DATE: June 20, 2024

TO: Joliet Plan Commission

FROM: Planning Staff

SUBJECT: <u>PUD-5-24</u>: Final Planned Unit Development of Lakewood Prairie

Subdivision, Unit 3. (Southeast Corner of Theodore Street and Barberry Way) (PIN #00-09-01-100-005-

0000) (COUNCIL DISTRICT #3)

M-2-24: Development Agreement for Lakewood Prairie

Subdivision, Unit 3.

GENERAL INFORMATION:

APPLICANT: CalAtlantic Group, LLC (d/b/a Lennar

Corporation)

STATUS OF APPLICANT: Owner

REQUESTED ACTION: Approval of a Final Planned Unit Development

of Lakewood Prairie Subdivision, Unit 3, and

approval of a Development Agreement.

PURPOSE: To allow future development of 213 single-

family residential dwelling units.

LOCATION: Southeast corner of Theodore Street and

Barberry Way.

SIZE: Approximately 70 acres

EXISTING LAND USE: Vacant, undeveloped land

SURROUNDING LAND

USE & ZONING: North: Single-Family Residential; R-2

South: One and Two-Family Residential; R-3

East: Single-Family Residential; R-1B

West: Single-Family Residential; R-1B

<u>SITE HISTORY</u>: The subject property was annexed into the City and zoned to its current zoning designation of R-1B (Single-Family Residential) zoning in 2003. The property was annexed and zoned with the greater Lakewood Prairie subdivision and was intended for development of over 200 single-family residences. Development of the subject property was delayed due to unfavorable market conditions. At this time the subject petitioner, CalAtlantic Group, LLC, wishes to develop 213 single-family residences on the subject property. The City Council approved the Preliminary Planned Unit Development (PUD) at its March 19, 2024, meeting.

<u>SPECIAL INFORMATION</u>: The petitioner is requesting approval of a Final Planned Unit Development of Lakewood Prairie Subdivision, Unit 3. The proposed subdivision would contain 213 single-family dwelling units. The originally approved Preliminary PUD contained 214 dwelling units. Homes would range between 1,428 and 2,607 square feet and would feature 2-2.5 bathrooms and 2-4 bedrooms per unit. Initial market pricing for the homes would be between \$385,000 and \$405,000 for ranch-style homes, and between \$430,000 and \$465,000 for two-story homes. Draft elevations and floor plans of the proposed models have been included in the staff report packet.

The subdivision would feature an extension of Fawnlily Circle to the north from the Lakewood Prairie, Unit 2 subdivision, in addition to six new streets as depicted on the Final PUD Plat. A Wetland Delineation Report from October 23, 2023, states that two wetlands totaling 0.61 acres in size were identified on the subject property and are anticipated to be isolated wetlands. Isolated wetland mitigation is not expected to be required for these wetlands, however, a jurisdictional determination from the U.S. Army Corps of Engineers is still required to confirm the findings in the Wetland Delineation Report.

The proposed PUD would have an approximate density of 3.04 dwelling units per acre when including the property's total site area. Outlot "M", a 2.93-acre open space, located along the east side of Barberry Way, is proposed to be dedicated to the Joliet Park District. Outlot "K", located along the north side of the subdivision, would be a common open space that would be maintained by the subdivision's Homeowner's Association (HOA). A 10'-wide bike path also runs along the east side of Barberry Way to provide an additional recreational amenity for the subdivision. The petitioner will form its own HOA for the proposed subdivision but is requesting that the Lakewood Prairie HOA for the existing subdivision grants its residents access to the central clubhouse and pool.

The site is subject to school facilities fees, Joliet sewer and water connection fees, and the economic development impact fee.

<u>DEVELOPMENT AGREEMENT:</u> The petitioner also seeks approval of a Development Agreement with submission of the Final PUD Plat. The Development Agreement is in draft form, but lays out specifics regarding Zoning and Variations, Non-Arterial Streetlighting, Development and Subdivision Signage, Public Improvements, Development Provisions, Temporary Occupancy, Water and Sewer Availability, Park Site Dedication, Architectural Requirements, City Fees, General Provisions, and the Effective Date.

<u>ANALYSIS</u>: Approval of the proposed Final Planned Unit Development (PUD) Plat of Lakewood Prairie Subdivision, Unit 3, will allow the development of 213 single-family residential dwelling units within the subject property. The proposed development meets the intent and character of the underlying R-1B zoning designation and would complement existing residential development in the city's far west side.



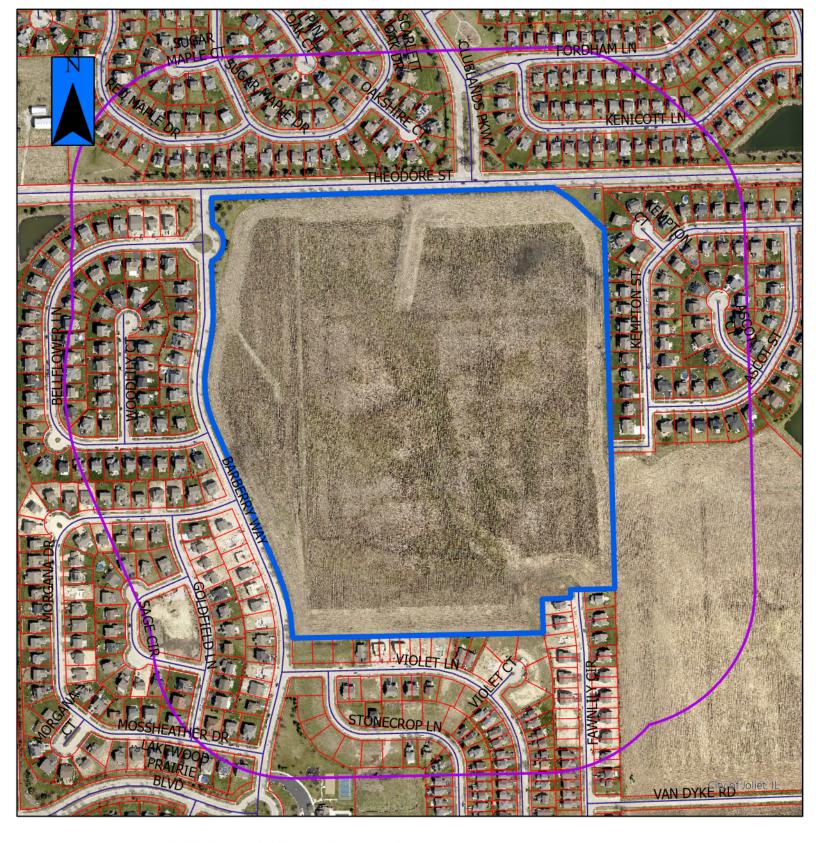
PUD-5-24 & M-2-24



PLANNING = Property in Question

DIVISION = 600' Public Notification = 600' Public Notification **Boundary**

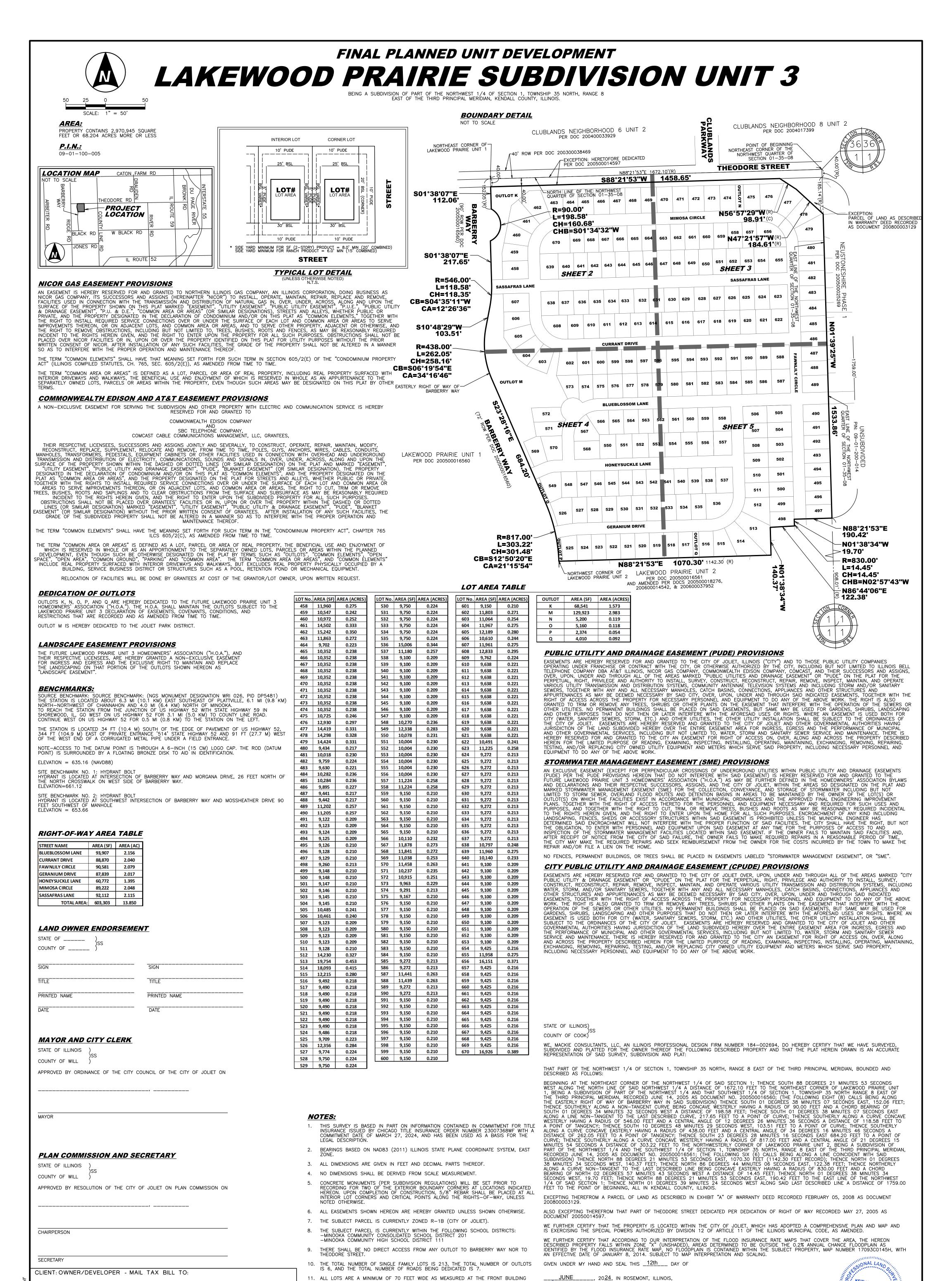




PUD-5-24a & M-2-24a



 Property in Question / Propiedad en cuestión
 600' Public Notification Boundary / Límite de notificación pública de 600 ft (180 m)



ENGINEER/SURVEYOR - MAIL TO:

LENNAR

9575 W. Higgins Road, Suite 500 Rosemont, IL 60018 (847)696-1400 www.mackieconsult.com

LENNAR HOMES

1700 E. GOLF ROAD

SUITE 1100

SCHAUMBURG, IL 60173

DESIGNED MTL DRAWN KMF APPROVED 06-12-24 REVISED PER CITY COMMENTS AJM ISSUE FINAL PUD PLAT 04-15-24 AJM DATE 01/09/2024 REVISED PER CITY COMMENTS 02-06-2024 JT SCALE DESCRIPTION OF REVISION BY

12. ALL OUTLOTS WILL BE OWNED AND MAINTAINED BY EITHER THE HOA OR PARK DISTRICT

13. THE STORMWATER DETENTION VOLUME IS STORED IN THE EXISTING BASIN LOCATED IN LAKEWOOD PRAIRIE UNIT 1, OUTLOT T, PER RECORDED DOCUMENT 200500016560.

