approximately three hundred (300) feet apart online in commercial, industrial, and multiple-residential areas. In cases where the buildings within developments are fully fire suppressed, hydrants shall be no more than five hundred (500) feet apart. The spacing of hydrants around commercial and/or industrial developments shall be considered as individual cases where special circumstances exist upon consultation with

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

cityofnovi.org

the fire chief. (D.C.S. Sec. 11-68 (f)(1)c)

Fire hydrant spacing:

1. Between fire hydrant 3 to 4.
 2. Between fire hydrant 5 to 7.
 3. Between fire hydrant 7 to 8.
- **Corrected 6/21/22 KSP**-A hazardous chemical survey is required to be submitted to the Planning & Community Development Department for distribution to the Fire Department at the time any Preliminary Site Plan is submitted for review and approval. Definitions of chemical types can be obtained from the Fire Department at (248) 735-5674.
 - The installation of security gates across a fire apparatus access road shall be approved by the fire chief. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be always maintained operational. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

Recommendation:

APPROVED WITH CONDITIONS

Sincerely,

A handwritten signature in black ink, appearing to read 'KSP', with a long horizontal flourish extending to the right.

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

cc: file

APPLICANT RESPONSE LETTER

September 21, 2022

City of Novi
Community Development Department Planning Division
45175 West 10 Mile Road
Novi, MI 48375

Attn: Christian Carroll, Planner

RE: Novi Concrete Plant
Preliminary Site Plan Review
46844 Twelve Mile Road
JS 22-08

Christian:

Please accept this response to the comments provided by the City staff and consultants, as communicated in your Plan Review Center Report dated September 12, 2022.

The following documents are provided with this submittal:

- Civil Design Set, (30) sheets, dated 9-19-2022
- Civil Design Reference Sheets:
 - Landscaping Design, (4) sheets, dated 9-21-2022
 - Site Photometric Design, (7) sheets, dated 9-21-2022
 - ALTA/NSPS Survey, dated 3-16-2022
 - Novi Standard Detail Sheets
- Architectural Design Drawings, (2) Sheets, dated 8-2-2022 & 9-13-2022
- Rendered Site Plan
- Building Exterior Rendering

RECOMMENDATION

Approval of the Preliminary Site Plan is recommended by Planning staff contingent upon revisions being made to the Wetland Impact Plan and Landscape Plan.

Response: The required revisions to the Wetland Impact Plan and Landscape Plan have been made as described below.

ORDINANCE REQUIREMENTS

1. Uses Permitted (Sec. 3.1.19.B/C): A concrete plant is a principal permitted use in the I-2, General Industrial, Zoning District. **No portion of the site associated with such use shall extend beyond the I-2, General Industrial, Zoning District boundary except for site grading, landscaping, and stormwater management. Planning Commission approval of the Preliminary Site Plan is required.**
Response: Acknowledged
2. Building Height (Sec. 3.1.19.D): The proposed concrete plant has two roofs—one flat roof that has a maximum height of 90 feet and one gable roof that appears to have a height of approximately 50 feet. Currently, the roof measurement for the gable roof is from grade to bottom of the pitch. **The height measurement of the gable roof should be revised to be measured from established grade to the mean height level between the eaves and ridge**

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of the gable roof. Please correct this on Sheet A201. In addition, the maximum building height in the I-2 Zoning District is 60 feet. While the majority of the structure is 50 feet tall, the 90 foot tall concrete silos exceed the 60 foot height requirement. **The applicant is seeking a variance from the height requirement from the Zoning Board of Appeals.**

Response: The dimension from the proposed floor elevation to the mean height level between the eave and the ridge is provided on the East Elevation on Sheet A-201. A **Variance** for the proposed height has been requested.