PENDING FINAL AGREEMENTS AND WILL NOT BE THE RESPONSIBILITY OF THE CITY OF

FINAL PUD PLAT LAKEWOOD PRAIRIE SUBDIVISION UNIT 3 **JOLIET, ILLINOIS**

KEITH M. FRANCE

FMAIL: kfrance@mackieconsult.com

ILLINOIS PROFESSIONAL LAND SURVEYOR NUMBER 035-004077 LICENSE EXPIRES: NOVEMBER 30, 2024

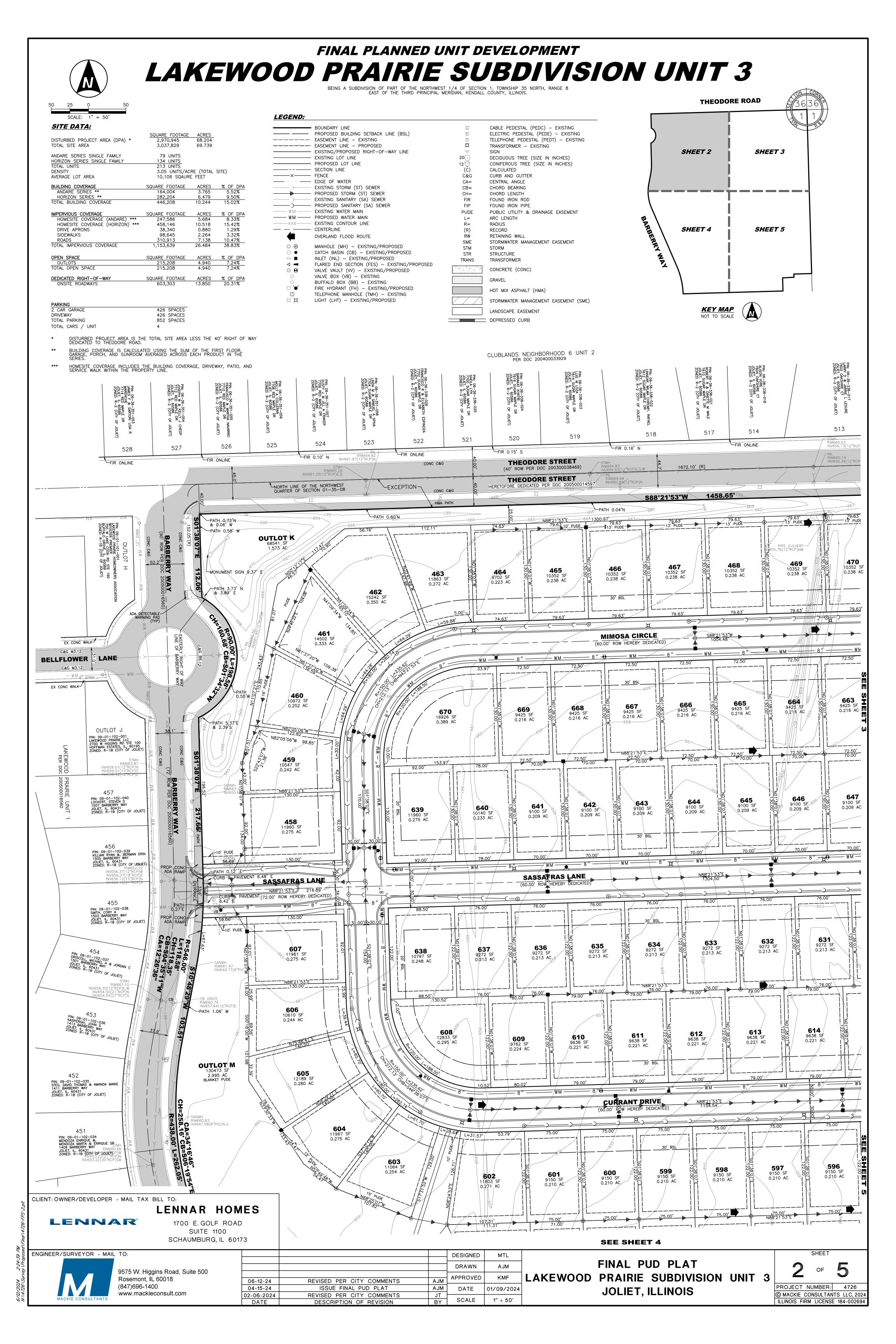
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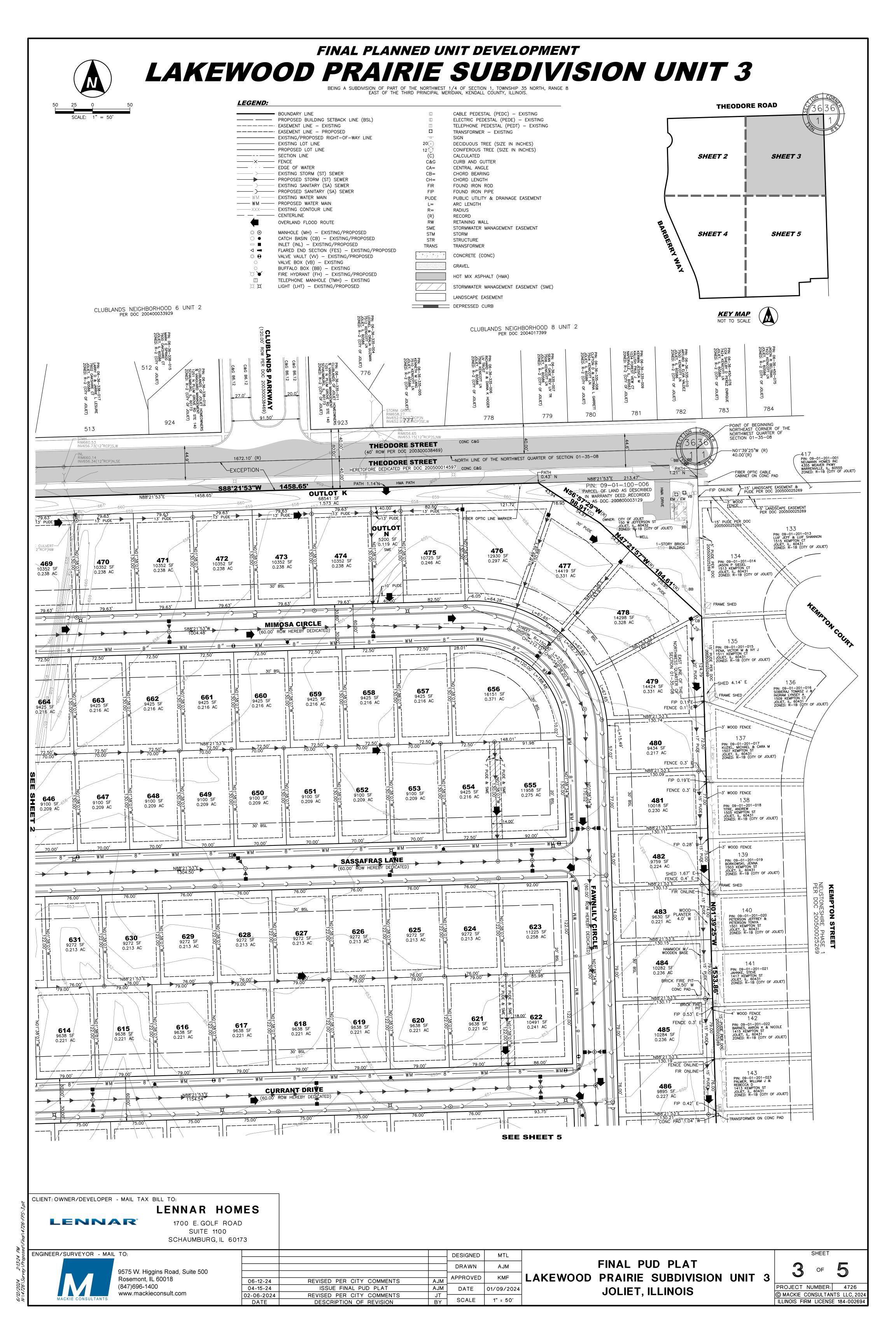
KEITH M. FRANCE

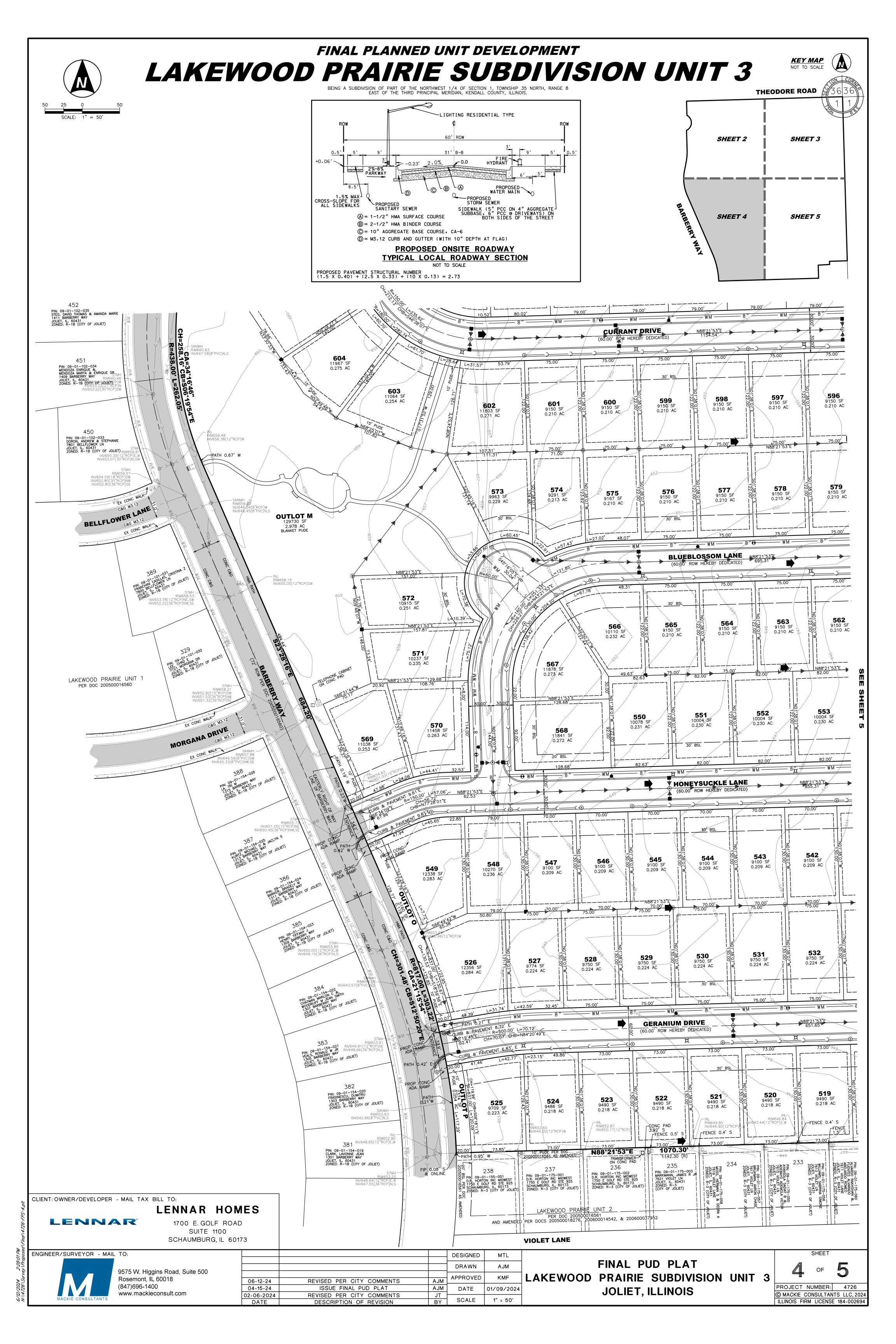
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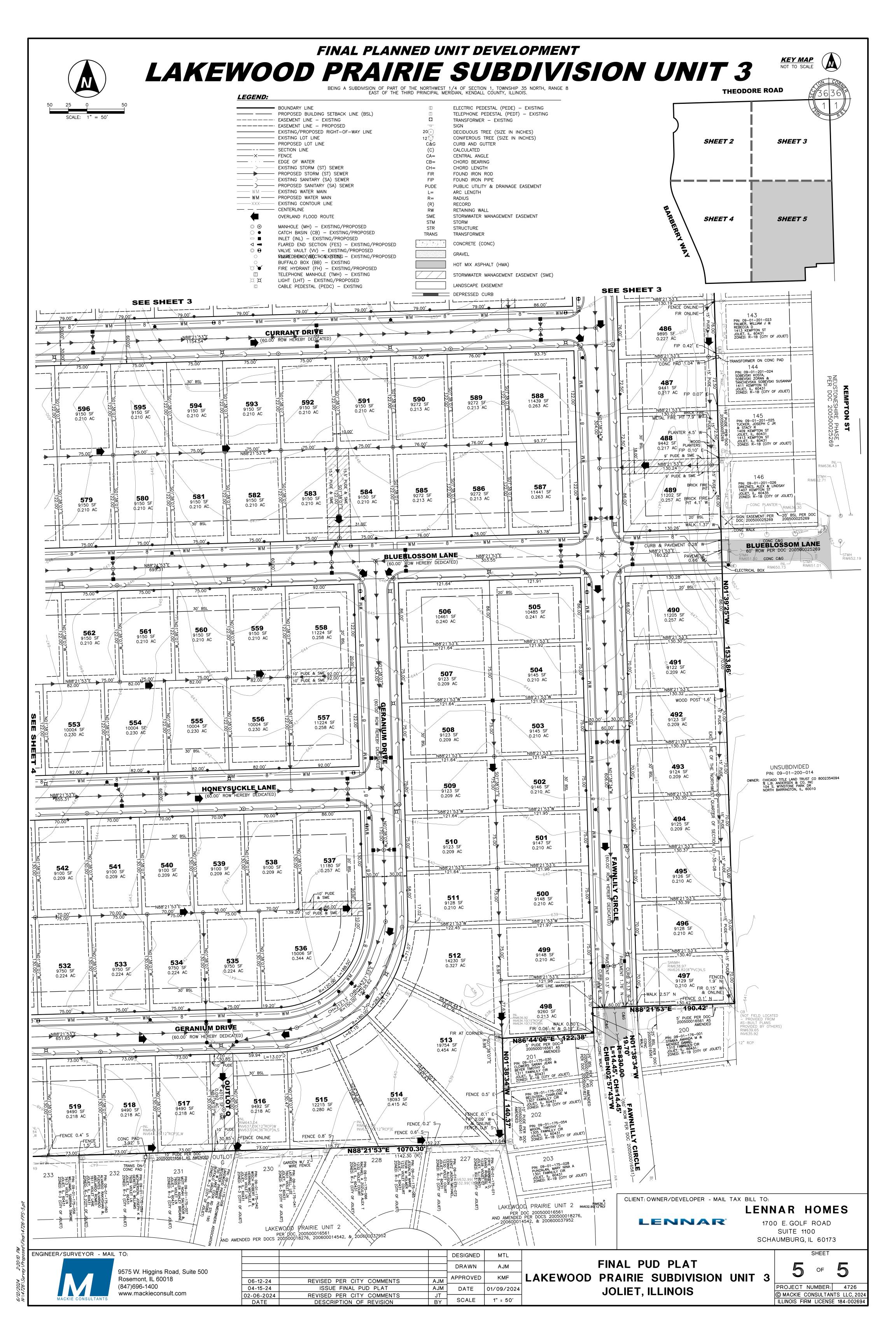
ILLINOIS

PROJECT NUMBER: 4726 ILLINOIS FIRM LICENSE 184-002694









Napa Andare Series

1,428 sq ft 1-story 2 beds – 2 baths 2-car garage

Open plan, study, spacious owner's suite



Napa C







Napa B



Napa



Elevation A - Side Elevation Elevation



Elevation A -Rear Elevation



Napa Andare Series

1,428 sq ft 1-story 2 beds - 2 baths 2-car garage Open plan, study, spacious owner's suite

NAPA





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Elevations of a home may vary and we reserve the right to substitute and /or modify design and materials, in our sole opinion and without notice. Please see your actual home purchase agreement for additional information, disclosures and disclaimers related to the home and its features. Stated dimensions and square footage are approximate and should not be used as representation of the home's precise or actual size. Any statement, verbal or written, regarding "under air" or "finished area" or any other description or modifier of the square footage size of any home is a shorthand description of the manner in which the square footage was estimated and should not be construed to indicate certainty. Garage sizes may vary from home to home and may not accommodate all vehicles. Features, amenities, floor plans, elevations, square footage and designs vary per plan and community and are subject to changes or substitution without notice. Lennar makes no guarantee as to the availability of homes within the price ranges set forth above. Price subject to change without notice. Visit Lennar.com or see a Lennar New Home Consultant for further details and important legal disclaimers. This is not an offer in states where prior registration is required. Void where prohibited by law. This is not an offer in states where prior registration is required. Void where prohibited by law. Copyright © 2022 Lennar Corporation Lennar, the Lennar logo are U.S. registered service marks or service marks of Lennar Corporation and/or its subsidiaries. LNCH1866 Aylesworth - Andare - Napa 07/2022



Rutherford

Andare Series

1,649 sq ft

1-story

3 beds – 2 baths

2-car garage

Covered porch, spacious kitchen, private Owner's suite



Rutherford C



Rutherford A



Rutherford B



Rutherford



Elevation A - Side Elevation

Elevation A - Side Elevation



Elevation A -Rear Elevation



Rutherford

Andare Series

1,649 sq ft

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1,792 sq ft

1-story

3 beds – 2 baths

2-car garage

Open plan, spacious kitchen, private Owner's suite



Siena C



Siena A



Siena B



Siena



Elevation A - Side Elevation Elevation Elevation



Elevation A -Rear Elevation



Siena Andare Series

1,792 sq ft

1-story

3 beds - 2 baths

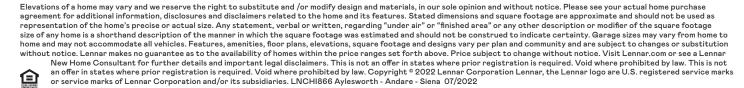
2-car garage

Open plan, spacious kitchen, private Owner's suite



219-321-9147 | Lennar.com





1,880 sq ft

1-story

3 beds – 2 baths

2-car garage

Open plan, study, private Owner's suite



Sonoma C



Sonoma A



Sonoma B



Sonoma



Elevation A - Side Elevation Elevation



Elevation A -Rear Elevation



Sonoma Andare Series

1,880 sq ft

1-story

3 beds - 2 baths

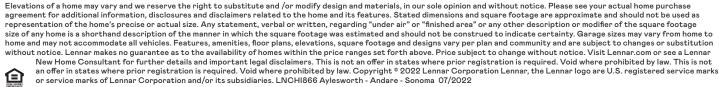
2-car garage

Open plan, study, private Owner's suite



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THE MEADOWLARK

Approx. 2,052 sq. ft.

3 Bedrooms

2.5 Bathrooms

2-Car Garage



— The Meadowlark A —



— The Meadowlark C —



— The Meadowlark D —

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LENNAR°



Meadowlark



Elevation A - Side



Elevation A - Side



Elevation A - Rear

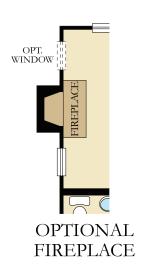






SECOND FLOOR









THE SIENA

Approx. 1,866 sq. ft.

3 Bedrooms

2 Bathrooms

2-Car Garage



— The Siena A —



— The Siena B - Shown with Optional Brick —



— The Siena C - Shown with Optional Brick —

LENNAR

LENNAR°

Siena



Elevation A - Side



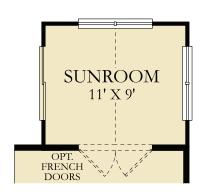
Elevation A - Side



Elevation A - Rear







OPTIONAL SUNROOM





THE STARLING

4 Bedrooms

2-Car Garage





— The Starling A —

— The Starling B —



— The Starling D —



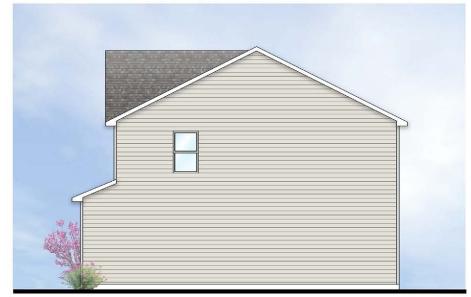


2.5 Bathrooms





Starling



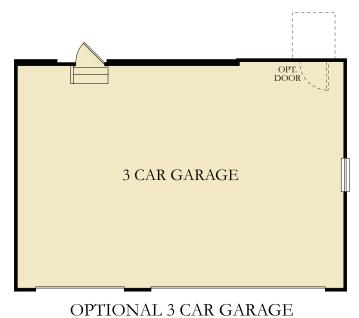
Elevation A - Side



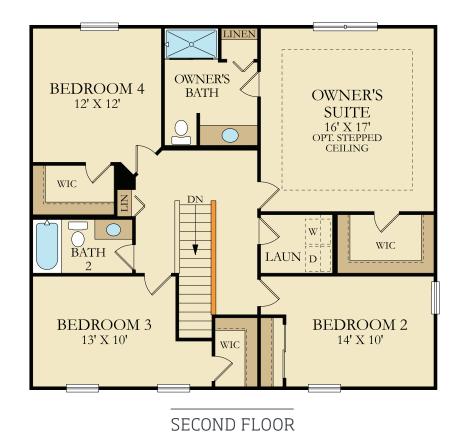
Elevation A - Side



Elevation A - Rear







OPTIONAL DELUXE

SHOWER BATH

THE TOWNSEND

Approx. 2,362 sq. ft.

4 Bedrooms

2.5 Bathrooms

2-Car Garage





— The Townsend A —



— The Townsend B —



— The Townsend C —



— The Townsend D —

LENNAR°

Townsend



Elevation A - Side



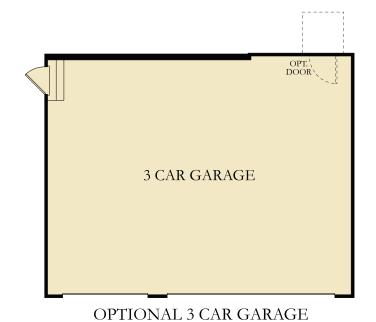
Elevation A - Side



Elevation A - Rear



FIRST FLOOR



DESIGNER SELECT RAILING



SECOND FLOOR



SHOWER BATH

THE WREN



2.5 Bathrooms

2-Car Garage



— The Wren C —

— The Wren B —

— The Wren A —



— The Wren D —

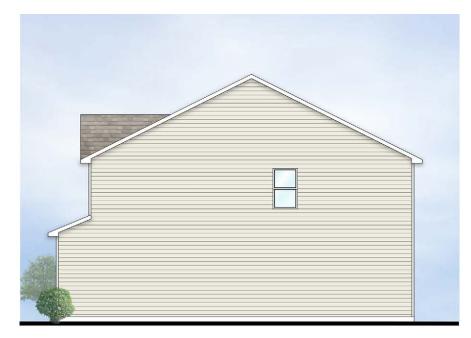


4 Bedrooms





Wren



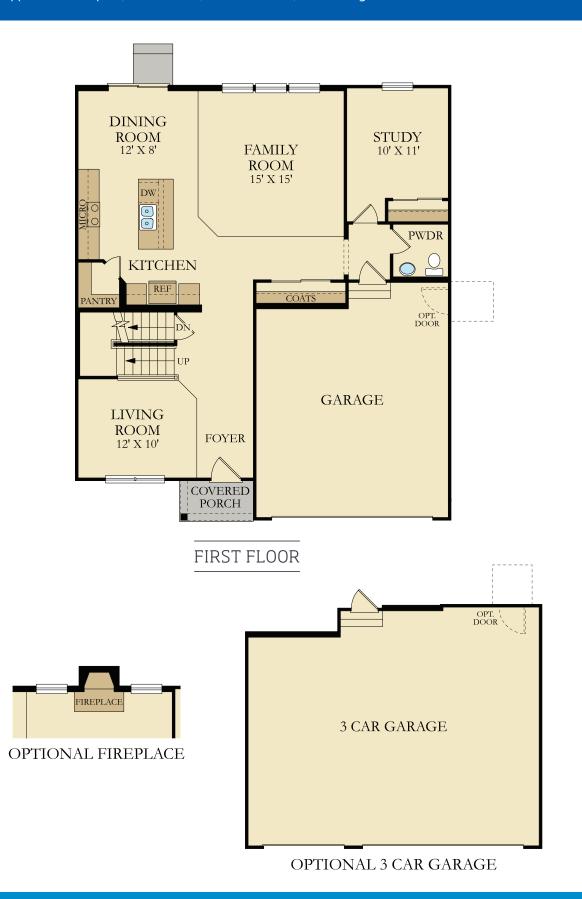
Elevation A - Side



Elevation A - Side

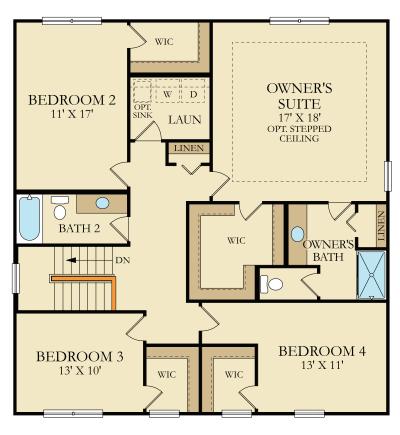


Elevation A - Rear





Preliminary





SECOND FLOOR



MEMORANDUM

LANDSCAPE ARCHITECTURE

TO: Todd Kleven, Lennar DATE: February 6, 2024

FROM: Olivia Hollander PROJECT NO. GRWA: LN23147

Certified Arborist, IL-9980A Gary R. Weber Associates

SUBJECT: Lakewood Prairie

Joliet, IL

RE: Lakewood Prairie, Existing Trees-Replacement Requirements

This memo summarizes existing trees present within the proposed Lakewood Prairie single-family home development in Joliet, IL. Per the City of Joliet's Code of Ordinances, invasive or not-acceptable species do not require replacement. See Section 26-128.h.1-2,6. quoted below:

- h) Tree replacement.
- (1) It is required that tree replacement species come from the acceptable species list. The acceptable species list is provided in the urban forest management plan.
- (2) Any tree species removed, four (4) inches DBH or six (6) inches group of trees, which is not identified on the invasive species list, but is identified on the acceptable species list, is required for replacement by this section. These trees shall be replaced based on subsection (h) of this section, with species identified on the acceptable species list or approved by the city arborist. All replacements shall be located appropriately as confirmed by a certified arborist and as approved by the City of Joliet.
- (6) It shall be encouraged that any species identified on the invasive species list be removed. There is no replacement requirement for these removals.

During the growing season of 2023, Midwest Ecological Inc. performed a floristic quality index in coordination with their wetland delineation. Tree species identified on-site consist of Eastern Cottonwood, White Mulberry, and European Buckthorn. These species are not on the acceptable tree species list and replacement is not required.

Cc: Rich Olson, Gary R Weber Associates

Final Landscape Plan

LAKEWOOD PRAIRIE UNIT 3

Joliet, Illinois

April 16, 2024

CONSULTANTS:



LANDSCAPE ARCHITECT:

GARY R. WEBER ASSOCIATES, INC 402 W. LIBERTY DRIVE WHEATON, ILLINOIS 60187



CIVIL ENGINEER:

MACKIE CONSULTANTS, LLC. 9575 W. HIGGINS ROAD, SUITE 500 ROSEMONT, ILLINOIS 60018



LOCATION MAP

SCALE: 1"=500'

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INDEX OF SHEETS

SHEET NO.	DESCRIPTION
SHEET NO.	DESCRIPTION
L1.0	COVER SHEET
L1.1	OVERALL LANDSCAPE PLAN
L1.2	LANDSCAPE PLAN
L1.3	LANDSCAPE PLAN
L1.4	LANDSCAPE DETAILS
L1.5	PARK DETAILS
L1.6	PARK DETAILS
L1.7	LANDSCAPE SPECIFICATIONS
L1.8	LANDSCAPE SPECIFICATIONS

PLANT LIST

Cercis canadensis

Cercis canadensis

Malus 'Prairifire'

Abies concolor WHITE FIR

Abies concolor

Picea omorika SERBIAN SPRUCE

Pinus strobus

NORWAY SPRUCE

EASTERN WHITE PINE

DECIDUOUS SHRUBS

Cornus sericea 'Baileyi'

BAILEY'S REDTWIG DOGWOOD

Hydrangea arborescens 'Abetwo'

Hydrangea paniculata 'SMHPLQF'

LITTLE QUICK FIRE HYDRANGEA

Juniperus chinensis 'Kallays Compact'

KALLAYS COMPACT PFITZER JUNIPER

Juniperus chinensis var. sargentii 'Viridis' 24" Wide

INCREDIBALL HYDRANGEA

Hydrangea paniculata 'Jane'

LITTLE LIME HYDRANGEA

Rhus aromatica 'Gro-low'

Syringa meyeri 'Palibin'

DWARF KOREAN LILAC

EVERGREEN SHRUBS

GREEN SARGENT JUNIPER

Botanical/Common Name

ORNAMENTAL GRASSES

GRO-LOW SUMAC

WHITE FIR

Picea abies

PRAIRIFIRE CRABAPPLE

EVERGREEN TREES

Syringa reticulata 'Ivory Silk'

IVORY SILK JAPANESÉ TREE LILAC

CC7

AC8

PO

PA 23

CS 18

HA

RA

EASTERN REDBUD

EASTERN REDBUD

Crataegus crusgalli var. inermis THORNLESS COCKSPUR HAWTHORN

l PL	ANI	LISI							
Key	Qty	Botanical/Common Name	Size	Remarks	CK	22	Calamagrostis x acutiflora 'Karl Foerster'	#1	30" O.C
		SHADE TREES					FEATHER REED GRASS		00 0.0
AA	35	Acer x freemanii 'Jeffer's Red' AUTUMN BLAZE MAPLE	2 1/2" Cal.		PB	44	Pennisetum alopecuroides 'Burgundy Bunny BURGUNDY BUNNY FOUNTAIN GRASS	# 1	24" O.C
ААЗ	4	Acer x freemanii 'Jeffer's Red' AUTUMN BLAZE MAPLE	3" Cal.		55	12	Schizachyrium scoparium 'Twilight Zone' TWILIGHT LITTLE BLUESTEM	#1	24" O.C
AM	33	Acer miyabei 'Morton' STATE STREET MAPLE	2 1/2" Cal.		SH	76	Sporobolus heterolepis PRAIRIE DROPSEED	#1	24" O.C
AS	38	Acer saccharum 'Green Mountain' GREEN MOUNTAIN SUGAR MAPLE	2 1/2" Cal.				PERENNIALS		
AS3	9	Acer saccharum 'Green Mountain' GREEN MOUNTAIN SUGAR MAPLE	3" Cal.		AB	126	Allium 'Summer Beauty' SUMMER BEAUTY ONION	#1	18" O.C.
СО	36	Celtis occidentalis HACKBERRY	2 1/2" Cal.		AT	16	Asclepias tuberosa BUTTERFLY WEED	#1	18" O.C.
GT	43	Gleditsia tricanthos var. inermis 'Skycole' SKLYINE HONEYLOCUST	2 1/2" Cal.		CN	19	Calamintha nepeta 'Montrose White' MONTROSE WHITE CALAMINT	#1	18" O.C.
LT	16	Liriodendron tulipifera TULIPTREE	2 1/2" Cal.		CP	9	Coreopsis palmata PRAIRIE COREOPSIS	#1	18" O.C.
PM	54	Platanus x acerifolia 'Morton Circle' EXCLAMATION! LONDON PLANETREE	2 1/2" Cal.		EC	19	Echinacea 'CBG Cone 2' PIXIE MEADOWBRITE CONEFLOWER	#1	18" O.C.
QB	50	Quercus bicolor SWAMP WHITE OAK	2 1/2" Cal.		HH	108	Hemerocallis 'Happy Returns' HAPPY RETURNS DAYLILY	#1	18" O.C.
QI	29	Quercus imbricaria SHINGLE OAK	2 1/2" Cal.		NM	83	Nepeta racemosa 'Walker's Low' WALKER'S LOW CATMINT	#1	18" O.C.
QR	39	Quercus rubra RED OAK	2 1/2" Cal.		PD	3 <i>0</i>	Penstemon 'Dark Towers' DARK TOWERS BEARDSTONGUE	#1	24" O.C
TA	42	Tilia americana 'Redmond' REDMOND AMERICAN LINDEN	2 1/2" Cal.		PR	44	Perovskia atriplicifolia RUSSIAN SAGE	#1	24" O.C
TC	47	Tilia cordata 'Greenspire' GREENSPIRE LITTLELEAF LINDEN	2 1/2" Cal.				MISC. MATERIALS		
UM	60	Ulmus 'Morton Glossy'	2 1/2" Cal.			209.9	SHREDDED HARDWOOD MULCH	C.Y.	
		TRIUMPH ELM				15,848	SOD	S.Y.	
		ORNAMENTAL TREES				4.6	TURF SEED \$ EROSION CONTROL BLANKET	AC.	
AG	8	Amelanchier x grandiflora APPLE SERVICEBERRY	6' Ht.	Multi-Stem					
BN	5	Betula nigra 'Cully' HERITAGE RIVER BIRCH	6' Ht.	Multi-Stem					
CA	5	Carpinus caroliniana	6' Ht.	Multi-Stem					

Multi-Stem

Multi-Stem

5' O.C.