3. Loading Spaces (Sec. 5.4.3): The proposed concrete truck loading area is located in the front yard of the site, which is not permitted. **The applicant is seeking a Zoning Board of Appeals variance for the placement of a loading area in the front yard.**
Response: Acknowledged. A **Variance** for the loading area in the front yard has been requested.
4. Dumpster Enclosure (Sec. 21-145 (c), Code of Ordinances): The proposed dumpster enclosure appears to comply with ordinance standards. However, the height of the dumpster has not been confirmed. **Please provide a standard note on the plans indicating that the height of the enclosure will be a minimum of 1 foot taller than the height of the dumpster.**
Response: This note has been added to the Dumpster Enclosure Elevation on Sheet A-302, with a reference note included on the Site Plan Sheet CS-100.
5. Woodland Use Permit: A Woodland Use Permit will be required for this project as 82 regulated woodland trees are proposed to be removed. **This permit will require 138 Woodland Replacement Credits and Planning Commission approval. Please indicate if any woodland trees are proposed to be replace on-site in a proposed conservation easement. Any outstanding credits will be required to be paid into the City Tree Fund at \$400 per credit.**
Response: The updated tree replacement summary is provided on Sheet TPP-1. Total replacement of (119) trees will be provided with (52) plantings plus (67) outstanding credits.
6. Wetland Use Permit: A Major Wetland Use Permit **is still required** for this project as 0.25 acres of regulated wetland is proposed to be filled. **Please revise the plan to reduce the wetland impact below 0.25 acres if you wish to seek a Minor Wetland Use Permit and clearly indicate this in the response letter. In addition, the site plan notes a future development area near the Twelve Mile Road frontage. If this site were to be developed and the remainder of Wetland A were to be filled, a Major Wetland Use Permit and on-site mitigation would be required at that time (only if the current plan is revised to reduce current wetland impacts below 0.25 acres). Please refer to the Wetland Review letter for additional information.**
Response: The revised Wetland Impact of 0.22 acres and approximately 295.70 cubic yards of fill is provided on Sheet CW-100. The project now meets Minor Wetland Use Permit criteria and falls below the City's 0.25-acre threshold for mandatory wetland mitigation. The reduced impacts were achieved by reducing the parking spaces by 4 and lowering the parking lot grading.

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7. Same Side Driveway Spacing Waiver (Sec. 11-216.d.1.d): A same side driveway spacing waiver is required for the proposed access drive on Twelve Mile Road. The proposed driveway is 122.4 feet from the driveway to the west and 230 feet is required. The distance to the driveway to the east has not been indicated and 230 feet is required. **Please indicate the distance to the driveway to the east in the response letter and on the plans. AECOM and City Staff supports the waiver as the site could not be accessed from Twelve Mile Road without a waiver.**

Response: The proposed distance to the driveway to the east is provided on Sheet CS-102. A **Waiver** for the driveway spacing is requested.

8. Sidewalk – Distance to Back of Curb Waiver (EDM 7.4): The sidewalk distance to the back of the curb along the access drive is currently 3 feet from the edge of curb. 5 feet is required. The current plan does not meet this requirement and will require a waiver. **Please indicate if you wish to seek a waiver, which is not supported by staff and AECOM, or if you plan on revising the plans to address this issue in the next submittal.**

Response: Sidewalk was moved to 5 feet from back of curb, on Sheet CS-101.

9. Photometric Plan (Sec. 5.7): A photometric plan has been provided. **However, there are several items that need to be addressed:**

- a. Fixture Height/Maximum Height (Sec. 5.7.A.2.ii, Sec. 5.7.3.A): **Please provide fixture height for each fixture.** The fixture height shall not exceed 25 feet on the I-1 portion of the site, and 60 feet on the I-1 portion of the site.

Response: Height is shown on sheet E-2 & E-7

- b. Hours of Operation (Sec. 5.7.A.2.ii): **Please provide the lighting hours of operation.**
Response: The hours of operation are shown on sheet E-7

- c. Standard Notes (Sec. 5.7.3.B): **Please provide the following standard notes as listed below.**

i. "Electrical service to light fixtures shall be placed underground."

ii. "Flashing light shall not be permitted."

iii. "Only necessary lighting for security purposes & limited operations shall be permitted after a site's hours of operation."

Response: The notes are shown on sheet E-2 & E-7

- d. Average Light Level (Sec. 5.7.3.E): The average light level of the site has not been provided. It shall not exceed a 4:1 ratio to maintain a consistent level of lighting across the site. **Please provide this calculation with the next submittal.**

Response: The calculation is shown on sheet E-1 & E2

- e. Minimum Illumination (Sec. 5.7.3.K): The minimum illumination levels have not been met in the parking areas, loading areas, and walkways. **Please increase the minimum illumination levels in these areas to comply with the ordinance requirements.**

Response: Minimum illumination levels are shown on sheet E-1 & E2

10. Façade: A Section 9 Façade Waiver is required for the overage of metal panels on all elevations, which is supported by staff. **This will require Planning Commission approval.**

Response: Acknowledged. A **Waiver** for this item is requested.

Engineering Review

Recommendation

Approval of the Revised Preliminary Site Plan is recommended, with items to be addressed at Final Site Plan submittal.