3' O.C.

4' O.C.

3' O.C.

4' O.C.

4' O.C.

4' O.C.

5' O.C.

Remarks

6′ Ht.

8′ Ht.

6′ Ht.

6′ Ht.

6′ Ht.

36" Tall

24" Tall

24" Tall

24" Tall

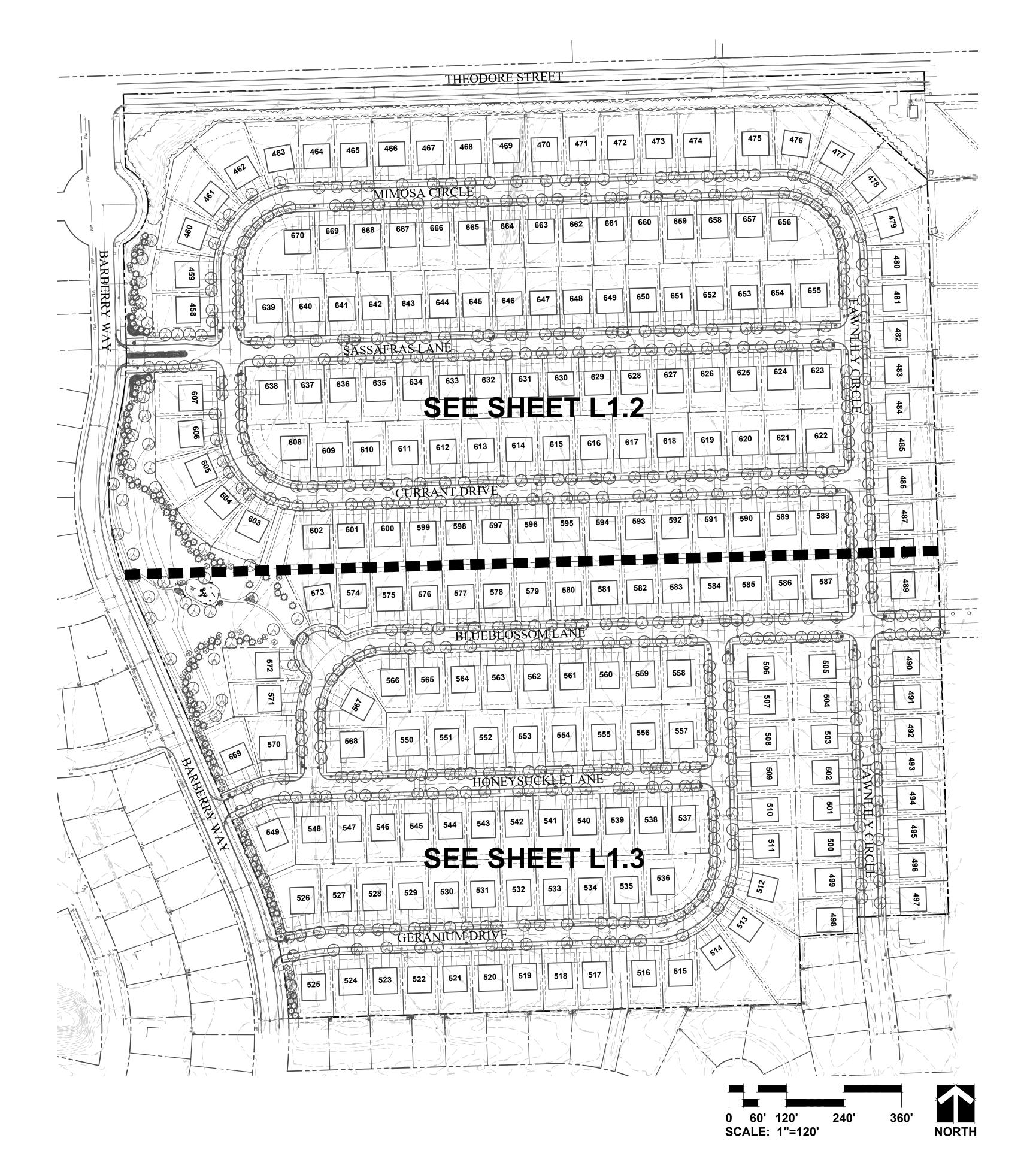
24" Wide

24" Tall

24" Wide

GENERAL LANDSCAPE NOTES

- 1. Contractor shall verify underground utility lines and is responsible for any damage.
- 2. Contractor shall verify all existing conditions in the field prior to construction and shall notify landscape architect of any variance.
- 3. Material quantities shown are for contractors convenience only. The Contractor must verify all material and supply sufficient materials to complete the job per plan.
- 4. The landscape architect reserves the right to inspect trees and shrubs either at place of growth or at site before planting, for compliance with requirements of variety, size and quality.
- 5. Work shall conform to American Standard for Nursery Stock, State of Illinois Horticultural Standards, and Local Municipal requirements.
- 6. Contractor shall secure and pay for all permits, fees, and inspections necessary for the proper execution of this work and comply with all codes applicable to this work.
- 7. See General Conditions and Specifications for landscape work for additional requirements.





ASSOCIATES, INC LAND PLANNING ECOLOGICAL CONSULTIN LANDSCAPE ARCHITECTU WHEATON, ILLINOIS 6018' PHONE: 630-668-7197

LENNAR

www.grwainc.com

1700 E. GOLF ROAD SUITE 1100 SCHAUMBURG, IL 60173

CIVIL ENGINEER: MACKIE CONSULTANTS, LL 9575 W. HIGGINS ROAD

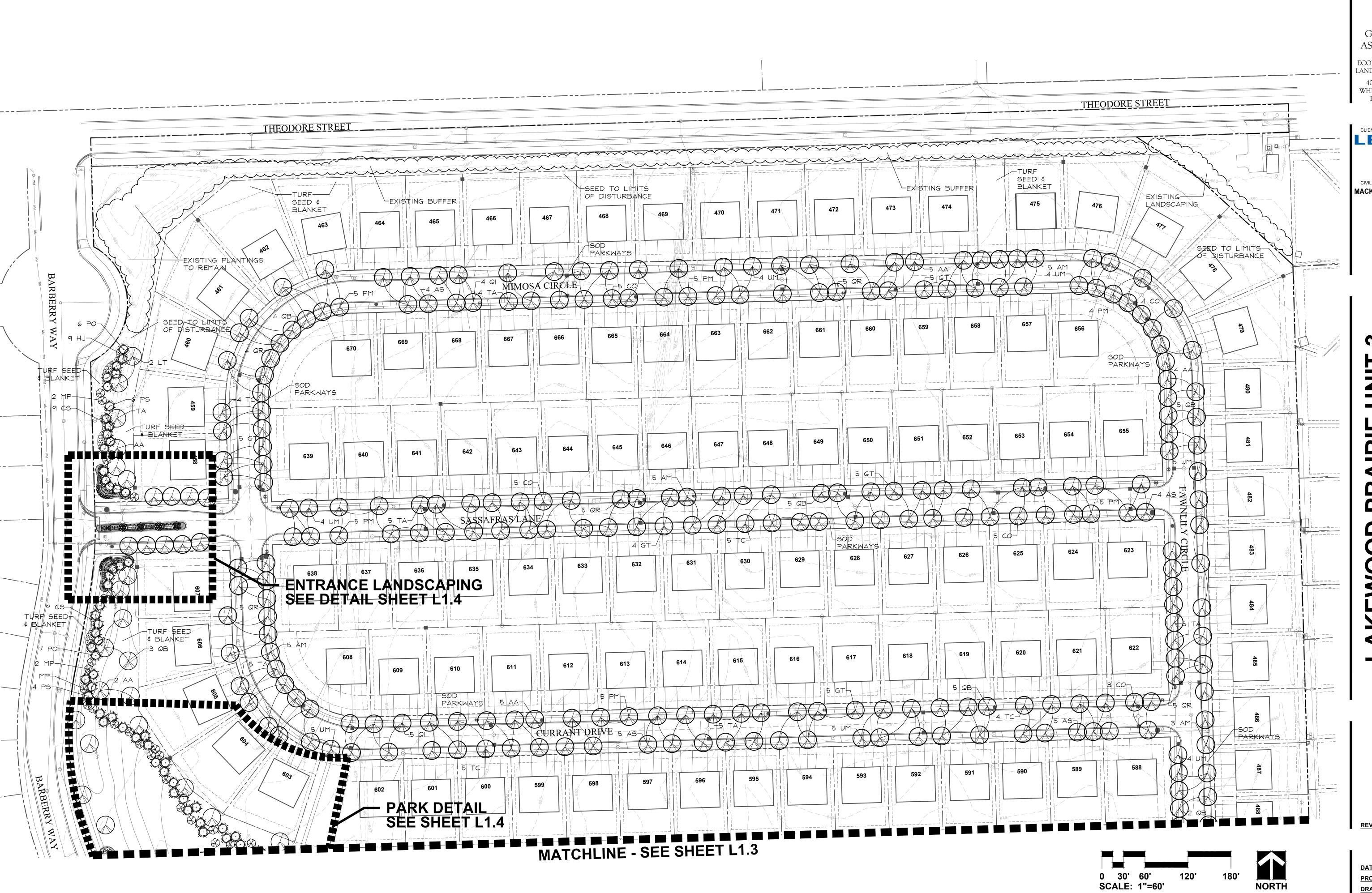
SUITE 500 ROSEMONT, IL 60018

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OVERA

REVISIONS

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ECOLOGICAL CONSULTIN LANDSCAPE ARCHITECTU PHONE: 630-668-7197

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1700 E. GOLF ROAD SUITE 1100 SCHAUMBURG, IL 60173

CIVIL ENGINEER: 9575 W. HIGGINS ROAD

MACKIE CONSULTANTS, LLC SUITE 500 ROSEMONT, IL 60018

REVISIONS

PROJECT NO. LN23147 CHECKED SHEET NO.







GARY R. WEBER ASSOCIATES, INC ECOLOGICAL CONSULTIN LANDSCAPE ARCHITECTU PHONE: 630-668-7197



1700 E. GOLF ROAD SUITE 1100 SCHAUMBURG, IL 60173

CIVIL ENGINEER: MACKIE CONSULTANTS, LLC 9575 W. HIGGINS ROAD

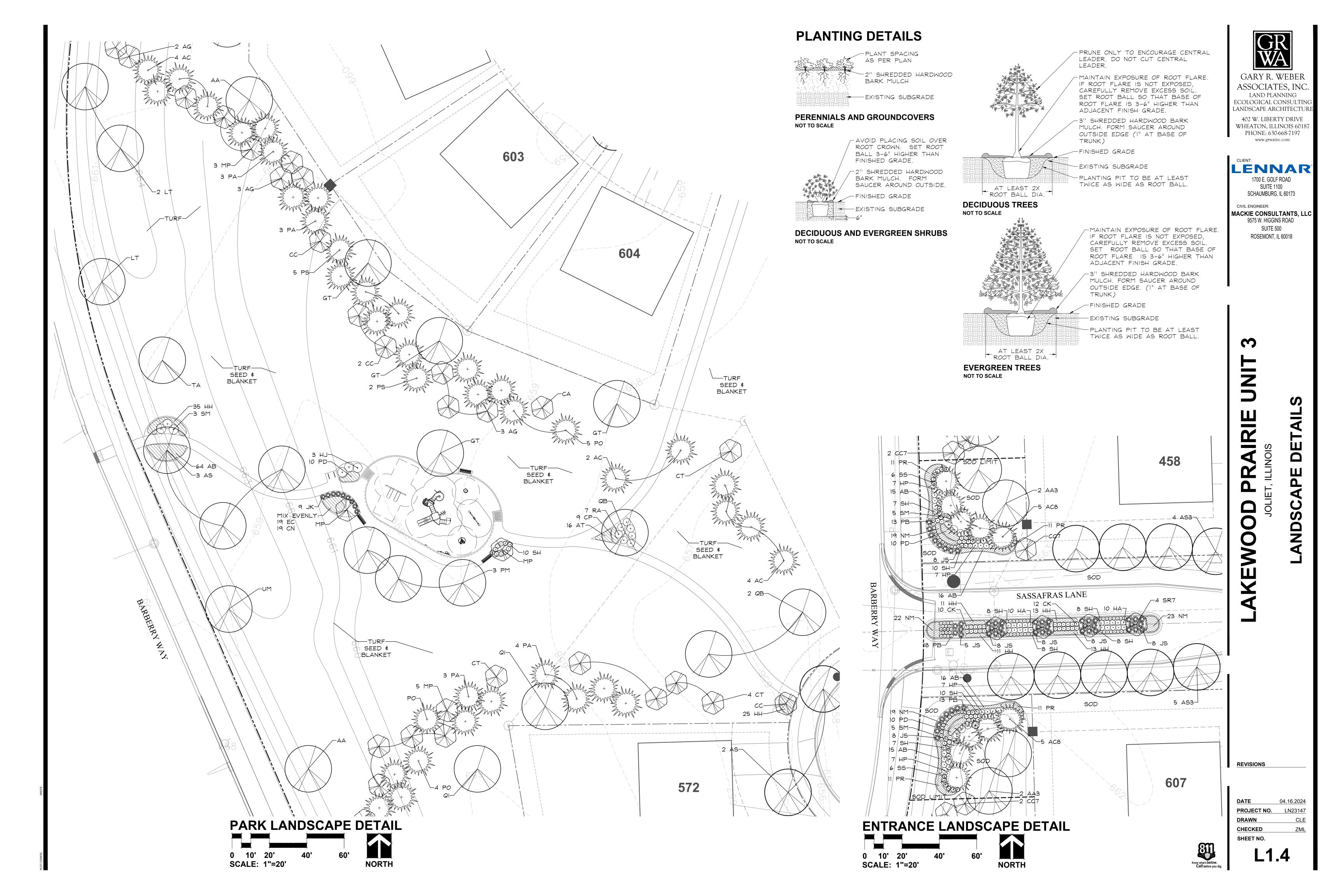
SUITE 500 ROSEMONT, IL 60018

LANDSC

REVISIONS

PROJECT NO. LN23147 CHECKED SHEET NO.





SITE FURNISHINGS SCHEDULE

	ITEM	MANUFACTURER	MODEL	QUANTITY	COMMENTS
A L1.5	CONCRETE WALK/ BENCH PADS			3,384 S.F.	
B L1.5	THICKENED EDGE			109 L.F.	
C L1.5	CONCRETE CURB			98 L.F.	
D L1.5	ENGINEERED WOOD FIBER SURFACING			2,593 S.F.	
E L1.5	CONCRETE RAMP			2	
F L1.6	BENCH	DUMOR	165	3	COLOR: BLACK SLATS: IPE
G L1.6	BIKE RACK	DUMOR	292	2	COLOR: BLACK POWDERCOAT

PLAY LOT APPARATUS SCHEDULE

ITEM	MANUFACTURER	COMMENTS
2 - 12 YRS PLAY STRUCTURE	LANDSCAPE STRUCTURES	
SWING SET	LANDSCAPE STRUCTURES	
CHILL SPINNER	LANDSCAPE STRUCTURES	
SEESAW	LANDSCAPE STRUCTURES	
WEE PLANET CLIMBER	LANDSCAPE STRUCTURES	
BONGO PANEL	LANDSCAPE STRUCTURES	
DRIVER PANEL	LANDSCAPE STRUCTURES	
WELCOME SIGN	LANDSCAPE STRUCTURES	

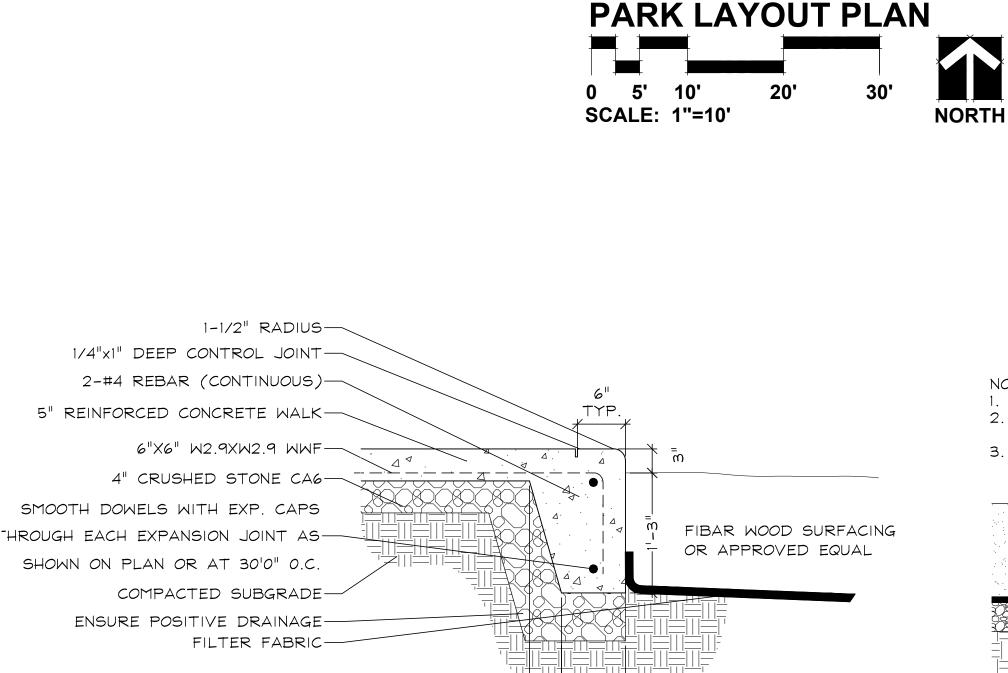
PLAY LOT GENERAL NOTES:

- 1. CONCRETE WALK. SCORE WALK IN 5' MODULES OR AS SHOWN AND PROVIDE 1/2" EXPANSION JOINTS AT 30' INTERVALS OR AS SHOWN.
- 2. CONCRETE WALK. EXCAVATE TO SUBGRADES INDICATED AND INSTALL NEW CONC. PITCH WALKWAY AT A MIN. 2% IN THE DIRECTION OF THE DRAINAGE PATTERN SHOWN. BACKFILL WALK WITH TOPSOIL & BLEND INTO SURROUNDING GRADE.
- 3. ALL CONCRETE CURVES SHALL BE SMOOTH AND CONTINUOUS AS SHOWN IN THE DRAWINGS. SHARP BENDS OR KINKS IN THE PAVEMENT SHALL BE REMOVED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- 4. DASHED LINE AROUND APPARATUS COMPONENTS AND INDEPENDENT PLAY COMPONENTS REPRESENTS THE MINIMUM REQUIRED SAFETY ZONE (USE ZONE) CLEARANCE OF 6'-0" UNLESS OTHERWISE NOTED.
- 5. THE REQUIRED USE ZONE IN FRONT OF ALL SLIDE EXIT CHUTES SHALL EXTEND A MINIMUM DISTANCE OF THE HEIGHT OF THE SLIDE (ABOVE THE PLAYGROUND SURFACE) + 4'-0".
- 6. FOR PLAY APPARATUS CLUSTERS AND INDEPENDENT PLAY COMPONENTS, SEE THE APPARATUS SCHEDULE FOR ITEM DESCRIPTIONS.
- 7. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITY LINES AND IS RESPONSIBLE FOR ANY DAMAGE.
- 8. CONTRACTER SHALL SURVEY AND LAYOUT SIDEWALK AND CURB.
- 9. CONTRACTER SHALL INSTALL TEMPORARY PROTECTION FENCING WHILE UNDER CONSTRUCTION
- 10. CONTRACTER SHALL GRADE AND EXCAVATE AREAS NECESSARY TO INSTALL THE HARDSCAPE AND PLAY EQUIPMENT AS DETAILED.
- 11. CONTRACTOR SHALL GUARANTEE ALL CONCRETE FOR TWO YEARS.
- 12. CONTRACTOR TO VERIFY POSITIVE DRAINAGE IN ALL AREAS WITHIN LIMITS OF

6" TOPSOIL LAYER ---

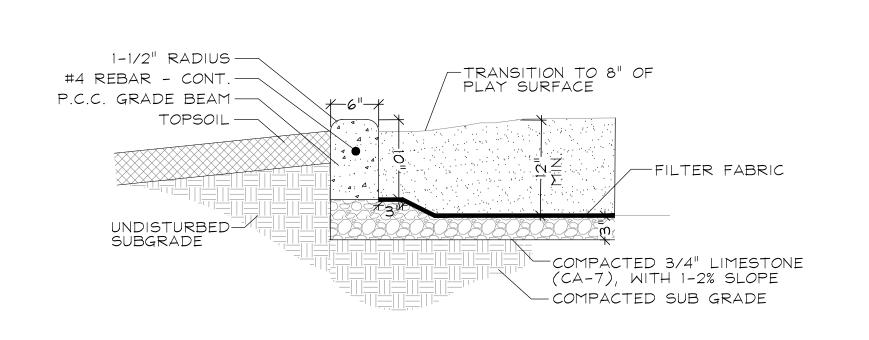
3/4" RADIUS, 1/4" X 1" — CONTROL JOINT 5' O.C. OR AS SHOWN ON PLAN

- VARIES SEE PLAN

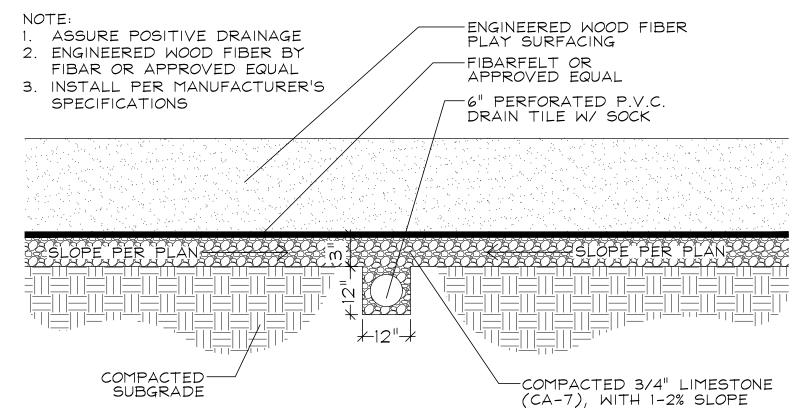


NOTE: THICKENED EDGE TO BE USED ADJACENT TO ALL PLAY AREAS

B THICKENED EDGE SCALE: NTS



C CONCRETE CURB DETAIL
SCALE: NTS



E.W.F. SURFACING DETAIL SCALE: NTS

LOCATION TO BE-

LOCATION TO BE

LOCATION TO BE

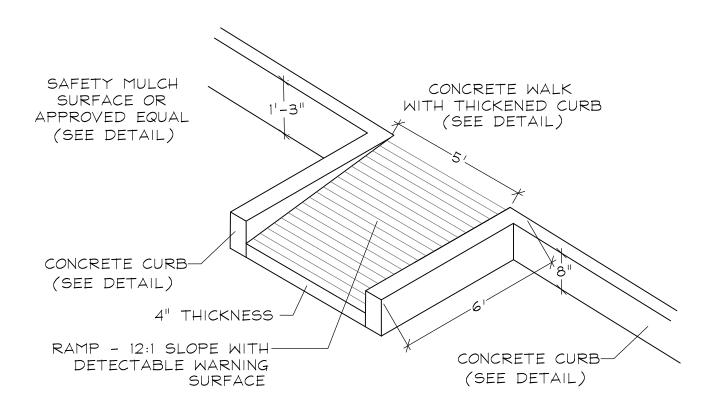
STAKED BY

STAKED BY

SURVEYOR

STAKED BY

SURVEYOR



E CONCRETE RAMP DETAIL SCALE: NTS



CLIENT:

LENNAR®

1700 E. GOLF ROAD

SUITE 1100

SCHAUMBURG, IL 60173

WHEATON, ILLINOIS 60187 PHONE: 630-668-7197 www.grwainc.com

CIVIL ENGINEER:

MACKIE CONSULTANTS, LLC
9575 W. HIGGINS ROAD
SUITE 500

SUITE 500 ROSEMONT, IL 60018

RAIRIE UNIT

JOLIET, ILLINOIS

REVISIONS

 DATE
 04.16.2024

 PROJECT NO.
 LN23147

 DRAWN
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 CHECKED
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 SHEET NO.

L1.

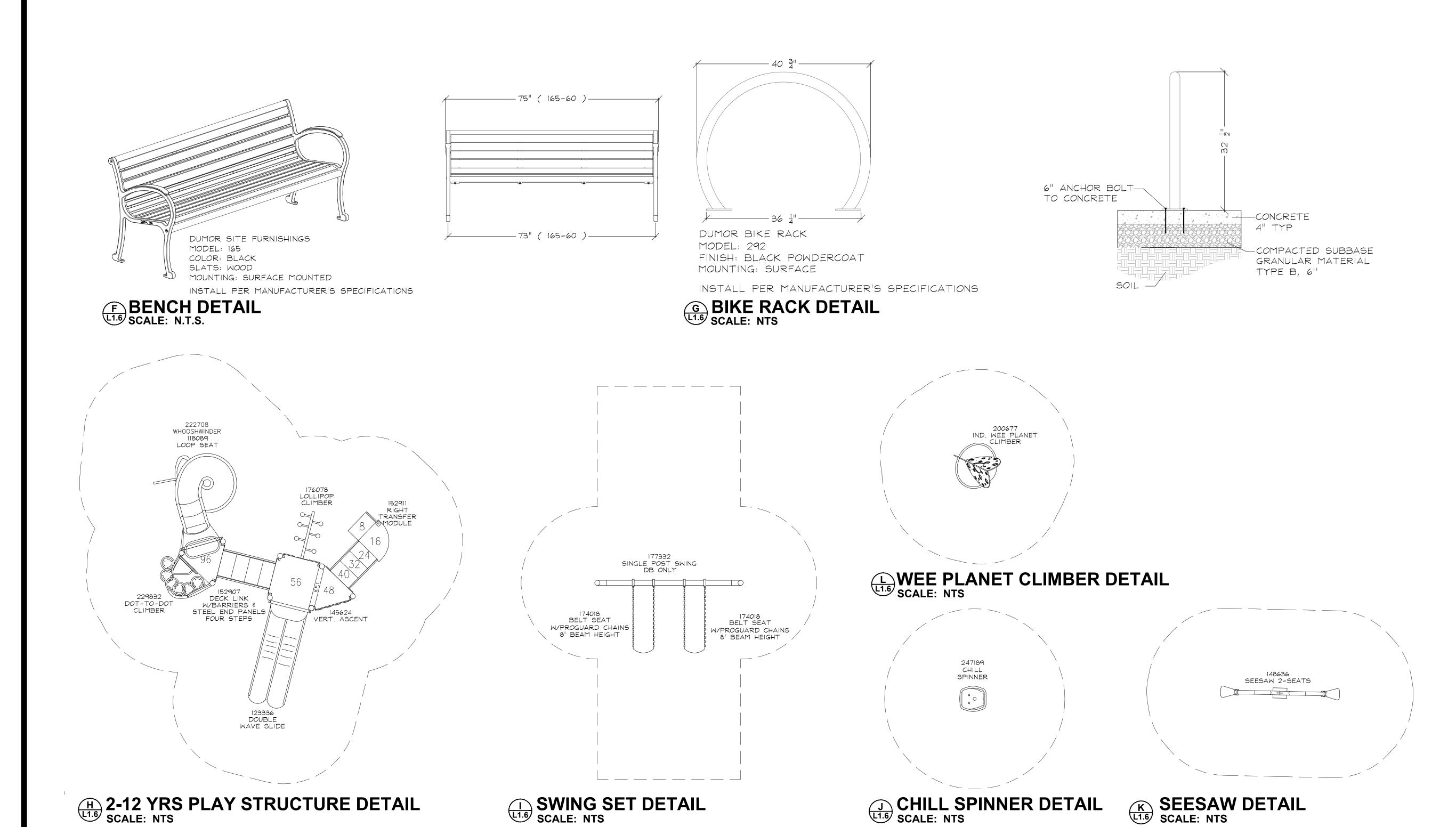
CONCRETE WALK (PLAY LOT ONLY)
SCALE: NTS

5" THICK CONCRETE WALK-

4" CRUSHED STONE CA6-

COMPACTED SUBGRADE-

8111



184891 BONGO REACH PANEL

BONGO PANEL,

N DRIVER PANEL

AND WELCOME SIGN DETAIL

O SCALE: NTS

182503 WELCOME SIGN (LSI PROVIDED) 5-12 YEARS

184886 NAVIGATOR REACH PANEL

GARY R. WEBER ASSOCIATES, INC LAND PLANNING ECOLOGICAL CONSULTIN LANDSCAPE ARCHITECTUR 402 W. LIBERTY DRIVE

LENNAR 1700 E. GOLF ROAD SUITE 1100

SCHAUMBURG, IL 60173

WHEATON, ILLINOIS 60187

PHONE: 630-668-7197 www.grwainc.com

CIVIL ENGINEER: MACKIE CONSULTANTS, LLC 9575 W. HIGGINS ROAD SUITE 500

ROSEMONT, IL 60018

ARK

AIRIE **AKEWOOD**

REVISIONS

DATE PROJECT NO. LN23147 CHECKED SHEET NO.