General

8. **Regarding backflow prevention: a. Although irrigation is not shown on the plans, an \$8,000 budget line for underground irrigation is indicated on sheet LP-1. Clarify whether irrigation will be connected to the public water supply or a well.**

Response:

14. **Indicate An adequate maintenance access route to the basin outlet structure and any other pretreatment structures shall be provided (15 feet wide, maximum running slope of 1V:5H, maximum cross slope of 3%, and able to withstand the passage of heavy equipment). Verify the access route does not conflict with proposed landscaping.**

Response: The maintenance access is shown on Sheet CS-100.

All remaining storm water management comments will be addressed during the final engineering review. We want to confirm what standards we should follow; the fact that we are discharging to an Oakland County drain will force us to follow the County standards. There is a difference between the current City standards and the County standards so we need clear direction on how to deal with this issue.

22. **Indicate the ingress/egress routing to the building from the barrier-free stalls, and verify the slopes. All barrier-free stalls and routes shall comply with Michigan Barrier-Free regulations. Noted this item will be addressed during final engineering.**

Response: A path was provided and is shown on all the plans, see Sheet CS-100

27. **If applicable, any off-site utility easements anticipated must be executed prior to final approval of the plans.**

Response: Noted, it will be executed.

28. **A license Agreement will be required for the retaining wall proposed within the water main easement. The agreement shall state that the wall and all site facilities within the influence of the wall that may be removed or damaged in the event the utility requires maintenance will be the responsibility of the property owner to repair or replace.**

Additionally, a cross-section shall be included with the agreement showing the distance between the wall foundation and the utility. A template agreement is available from the Engineering Division.

Response: Noted

29. **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. Additionally, a**

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statement must be provided stating that all changes to the plan have been discussed in the applicant's response letter.

Response: The drawing revisions provided with this letter have been discussed by the engineer and applicant.

30. An 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 yardage), right-of-way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pre-treatment structure and restoration).

Response: An itemized construction cost estimate will be provided at the time final engineering is submitted.

Preliminary Site Plan - Landscaping

Please follow the requirements of the revised ordinance,

Response: Acknowledged.

Recommendation:

This project is **recommended for approval for Preliminary Site Plan**. The only waivers required that is not supported by staff are easily corrected, and the applicant will hopefully agree to doing them. The other changes required can be made on the Final Site Plans.

Please correct the conditions that require the two unsupported waivers.

Response: Waivers are requested for the following landscaping items:

- **Waiver** for the berm required along the outer edges.
I-2 Buffering (*Zoning Sec. 3.15*)
- **Waiver** for the foundation landscaping
Building foundation Landscaping (*Zoning Sec 5.5.3.D*)
- **Waiver** for the transformer plantings
Transformers/Utility boxes (LDM 6)

Ordinance Considerations

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

1. Provided
2. **Please plant as many replacement credits as possible on the site.**
Response: Fifty two (52) replacement trees are now specified on Sheet TPP-1. Sixty-seven (67) replacement credits are required.
3. **Woodland replacement trees may be used for the screening along the east and west sides of the site. They may also be used to meet the detention basin tree requirement.**
Response: Deciduous trees around the stormwater basin are categorized as replacement trees.
4. **Excess shrubs (those around the detention pond that exceed the 70% coverage requirement) may also be used toward the Woodland Replacements per the Reforestation Credit Table in Section 37-8.**

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Response: Proposed shrubs around the detention pond are at 70% coverage.

5. **Please clearly label all woodland replacement plantings as such on the plan view.**

Response: Replacement trees are indicated in the plant list.

I-2 Buffering (Zoning Sec. 3.15)

1. The berm or walls required along the outer edges are not provided.
2. **A landscape waiver is required for that deficiency.**
3. The waiver required for this deficiency is supported by staff because alternative screening, in the form of evergreen trees along the sides of the site is provided and about 570 feet of woodland is preserved on the north end of the site.

Response: A waiver is requested for the berm requirement.

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

1. The required berm is proposed on the landscape plan but not the grading plan. **Please copy the berm from the landscape plan to the grading plan.**
2. The greenbelt landscaping exceeds the requirement.
3. **Please revise the calculations per the current ordinance. The trees proposed can be reduced to the required 10 canopy and 13 subcanopy trees if desired**
4. **Please show the RCOC clear vision zone at the 12 Mile Road entry.**
5. **Please revise the street tree calculations, reduce the number of street trees proposed to the number required and spread them out as evenly as possible, outside of the turnaround area.**

Response: The berm has been copied to the Grading Plan, Sheet CG-102. The Landscape Calculations on Sheet LP-1 have been amended according to current zoning requirements. The plant quantities have been adjusted to reflect the requirements. Clear vision zones have been indicated on the Landscape Planting Plan, Sheet LP-1.

Parking Lot Landscaping (Zoning Sec. 5.5.3.C)

1. **Please revise the calculations per the current ordinance (6%) and provide the required interior space, interior trees, parking lot perimeter space between the lot and the operations area, and parking lot perimeter trees.**
2. **Please label the interior area of all of the islands not including the perimeter area between the parking lot and the operations area and revise the calculations accordingly.**
3. **Please locate at least 8 of the perimeter trees in the area between the parking lot and the operations area, not including the island trees.**

Response: The Landscape Calculations on Sheet LP-1 have been amended according to the current ordinance. The square footage of the landscape islands is indicated on the Landscape Planting Plan, Sheet LP-1. The green space between the parking lot and the operations area is not included in the interior landscape island square footage totals. A fence is proposed down the middle of this green space limiting tree planting in this area. Perimeter trees are proposed along the north perimeter of the parking lot.

Accessway Perimeter Trees (Zoning Sec. 5.5.3.C)

Please locate all of the accessway perimeter trees within 15 feet of the accessway, and use canopy tree species/cultivars that meet the requirement of a minimum mature height of 30 feet and mature canopy width of at least 20 feet. The Green pillar oaks and spruces do not meet this requirement.

Response: The trees fulfilling the accessway perimeter planting consist of deciduous trees with a mature height of thirty feet (30') and a mature width of at least twenty feet (20').

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Building foundation Landscaping (Zoning Sec 5.5.3.D)

1. No foundation landscaping is proposed for the operations building.
2. As the building is in the interior of the operations area, it is not visible from Twelve Mile Road and there is no good alternative place for the landscaping. **For this reason, the applicant is encouraged to request a landscape waiver for this deviation.** *It would be supported by staff if the area is located on the south side of the 12 foot wall and includes vines that can climb the wall.*

Response: We are requesting a **Waiver** for the foundation planting requirement. This requirement is not compatible with the proposed use of the property and significant plantings are proposed for the remainder of the site.

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

1. More than the required shrubs are provided. The excess shrubs can be counted toward the woodland replacement requirement using the Reforestation Credit Table in Section 37-8.
2. The detention pond trees need to be deciduous canopy trees to provide as much shade as possible for the pond. **Please change the evergreen trees to canopy trees. The one area where evergreen trees could be used is between the pond and the operations area, to help with screening of that area from the east. Woodland replacement trees can be used to meet the canopy tree requirement.**
3. **Please locate the shrubs and trees at about 10 feet away from the permanent water level.**
Response: Deciduous trees fulfilling the replacement tree requirement are now specified around the detention pond, on Sheet LP-1. The proposed shrubs are indicated approximately ten feet (10') from the bottom of the basin.

Plant List (LDM 4, 10)

1. 9 of 11 (82%) species used for non-woodland replacement trees are native to Michigan.
2. The tree diversity requirements of LDM Section 4 are not met. There are too many serviceberries and redbuds (19.6% of the non-woodland replacement trees used versus a maximum of 15% per species) and too many tuliptrees (35.3%). Maples may also be too plentiful if the number of extra trees (street and greenbelt) are reduced as discussed above.
3. **Please revise the species selections to meet the 15% species/25% genus requirement for all non-woodland replacement plantings. Picea abies may not be used as a woodland replacement as it is not on the woodland replacement chart of Section 37-8.**
4. A maximum of 10% of the woodland replacement credits planted on the site can be evergreens. **Please reduce the percentage of evergreen woodland replacements.**
Response: The species selections have been amended in the Plant List on Sheet LP-1. Norway Spruce is not specified as a woodland replacement. Approximately eight percent (8%) of the replacement trees are specified as White Pine.

Preliminary Site Plan Woodland Review #1 – PSP22-0022

Woodland Review Comments

Recommendation: DRG recommends approval contingent on addressing the Woodland Review comments. The Woodland Use Permit for the site will require Planning Commission approval.

3. Woodland Replacements (Sheet LP-1). The site is required to mitigate the removal of the 82 regulated woodland trees with 138 woodland replacement credits. Woodland replacement credits can be provided by:

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- a. Planting the woodland tree replacement credits on-site.
- b. Payment to the City of Novi Tree Fund at a rate of \$400/woodland replacement credit.
- c. Combination of on-site tree planting and payment into the City of Novi Tree Fund (\$400/woodland replacement credit).