A.Scope of Work

- 1. This work shall consist of preparing the planting beds, seedbed or ground surface, and furnishing, transporting and placing plants, mulch, seed, sod, fertilizer and other materials required in the specified
- 2. Planting required for this work is indicated on the Landscape Plans and, in general consists of the following: a. The establishment of trees, shrubs, perennials, annuals, lawn and natural areas as shown on the
- Landscape Plans;
- b. The provision of post-planting management as specified herein;
- c. Any remedial operations necessary for conformance with The Landscape Plans as specified in this document;
- d. The design, furnishing and installation of a complete underground sprinkler system at locations noted on

B. General

1. Permits

The Landscape Contractor shall be responsible for obtaining any permits required for the completion of the work and shall be responsible for the cost of the same.

2. Field Verification

Upon notice to begin work the Landscape Contractor shall verify all existing conditions of the site and shall report any conditions that will impede the beginning of work to the Landscape Architect in writing. The Landscape Contractor shall examine areas, conditions, grades, soils and water levels under which work is to be performed and notify the Landscape Architect of conditions detrimental to the proper and timely completion of the work.

3. Existing Utilities

The Landscape Contractor shall verify location of all underground utilities before construction. Contact J.U.L.I.E at 1.800.892.0123; 48 hours prior to digging. Notification of any disturbance of existing utilities shall be given to the Landscape Architect immediately. Should uncharted or incorrect utilities be encountered, notify the Landscape Architect immediately.

4. Inspections of Project

During the construction period, all phases of work shall be available for inspections by the Landscape Architect. All plant material shall be subject to inspection and approval, and the Landscape Architect reserves the right to reject any plants which fail to meet the standards of this inspection. The Landscape Architect reserves the right to inspect nursery stock either at place of growth or at site for compliance with requirements of variety, size and quality.

C. Quality Assurance

- 1. The Landscape Contractor shall provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the best methods for their installation and who shall direct all work performed under this Section and shall comply with work site requirements.
- 2. The Landscape Contractor must verify with the Landscape Architect at the commencement of work that he has the most current set of plans for the project and that one set of the current plans, clearly marked "Field Set", must be on the jobsite at all times.
- 3. The Landscape Contractor shall provide protection for structures, utilities, roads, trees and vegetation from damages caused by settlement, undermining, washout and other hazards created by landscape operations.
- 4. The Landscape Contractor shall provide and maintain fences, planking, guard lights, barricades, warning signs and guards as necessary for protection of material storage, curbs, sidewalks, streets, drives and
- adjoining property. 5. Any damage to utilities, structures, plantings, or lawns which result from the Landscape Contractor's course of work will be repaired at the Landscape Contractor's expense, to the satisfaction of the Landscape

Architect, in a reasonably timely manner with as little inconvenience to the Owner as possible.

- 6. Existing trees, shrubs and plant material to remain shall be protected. Damage to existing plants which result from the Landscape Contractor's course of work shall be repaired by a qualified nurseryman or replaced with approved material per village ordinance at the expense of the Landscape Contractor.
- 7. All planting techniques and methods shall be consistent with the latest edition of "Horticulture Standards of Nurseryman" and as detailed on the drawings.
- 8. Landscape Contractor shall maintain all relevant erosion control devises destroyed or disrupted during landscape installation. Erosion control devises include measures shown on the approved erosion control plans, plus any additional measures deemed necessary by the Owner or public agency having jurisdiction over erosion control. Erosion control devices include, but are not limited to, silt fence, straw bales, erosion control logs, filter fabric in storm structures, filter baskets ditch checks and siltation basins.

D. Substitutions

- 1. Substitution from the approved plans will be accepted only when satisfactory evidence in writing is submitted to the Landscape Architect, showing that the plant specified is not available.
- 2. Landscape Contractor shall submit request for approval to substitute plant material available and shall include Common and Botanical names and size of substitute material.
- 3. Only those substitutions of equivalent size and having essential characteristics similar to the originally specified material will be approved.
- 4. Acceptance or rejection of substitute plant materials will be issued in writing by the Landscape Architect,
- following approval by Lennar and the governing Municipality or Regulatory Agency.
- 5. Any unauthorized substitutions will be removed and replaced by the Landscape Contractor at the expense of the Landscape Contractor.

E. Submittals

- 1. Nursery List: In Bid Proposal Form Landscape Contractor shall identify a list of area nurseries from where nursery stock for the job will be obtained.
- 2. Materials List: Before any plant materials are delivered to the job site, submit to the Landscape Architect a complete list of all plants and other items to be installed and the nursery sources.
- 3. Certification of Inspection: Shall accompany each shipment of plants as may be required by law for transportation. File certificates with the Landscape Architect prior to acceptance of the material. Inspection by Federal or State authorities at place of growth does not preclude rejection of the plants at the site.
- 4. Planting Schedule: Submit proposed planting schedule with dates for review and inspection of plants by the Landscape Architect prior to planting.
- 5. Soil Tests: Submit two (2) copies of soils test of existing topsoil with recommendations for soil amendments for Landscape Architect's review.
- 6. Seed: Submit seed vendor's certification for required grass seed mixture, indicating percentage by weight,
- and percentage of purity, germination, and weed seed for each grass species and date tested.
- 7. Sod: Submit sod grower's certification of grass species. Identify source location in Bid Proposal Form.
- 8. Mulch and Erosion Control Blankets: Submit two (2) samples of shredded hardwood bark mulch, erosion control blankets, and all other products and materials as specified on plans to Landscape Architect for review and written approval.
- 9. Maintenance Instructions: Submit to the Landscape Architect typewritten instructions recommending procedures to be established by the Owner for the maintenance of landscape work after preliminary acceptance of plantings and turf areas. Submit prior to beginning of warranty period. Instructions shall include: watering, fertilizing, spraying, mulching and pruning for plant material and trimming groundcover. Instructions for watering, fertilizing and mowing grass areas shall be submitted prior to request for preliminary inspection for acceptance.

F. Product Handling

1. Delivery and Storage

- a. Deliver all items to the site in their original containers with all labels intact and legible at the time of
- b. Immediately remove from the site all plants which are not true to name and all materials which do not comply with the provisions of these Specifications.
- c. Use all means necessary to protect plant materials before, during, and after installation and to protect the installed work and materials of all other trades.
- d. Cover all plant material transported in open vehicles with a protective covering to prevent windburn.

2. Time of Planting

- a. All planting shall be performed during favorable weather conditions and only during normal and accepted planting seasons when satisfactory growing conditions exist.
- b. The planting operations shall not be performed during times of extreme drought, when ground is frozen or during times of other unfavorable climatic conditions unless otherwise approved by the Landscape Architect. The Landscape Contractor assumes full and complete responsibility for such plantings and operations.

G.Materials

Plant Material

Provide plants typical of their species or variety with normal, densely developed branches and vigorous, fibrous root systems. Provide only sound, healthy, vigorous plants free from defects, disfiguring knots, sunscald injuries, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation. All plants shall have a fully developed form without voids and open spaces.

- a. Balled and burlapped plants shall have a firm natural ball of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock". Cracked or mushroomed balls are not acceptable
- b. Tree spade transplanting is acceptable for plants 6" caliper and larger after acceptance of plant by the Landscape Architect. Tree spade must be of a size generally accepted in the trade to safely move the tree size.
- c. Container grown stock shall be grown in a container for a sufficient length of time for the root system to
- have developed to hold its soil together, firm and whole. (i) No plants shall be loose in the container.
- (ii) Container stock shall not be pot bound.
- (iii) All container plants used on the project shall conform to the sizes indicated on the plant list and on
- d. No evidence of wounds and/or pruning cuts shall be permitted unless approved by the Landscape Architect.
- e. When specified by caliper, provide shade and ornamental trees with a single main trunk. When specified by height, provide shade and ornamental trees as multi-stemmed plants with not less than three main
- Evergreen trees shall be branched to the ground unless otherwise specified and accepted.
- g. Provide plants matched in form when arranged in groups.

trunks and side branches that are generous and well twigged.

- h. All plants shall be nursery grown under climatic conditions similar to those in the locality of the project for a minimum of two years. Comply with sizing and grading standards of the latest edition of "American Standards of Nursery Stock" A plant shall be dimensioned as it stands in its natural position. No plants shall be loose in the container.
- (i) Shade Tree and Ornamental Tree caliper shall be measured at a point on the trunk six (6) inches above natural ground line for trees up to and including four (4) inches in diameter, and at a point
- twelve (12) inches above the natural ground line for trees over four (4) inches in diameter. (ii) Height of Evergreen Trees is measured from the natural ground line to the first lateral branch
- closest to the top. (iii) Height of Clump Ornamental Trees is measured from the natural ground line to the beginning last
- (iv) Shrub and small plants shall meet the requirements for spread and/or height indicated on the plant list and with not less than the minimum number of canes required by ANSI Z60.1 for the type and

Sub-drainage Systems

- a. Provide piping types and sizes indicated. Provide matching reducers, adapters, couplings, fittings and accessory components to ensure continuity of the sub-drainage system.
- i) Plastic tubing shall be ASTM F405, corrugated Polyethylene drainage tubing, perforated or solid as
- ii) Sub-drainage fill shall be AASHTO M43 (3/8" to 3/4") clean uniformly graded stone or gravel. iii) Sub-drainage filter fabric shall be DuPont "Typar" or other non-woven porous polypropylene fabric

Grass Seed

approved by the Landscape Architect.

height of shrub required.

- a. All seeds shall be guaranteed by the vendor to be true to name and variety.
- b. Seed mixtures shall be fresh, clean new crop with a tolerance for purity and germination established by the Official Seed Analysts of North America. Seed will not contain any noxious weed seeds.
- c. Seed mixtures shall be proportioned by weight and shall be as specified on the drawings. If no seed mix is specified, the following general turf seed mix shall be used:
- 65% Improved Kentucky Bluegrass (minimum three (3) varieties)
- 25% Improved Perennial Ryegrass (minimum two (2) varieties with endophytes)
- 10% Creeping Red Fescue
- If this general turf seed mix is used, the Landscape Contractor must submit the vendor's seed varieties, composition and application rate to the Landscape Architect for approval prior to ordering.

4. Erosion Control Blanket

a. North American Green seed blanket matting shall be used. Secure with 4" biostakes.

5. Sod Sod used shall be an approved blend of improved Kentucky Bluegrass (such as: Midnight, Allure, Viva, Washington and Liberty) with a mineral back that is adapted to the locality of work. It shall be either nursery grown or field grown and be well rooted. The consistency of adherent soil shall be such that it will not break,

crumble, or tear during handling and placing of the sod. Landscape Architect reserves the right to reject

- unacceptable sod. a. Each piece of sod shall be well covered with turf grass, shall not be less than two (2) years old, shall be free from noxious weeds and other objectionable plants, and shall not contain substances injurious to
- b. All sod used shall comply with state and federal laws with respect to inspection for plant diseases and insect infestation
- c. Each sod shipment shall be accompanied by an invoice from the vendor giving quantity and certifying that the sod received meets all requirements contained in these specifications.

6. Seed Fertilizer

- a. Fertilizer for seeded areas shall be a granular non-burning product from a commercial source composed of not less than 50% organic slow acting, guaranteed analysis professional fertilizer, uniform in composition, free flowing and suitable for application with approved equipment. Fertilizer types and ratios shall be as follows:
- i) Starter fertilizer with an approximate analysis of 13-25-12 at the rate of 4 lbs. per 1,000 S.F. or similar composition approved by the Landscape Architect.
- ii) Post emergent fertilizer with an approximate analysis of 25-0-5 at a rate of 4 lbs. per 1,000 S.F. or similar composition approved by the Landscape Architect.

7. Sod Fertilizer

a. Fertilizer for sod areas shall be a granular non-burning professional product from a commercial source, uniform in composition, free flowing and suitable for application with approved equipment. Fertilizer ratio shall be a ratio of 13-25-12 at the rate of 4 lbs. per 1,000 S.F.

8. Plant Fertilizer

a. Fertilizer for plants shall be a granular non-burning standard commercial grade product, uniform in composition, free flowing and suitable for application with approved equipment and an analysis of 14-14-14 at the rate of 6 lbs. per 1,000 S.F.

- a. Mulch for tree and shrub planting beds shall be dark shredded hardwood bark mulch, six month old, not larger than 4" in length and 1/2" in width, free of woodchips and sawdust. Submit sample to Landscape
- b. Mulch for perennial flower, annual flower and groundcover planting beds shall be pinebark fines. Submit sample to Landscape Architect for approval.

- a. Topsoil shall be available adjacent to the community site for use on project or in backfill mixes as specified. Initial fine grading to be done by Excavation Contractor.
- b. Touch up movement and placement of this topsoil shall be at the sole expense of the Landscape

Contractor.

Topsoil stockpile placement will be coordinated with Excavator to ensure easy access to Contractor.

11. Planting Bed Soil Mixture (Perennial, Annual and Groundcover Beds)

a. Provide planting soil mixture consisting of equal parts cooled mushroom compost and pinebark fines (Same as Midwest Trading CM30 mix) at 1 C.Y. per 100 S.F. incorporated into all perennial, annual and groundcover areas. Planting pits shall be excavated and filled with friable topsoil (stockpiled at site) to a depth of 8" prior to adding and incorporating planting bed soil mixture.

12. Accessories

- a. Water: Water provided by the Landscape Contractor shall be free of substances harmful to plant growth. All necessary hose piping, tank truck and other methods of transportation shall be supplied by the Landscape Contractor.
- b. Sand: Sand shall be coarse "torpedo" sand.

Specialty Products, Inc. or approved equal).

- c. Pea gravel: Pea gravel shall be 1/8" to 1/4" washed gravel.
- d. Retaining Walls: Retaining walls must always be installed in strict compliance with manufacture's recommendations for sizing and reinforcement
- i) Retaining wall material shall be as specified on the drawings or as approved by the Landscape
- f. Anti-Desiccant: Anti-Desiccant shall be an applicable emulsion which forms a transparent protective film over plant surface, permeable enough to permit transpiration. (Wilt-Pruf, manufactured by Nursery
- g. Herbicide: Herbicide shall be a granular form of herbicide applied in shrub and ground cover beds in strict accordance with the manufacturer's directions and recommendations. Acceptable products are "Treflan", "Ronstar" or approved equal.

H.Installation and Execution

2. Preparation

- a. Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that such work is complete to the point where this installation may properly commence. Verify that planting may be completed in accordance with the original design and the referenced standards. Work will commence only when satisfactory conditions exist.
- b. Check that grading, including spreading of topsoil and all other sub-surface work in lawn areas have been completed and accepted by Lennar. Start of work in this section shall constitute acceptance of grade. Lawn irrigation system must be completed and in operation before seeding and sodding begins.
- c. Saturate and fill tree and shrub pits with water to test drainage before planting. Provide gravel drains and venting tubes at pits, which are more than half full of water after 24 hours.

d. Landscape Contractor shall notify the Landscape Architect prior to plant installation. The Landscape Architect, at his discretion, may inspect all plant material and layout prior to planting.

Trees, Shrubs, Perennials, Annuals and Groundcovers

- a. Planting shall be performed only by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.
- b. Locate plants as indicated or as approved in the field by the Landscape Architect after staking by the Landscape Contractor. If obstructions are encountered that are not shown on the drawings, do not proceed with planting operations until alternate locations have been selected by the Landscape
- c. Excavate circular plant pits with tapered sides as shown on the drawing details. In general, all plant pits shall have a rounded bottom with the depth of the pit equal to the depth of the ball to be planted. The
- d. Excavate all clay and debris to 8" depth beneath all perennial, ornamental grass, annual flower, and groundcover beds. Backfill with 12" amended topsoil, thus resulting in all these areas being elevated or crowned by 4" wherever site drainage allows.

diameter of the pit shall be a minimum of two (2) times the width of the ball.

Seeding and Sodding

- a. Seed and sod bed preparation shall not be started until all stones, boulders, debris, and similar material larger than 1 inch in diameter have been removed. The area to be seeded shall be worked to a minimum depth of 6 inches with a disk or other equipment, reducing all soil particles to a size not larger than 1 inch in the largest dimension. Bed prep shall occur on the contour, where possible. The prepared surface shall be relatively free from all weeds, stones, roots, sticks, rivulets, gullies, crusting
- and caking. Do not overwork or powder final seedbed. b. Upon completion of the above, any rocks or stones larger than one (1) inch in diameter shall be removed from the surface prior to seeding. If excessive amount of rocks are present in native soil Contractor

should contact the Landscape Architect immediately. c. Landscape Contractor shall remove all debris and dispose of such material legally off-site.

- d. The areas to be seeded shall be assumed to be at final grades established by Excavator. The Landscape Contractor, however, shall be responsible for the proper drainage of the entire area. The Landscape Contractor shall fine grade all turf areas including any grading necessary to eliminate ponding of water, ruts or ridges. Limit preparation to areas which will be grassing within 48 hours.
- e. Immediately prior to the seed and sod bed preparation, specified fertilizer nutrients shall be uniformly spread at the following rate:

i) 5 lbs. per 1000 S.F.

- f. Final surface of topsoil immediately before seeding shall be within plus or minus 1/2" of required elevation, with no pockets or low spots in which water can collect. Restore prepared areas to specific condition if eroded, settled, or otherwise disturbed after fine grading and prior to seeding or sodding. Finish grade surface with a drag or rake, Round out all breaks in grade, smooth down all lumps and
- ridges, fill in all holes and crevices. g. In the event of settlement, re-adjust the work to required finish grade.

- Planting Plant nursery stock immediately upon delivery to the site and approval by the Landscape Architect. If immediate planting is not possible a holding area on-site must be established in a location approved by Lennar. All plant material in the holding area must have the rootball heeled in damp mulch and be protected from excessive sun and wind. The Landscape Contractor must operate and maintain the holding area in a
- All planting shall be performed during favorable weather conditions and only during normal and accepted planting seasons when satisfactory growing conditions exist. The planting operations shall not be performed during times of extreme drought, when ground is frozen or during times of other unfavorable climatic conditions unless otherwise approved by the Landscape Architect. The Contractor assumes full and complete responsibility for such plantings and operations.

Trees and Shrubs

neat and orderly appearance.

- a. Set plant material in the planting pit to proper grade and alignment. Set plants upright, plumb and faced to give best appearance or relationship to each other or adjacent structure. Set plant material 2" above the adjacent grade. The Contractor is responsible for planting to correct grades and alignment and all plants shall be set so that when settled will bear the same relationship to finished grade as they did
- b. Remove all non-biodegradable strings and twine from top of ball. Remove non-biodegradable burlap from to 1/3 of ball after the tree is set in the planting hole. The wire basket should remain. Fold the top portion of the wire basket into the hole.
- c. Any topsoil excavated from plant pits shall be used in the backfill soil mixture. No filling will be permitted around trunks or stems. Backfill the pit with topsoil. Do not use frozen or muddy mixture for backfilling. Form a ring of soil around the edge of each planting pit to retain water.
- d. After setting plants in pit to proper grade compact 6" of soil around base of ball. Fill the entire planting hole with water and allow to soak in. Gradually backfill remaining space around the ball or roots and compact the soil thoroughly using water to eliminate all voids and thoroughly soak the plant root ball.

e. Within 24 hours of planting slowly re-water the plant thoroughly soaking the root ball again.

- f. Install enough topsoil to insure finished grades are met after settling. g. All excess soil, other than topsoil, excavated from pits, shall be removed from the holes and left on site in locations designated by Lennar.
- h. After planting apply specified commercial pre-emergent herbicide per manufacturer's directions to all shrub beds.

Perennials, Ornamental Grasses, Annual Flowers and Groundcovers

a. Where perennials, ornamental grasses, annual flowers and groundcovers are specified on the plans, prepare entire plant bed incorporating a 1 C.Y. layer of planting soil mixture per 100 S.F. Incorporate commercial 14-14-14 fertilizer into prepared soil mixture at a approximate rate of 6 lbs. per 1000 S. F.

- b. Space plants in accordance with dimensions indicated on the plans. Adjust spacing as necessary to evenly fill planting bed with indicated quantity of plants. Plant to within 18" of the trunks of trees and shrubs or at edge of plant ball whichever is closest. Plant to within 12" of edge of bed.
- c. After planting apply specified commercial pre-emergent herbicide per manufacturer's directions to all planting beds. Confirm herbicide compatibility with all plant material in beds and notify the Landscape Architect immediately if a conflict exists.

a. Install seed under favorable weather conditions unless approved by the Landscape Architect. The conditions of the guarantee apply regardless of the date of installation. The generally accepted times for

Spring - April 1st to June 15th

Fall - September 15th to just before first frost

b. Seed indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.

c. Seed with specified seed mix at rate specified on the drawings or at a rate of 5 lbs. per 1000 S.F.

- d. Broadcast Seeding: Using a broadcast seeder, sow seed evenly over entire area by sowing equal quantities in two directions at right angles to each other. Do not seed when wind speed exceeds five (5) miles per hour. Seeding by hand is not allowed.
- e. Following seeding the area shall be lightly raked to incorporate seed into top 1/8" to 1/4" of soil. Remove all stones and other debris greater than 1 inch in any dimension which are visible shall be removed and disposed of legally off-site. Areas shall then be smoothed by rolling with a hand roller.
- sowing equal quantities in two directions at right angles to each other. Using this method raking and

f. Mechanical Seeding: Using a "Brillion-type" seeder and cultipacker, sow seed evenly over entire area

g. Following seeding, all seed areas will be covered with specified erosion control seed matting and stapled

- h. Following seeding, raking and matting, the entire area shall be watered by use of lawn sprinklers or other means approved by the Landscape Architect. Landscape Contractor shall assure initial watering continues until the equivalent of two inches of water has been applied to entire seed surface, at a rate
- which will not dislodge the seed. i. Landscape Contractor shall assure watering is repeated thereafter as frequently as required to prevent
- drying of the surface and to ensure proper establishment. j. Landscape Contractor shall mow the lawn area as soon as top growth reaches a 3 inch height. Cut back to 2 inch height. Not more than 33% of grass leaf shall be removed at any single mowing. The contract shall include a minimum of 3 (three) mowings. Repeat mowing as required to maintain specific height
- k. It shall be the Landscape Contractor's responsibility to determine and implement whatever procedures deemed necessary to establish the turf as part of the work. Reseed bare areas and provide erosion control as necessary until complete establishment achieved.
- I. Areas of seed installation will not be accepted unit it meets the growth coverage specifications detailed by Illinois Department of Transportation.

until Landscape Architect issues preliminary acceptance of completed work.

- Sodding a. Transport sod in either a closed van or in properly covered open trucks.
- b. Maintain sod in a moist condition from cutting until placement. Any sod that has dried out, or excessively heated will be rejected and shall be immediately removed and legally disposed of off-site by the Landscape Contractor. Replacement of rejected sod shall be at the expense of the Landscape Contractor.
- c. Sod shall be placed within 24 hours of cutting. Do not use sod cut for more than 24 hours without the
- approval of the Landscape Architect. d. Sod shall be placed when the ground is in a workable condition and temperatures are less than 90oF. Do not lay dormant sod or install sod on saturated or frozen soil or during an extended drought.
- e. The sod shall be placed on the prepared surface with the edges in close contact and alternate courses staggered. Lay sod to form a solid mass with tightly-fitted joints. Butt ends and sides of sod strips. Do not overlay edges. Stagger strips to offset joints in adjacent courses. Remove excess sod to avoid smothering of adjacent grass. Provide sod pad top flush with adjacent curbs, sidewalks, drains, and
- f. In ditches, the sod shall be placed with the longer dimension perpendicular to the flow of water in the ditch. On slopes, install preliminary row of sod in a straight line, starting at the bottom of the slope, the sod shall be placed with the longer dimension parallel to the contours of the ground. Place subsequent rows parallel to and lightly against previously installed row. The exposed edges of sod shall be buried
- flush with the adjacent soil. g. All sod shall be rolled with a light drum roller to ensure contact with sub-grade, uniformity and foster root
- h. The sod shall be staked on all slopes of 3:1 or steeper to prevent slippage. Sod shall be staked with ±2 stakes per square yard of sod as necessary to stabilize with at least one stake for each piece of sod. i. Sodded areas shall be watered to ensure proper establishment. Sod shall be watered thoroughly with fine spray immediately after laying and not be allowed to dry out. Any sod that has shrunk shall be replaced. Landscape Contractor shall assure initial watering continues until the equivalent of two inches

of water has been applied to entire sod surface, at a rate which will not dislodge the sod.

until Landscape Architect issues preliminary acceptance of completed work.

drying of the surface and watering shall continue through preliminary acceptance to ensure proper establishment. k. Landscape Contractor shall mow the lawn area as soon as top growth reaches a 3 inch height. Cut back to 2 inch height. Not more than 40% of grass leaf shall be removed at any single mowing. The contract

shall include a minimum of 3 (three) mowings. Repeat mowing as required to maintain specific height

j. Landscape Contractor shall assure watering is repeated thereafter as frequently as required to prevent

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- 4. Reconditioning Existing Turf
- a. Recondition existing turf damaged by Contractor's operations, including storage of materials or equipment and movement of construction vehicles.
- b. Provide fertilizer, seed and soil amendments as specified for new lawns and as required to provide a satisfactory reconditioned lawn. Provide topsoil as required to fill low areas and meet new finished
- c. Prior to over-seeding cultivate or rototill bare and compacted areas thoroughly to a depth of four (4) inches. Remove all rocks, stones, turf clumps and other debris larger than one (1) inch in diameter and
- d. Remove diseased or unsatisfactory lawn areas. Do not bury into soil. Remove topsoil containing foreign materials resulting from contractor's operations, including oil drippings, stone, gravel and other construction materials.
- e. Where substantial, but thin lawn remains, rake, aerate if compacted, and cultivate soil, fertilize and seed.
- f. Water newly seeded areas. Maintain adequate soil moisture as specified for new lawns, until new grass is established.

Mulching

Trees and Shrubs

- a. Apply the specified mulch to a depth of two (2) inches, evenly spread over the entire area of each tree basin and shrub bed. Maintain exposed root flare at all times. Thoroughly water mulched bed areas. After watering, rake mulch to provide a uniform finished surface.
- Perennials, Ornamental Grasses, Annual Flowers and Groundcovers
- a. Apply the specified mulch to a depth of one (1) inch, evenly spread over the entire area of each planting bed using care to keep foliage exposed. Thoroughly water mulched bed areas.

Pruning

- a. Prune branches of deciduous stock, after planting, to preserve the natural character appropriate to the particular plant requirements. Remove or cut back dead and badly bruised branches, broken and tangled branches, damaged and unsymmetrical growth of the new wood, suckers, water sprout growth and unnatural growth habits. No plants will be sheared for any reason.
- b. Prune with clean, sharp tools.
- c. Prune trees and evergreens at the direction of the Landscape Architect and in accordance with standard horticulture practice to preserve the natural character of the plant.
- d. In general, tree pruning requires removing 1/4 to 1/3 of the leaf bearing buds. Prune multiple leader plants to preserve the leader which best promote the symmetry of the plant. Do not apply paint to pruning marks.

7. Care of Existing Trees

- a. Selectively prune existing trees in construction limits as required, at the direction of the Landscape Architect. Remove shoots, dead, rubbing and damaged branching.
- b. Clean up miscellaneous organic debris within construction limits and dispose of legally off-site.

- 8. Clean-up a. The Landscape Contractor shall store materials and equipment, during landscape work, where directed
- by the landscape architect. b. The Landscape Contractor shall thoroughly clean the project area daily during the progress of work and upon completion of the work.
- c. Landscape Contractor shall keep pavement clean and all work areas and adjoining areas in an orderly condition. The Landscape Contractor shall remove and clean any excess dirt or mud left on the streets adjacent to the site as a result of this work daily. The Landscape Contractor shall be liable for any future
- charges incurred to clean streets affected by his work. d. No storing of rubbish or debris will be allowed on the site.
- e. No debris shall be buried at the site.
- f. No landscaping debris is allowed on the site dumpsters.
- g. The Landscape Contractor shall protect the property of the owner and the work of other contractors.
- h. The Landscape Contractor shall be directly responsible for all damage caused by the Landscape Contractor's activities and shall remove and properly dispose of all resultant dirt, rubbish, debris and other waste materials resulting from the work daily.