The Plan (Sheet LP-1) proposes the planting of **20 replacement credit on-site** (detailed below). However, the Landscape Calculations state that 121 replacement credits are planted on site. **Tree plantings and landscaping required by the City of Novi cannot also be used to meet the woodland replacement credit requirements. Please revise plans to indicate which trees are meeting the woodland replacement requirements and which are meeting other City of Novi requirements.** Note that any woodland replacements that cannot be planted will require payment into the City of Novi Tree Fund at a rate of \$400/woodland replacement credit.

- 5 – 2.5" cal. B&B Sugar maple (*Acer saccharum*)
- 2 – 2.5" cal. B&B American hornbeam (*Carpinus caroliniana*)
- 2 – 2.5" cal. B&B American hophornbeam (*Ostrya virginiana*)
- 7 – 2.5" cal. B&B Red Oak (*Quercus rubra*)
- 4 – 2.5" cal. B&B American basswood (*Tilia americana*)

Response: As a result of site plan changes, additional existing trees are proposed to remain. The revised replacement total is one hundred and nineteen. The plan now includes fifty-two (52) replacements on site. An equivalent monetary value of sixty-seven (67) replacement trees is to be contributed to the tree fund.

Wetland Review of Revised Preliminary Site Plan

The Preliminary Site Plan is conditionally approved for wetlands with the following contingencies:

2. **All areas of existing wetland and wetland buffer as well as areas of proposed impacts must be shown and quantified on future plan submittals (revised PSP or FSP, etc.).**

Response: The existing wetlands and wetland buffers, and the proposed wetland impacts are shown on Sheet CW-100.

4. The wetlands found on the Site include forested, emergent, and scrub-shrub components. **Because forested wetland has a higher compensatory wetland mitigation replacement ratio, the applicant needs to distinguish those types of wetland communities on the plan and quantify them accordingly.** The resulting areas of forested and non-forested wetlands would be used to calculate compensatory wetland requirements for both the EGLE and Novi Wetland Permits.

Response: Wetland community types are indicated on the plan. Wetland impacts were reduced to 0.21 acres, below the City's 0.25-acre threshold requiring mitigation. Mitigation will be addressed with EGLE.

Preliminary Site Plan Traffic Review

The revised preliminary site plan was reviewed to the level of detail provided and AECOM recommends **approval with conditions** for the applicant to move forward as long as the **comments/potential variances** below are addressed to the satisfaction of the City.

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EXTERNAL SITE ACCESS AND OPERATIONS

4. Emergency Access O 11-194.a.19

2 access points required unless Fire allows for a single access point.

Response: This will be reviewed with the Fire Marshal, and the requirements will be provided. A remote, second means of ingress is prohibitive because of the locations of the screen wall, aggregate storage, and storm water pond.

6. Driveway spacing

a. **Same-side** O 11.216.d.1.d

Variance required, which AECOM would support

Response: A **Waiver** for the same-side driveway clearance is requested.

INTERNAL SITE OPERATIONS

15. End islands | [ZO 5.3.12](#)

a. Adjacent to a travel way

End islands required for truck parking area where spaces are adjacent to drive aisles.

Response: The islands are shown on Sheet CS-101.

27. Sidewalk – distance back of curb [EDM 7.4](#) 3', 5' required

Variance required if plans are not revised.

Response: The sidewalk dimension of 5 feet from back of curb is shown on Sheet CS-101.

SIGNING AND STRIPING

40. Parking space striping notes

Include note on abutting white and blue lines.

Response: A note was added to CS-100 to provide 4" white line next to 4" blue line.

The following variances and waivers will be requested:

Variances to be requested:

- V1 Variance for the building height exceeding the allowable height of 60'.
Building Height (Sec. 3.1.19.D):
- V2 Variance for the location of the loading area
Loading Spaces (Sec. 5.4.3):

Waivers to be requested:

- W1 Same-side driveway spacing Waiver for the proposed location of the entrance drive with respect to the adjacent drive to the west.
- W2 Landscape Waiver for the berm required along the outer edges.
I-2 Buffering (*Zoning Sec. 3.15*)
- W3 Waiver for the foundation landscaping
Building foundation Landscaping (*Zoning Sec 5.5.3.D*)

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- W4 Waiver for the transformer plantings
Transformers/Utility boxes (LDM 6)
- W5 Façade Waiver for percentage of Metal Panels
Façade Ordinance Section 9

We look forward to addressing any items further as may be required to complete the review of this project.

Sincerely,

Daniel P. Onifer

Daniel P. Onifer
Crown Enterprises, LLC

Cc: Fadi Khalil, Heather Smigliani, Dana Knox

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