8. Inspections

- In addition to normal progress inspections, the Landscape Contractor shall schedule and conduct the
- following inspections, giving the Landscape Architect at least 48 hours prior notice of readiness for inspection. a. Inspection of plants and containers prior to planting.
- b. Inspection of plant locations to verify compliance with the current revisions of the Landscape Plans and As-Built Drawings.
- c. Preliminary acceptance inspection after completion of planting. Schedule this inspection sufficiently in advance and in cooperation with the Landscape Architect so that the inspection may be conducted in a
- d. Final acceptance inspection at the end of the maintenance period provided that all previous deficiencies
- have been corrected.
- e. All other inspections necessary for replacement warranty work and completion of the project.

I. Maintenance and Monitoring

- 1. Traditional Landscaping: Landscape Contractor shall maintain all planting, starting with the planting operations and continuing until all planting for that portion of the project is complete and through preliminary acceptance in writing from the Landscape Architect.
 - a. Maintenance of plants and planting beds shall include resetting plants to proper grades or upright position, restoring planting saucers, tightening and repair of guy wires and stakes, weeding, cultivating, pruning, application of appropriate insecticides and fungicides necessary to keep the plant materials in a healthy growing condition and to keep the planted areas neat and attractive.
- b. Maintenance of lawn areas shall be as specified, including spot weeding, mowing, application of weed and insect controls and reseeding necessary to promote proper establishment the lawn areas.
- c. Contractor shall water all sod and plantings for the first two weeks following installation.
- 2. Native Planting Areas: The Owner shall notify the City upon completion of plantings. The Owner's Environmental Specialist shall inspect the plantings and provide the City with a copy of the planting locations, species, and quantities for verification by applicable regulatory authority.
 - a. Native planting areas shall be maintained as specified below, continue for the three full (3) years after preliminary installation acceptance, and meet annual establishment performance criteria:
 - i. First Season With the exception of the emergent area, native seeding areas should be mowed to a height of 6" to control annual nonnative and invasive species early in the growing season. Mowing, including weed whipping, should be conducted during prior to weed seed production. Mowing height and timing may need to be adjusted per target species. Small quantities of undesirable plant species, shall be controlled by hand pulling prior to the development and maturity of the plant. Hand removal shall include the removal of all above-ground and below-ground stems, roots and flower masses prior to development of seeds. Herbicide should be applied as necessary by a trained and licensed operator that is competent in the identification of native and nonnative herbaceous plants. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary.
 - ii. Second Season Control of undesirable plant species during the second growing season shall consist primarily of precise herbicide application. Mowing and weed whipping shall be conducted as needed during the early growing season and as needed to a height of 6 to 8 inches to prevent annual weeds from producing seed. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary.
 - iii. Third Year Seasonal mowing and herbicide will continue as above but should be reduced over time. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary. At the completion of the third growing season (dependent on fuel availability; dominance of graminoid species; and favorable weather conditions), fire may be introduced to the planted areas as a management tool.
- b. General performance criteria is outlined below. Contractor is responsible to ensure native areas meet Federal, County and local requirements as necessary.
- i. 1st Full Growing Season: 90% of cover crop shall be established. There shall be no bare areas greater than two (2) square feet in seeded areas. At least 25% of vegetation coverage shall be native, non-invasive species. At least 50% of the emergent species, if planted as plugs shall be alive and
- ii. 2nd Full Growing Season: All areas with the exception of emergent zones shall exhibit full vegetative cover. At least 50% of the vegetation coverage shall be native, non-invasive species.

- iii. 3rd Full Growing Season: At least 75% of vegetation coverage shall be native, non-invasive species. Non-native species shall constitute no more than 25% relative aerial coverage of the planted area. Invasive species for this project shall include the following: Ambrosia artemisiifolia & trifida (Common & Giant Ragweed), Cirsium arvense (Canada Thistle), Dipsacus Iaciniatus (Cut-leaved Teasel), Dipsacus sylvestris (Common Teasel), Lythrum salicaria (Purple Loosestrife), Melilotus sp. (Sweet Clover), Phalaris arundinacea (Reed Canary Grass), Phragmites australis (Giant Reed), Fallopia japonica (Japanese Knotweed), Rhamnus cathartica & frangula (Common & Glossy Buckthorn), Typha sp. (Broadleaf, Narrowleaf, and Hybrid Cattail) Lonicera sp. (Honeysuckle).
- c. Long Term Wetland and Prairie Management/Maintenance
- A Long -Term Operation and Maintenance Plan is included in the Home Owner's Association covenants with guidelines and schedules for burning, mowing, application of herbicide, debris/litter removal and inspection schedule for storm structures and sediment removal.
- i. State and local permits shall be required prior to controlled burning. Burning shall be conducted by trained professionals experienced in managing smoke in urban environments. Prior to a controlled burn, surrounding property owners as well as local fire and police departments shall be notified. A burn plan detailing preferred wind direction and speed, location of fire breaks, and necessary personnel and equipment shall be prepared and utilized in planning and burn implementation.
- ii. The initial burn shall be dependent on fuel availability which is directly related to the quantity and quality of grasses contained within the plant matrix. Timing of the burn shall be determined based on results of the annual monitoring indicating species composition of the management area and other analysis of management goals. Generally, burns shall be scheduled from spring to fall on a rotational basis. Burn frequency shall also be dependent on the species composition within the management area. Generally, a new prairie restoration area shall be burned annually for two years after the second or third growing season after planting and then every 2-3 years thereafter, burning 50-75% of the area.
- iii. Owner to provide all supplemental watering and proper care and maintenance of all plant materials, seed and sod areas (except for native planting areas) after preliminary acceptance of the Landscape

J. Preliminary Acceptance

- 1. When the preliminary landscape work is completed, including maintenance, the Landscape Architect will, upon request, make a preliminary inspection of initial installation to determine acceptability.
- 2. The inspection for preliminary acceptance of the initial installation will be for general conformance to establishment of turf areas, specified size, character and quality of plant materials, workmanship and maintenance and shall not relieve the Landscape Contractor of responsibility for full conformance of the contract documents, including correct species.
- 3. It shall be the responsibility of the Landscape Contractor to verify all work is completed for the initial installation and maintained as per plan prior to notifying the Landscape Architect for preliminary inspection.
- 4. For preliminary acceptance of the initial installation all plant material shall be in a healthy growing condition. Any plants, lawn areas, workmanship, etc. not meeting the standards will be rejected and the Landscape Contractor will be instructed to make the necessary corrections immediately before preliminary acceptance of the initial installation will be granted.
- 5. Seeded areas will be inspected for acceptance after the first mowing by the Landscape Contractor and will be satisfactory provided requirements, including maintenance, have been complied with and a uniform healthy close stand of the specified grass is established, free of weeds, bare spots exceeding 5 by 5 inches, undesirable grass species, disease, insects and surface irregularities.
- 6. Sodded areas will be inspected for acceptance after the first mowing by the Landscape Contractor and will be satisfactory provided requirements, including maintenance, have been complied with and when all areas show a uniform stand of the specified grass in a healthy, well-rooted, even-colored, viable lawn condition, free of weeds, undesirable grass species, open joints, bare areas, disease, insects and irregular surfaces.
- 7. The Landscape Contractor shall assume liability for the correction of his work and liability for any other charges incurred due to the correction of his work. The cost of follow-up inspections of the initial installation required to receive acceptance will be charged to the Landscape Contractor.
- 8. Upon the receipt of written acceptance of the preliminary inspection of the initial installation the Owner will be responsible for maintenance.
- 9. The warranty period will begin upon receipt of written acceptance of the preliminary inspection for initial installation from the Landscape Architect.
- 10. After preliminary acceptance of the initial installation and receipt of notification in writing from the Landscape Architect, the Landscape Architect will recommend the release of payment, less retainers deemed necessary by the Owner, for the completed work.
- 11. The release of all fees will be at the discretion of Lennar upon receipt of written invoice from the Landscape Contractor.

K. Warranty Agreement

- 1. The Landscape Contractor shall provide a replacement warranty for all plant material and shall guarantee all work free of any defect in quality or workmanship for a minimum period of one (1) year or until final inspection and written acceptance by the Landscape Architect.
- a. Warranties of native plantings are excluded from this section and shall conform to the specified establishment performance criteria.
- 2. The warranty period will be from the date of the Landscape Architect's written preliminary acceptance of the initial installation and will continue through the end of the following years growing season upon the final inspection and written acceptance of the work.
- 3. The warranty shall provide against defects including death, unsatisfactory growth, and provides the material to be in good, healthy and flourishing condition, except for defects resulting from neglect by the owner, abuse or damage by others or unusual phenomena or incidents which are beyond Landscape Contractor's control. For verification of such defects, neglect, abuse or damage by others the Landscape Contractor must notify the Landscape Architect in writing immediately upon identifying said occurrences.
- Annual increases in the size of required replacements shall serve to maintain the continuity of the landscape design. At the time of the scheduled replacements, the required landscape replacement material shall be increased in size from the original plan to match the new growth size of the surrounding plants.
- 5. The Landscape Contractor shall make as many periodic inspections as necessary, at no extra cost to the Owner during the warranty period to determine what changes, if any, should be made to the Owner's maintenance program. The Landscape Contractor shall submit, in writing to the Landscape Architect, any
- 6. During the warranty period, should the appearance of any plant die, indicate weakness and/or probability of dying, the Landscape Contractor shall immediately begin replacement of said plants with new and healthy plants of the same type and size as soon as weather conditions permit and within a specified planting period after notification of such occurrences from the Landscape Architect without additional cost to the Owner.
- 7. The Landscape Contractor shall make all necessary repairs of damage due to plant replacements. Such repairs shall be done at no extra cost to the Owner.
- 8. Replacements shall be in accordance with and subject to all requirements of landscape installation, mulching, maintenance, warranty and acceptance procedures.
- 9. The Contractor is responsible for the watering and maintenance necessary to ensure establishment of the replacement plants until the Landscape Architect inspects the replacement plants and issues preliminary
- 10. The Landscape Contractor, prior to notifying Landscape Architect for preliminary acceptance, shall maintain the replacement plants for a period of 45 days at no additional cost to the owner.
- 11. The Landscape Contractor shall notify the Landscape Architect in writing, upon completion of replacements and extended maintenance period, for preliminary acceptance and written notification of new warranty period.
- 12. The Landscape Contractor, upon written preliminary acceptance of the replacements, shall warranty all replacements until the end of the following growing season and written final acceptance. The Landscape Contractor shall notify the Landscape Architect in writing at the end of the warranty period of replacement plants for final inspection and acceptance.
- 13. The Landscape Contractor shall remove tree wrapping, tree guy wires, stakes and tags from all established plants prior to contacting the Landscape Architect for final acceptance inspection. Tags, tree wrap, guy wires and stakes shall remain on all replacements until completion of additional warranty period.
- 14. All subsequent inspections required due to unacceptability of the replacements will be at the cost of the

L. Final Acceptance

acceptance in writing.

1. Inspection of all work will be made by the Landscape Architect at the end of the warranty periods upon written request of the Landscape Contractor.

- 2. The Landscape Architect shall prepare and submit, to Lennar and the Landscape Contractor, a list of warranty replacement items to be completed before final acceptance shall be deemed to have occurred. The failure to include any items on such list does not alter the responsibility of the Landscape Contractor to complete all work in accordance with the contract.
- 3. The Landscape Contractor shall complete all warranty replacement work as deemed necessary by the Landscape Architect, shall verify completion of all work required to satisfy the contract and shall notify the Landscape Architect upon completion of all work for review and final acceptance.
- 4. The Landscape Architect will perform a final inspection of the completed work with the Landscape Contractor and a representative from Lennar. At that time if all work is satisfactory, a written statement will be issued by the Landscape Architect that will constitute final acceptance of completed work to date.
- 5. After the final inspection and acceptance of the work, the Landscape Architect will notify Lennar in writing and will recommend release of fees in retention for the completed work, except for retention fees deemed necessary by Lennar and the Landscape Architect for work still under additional warranty.
- 6. The Landscape Architect will make a follow-up inspection of all additional warranty replacements at the written request of the Landscape Contractor and issue a written report accepting satisfactory completion of the warranty obligations and request release of the remaining retention fees.
- 7. The release of all retention fees will be at the discretion of Lennar after receipt of written notification from the Landscape Architect and upon receipt of written invoice from the Landscape Contractor.
- 8. The written final acceptance of all work following any necessary replacements shall terminate the Landscape

II. DAMAGES: STREET AND SITE

Contractor's plant warranty period.

- 1. The Landscape Contractor shall be responsible for any damages to streets, curbs or site improvements as a result of his work or his employees. The Landscape Contractor shall be responsible for any future charges resulting from the repair/replacement of damage.
- 2. Curb damage will be billed to the contractor at fault at a rate of \$25.00/lineal foot with a ten foot minimum
- 3. Subcontractor shall not park on any asphalt or concrete driveways at any time. Violators will be fined \$500 per occurrence.

III. TRADITIONAL LANDSCAPE MAINTENANCE

Turf Maintenance 1. Mowing

- a. All litter (i.e. paper, cans and bottles) will be removed from turf and plant bed areas prior to mowing.
- b. All lawn areas will be mowed weekly to a height of 3" from April through November, or as needed. No more than 1/3 of the grass blade is to be removed per cutting. Mowing height may be seasonally adjusted depending upon weather conditions in order to reduce stress and promote healthy turf.
- c. Mowing patterns shall be altered on a weekly basis wherever possible. Mowing patterns shall create straight lines for a more manicured appearance.
- d. Clippings shall be bagged and removed when clipping buildup is such that the excess clipping lay in an unsightly matted condition on the lawn.
- e. The turf shall be cut in such a manner as to avoid blowing clippings toward structures, patios, air conditioners, and planting beds.
- f. If the turf could potentially be damaged by equipment due to weather, mowing should not be performed.
- g. Turf bordering vertical surfaces such as foundations, fences, and utility boxes shall be trimmed to match the mowing height.
- h. Clippings shall be removed from all pavement areas.

Edging

- a. Turf areas adjacent to walks, driveways and curbing will be mechanically edged monthly in a uniform
- b. Shrub beds and tree rings shall be neatly and uniformly edged twice per year; once during the spring cleanup, and again in August or September weather permitting.

3. Fertilizer & Weed Control

- a. Pesticides must be applied by a licensed individual.
- b. Notice shall be given to the homeowners association or owner's representative 1 week prior to any pesticide application.
- c. The lawn shall be fertilized three (3) times with a high quality granular or liquid formula. The applications should be made approximately in April, May and September. Timing, frequency and rate of application shall be adjusted to meet the development's current needs and conditions d. A pre-emergent weed control application for annual grass prevention shall be incorporated into the first
- turf fertilization in spring. e. The entire turf area will be treated one (1) time with a post emergent broad leaf weed control at the
- appropriate time of year. Spot treatment should be done as necessary. f. Flags shall be posted throughout the community following each fertilizer application. Remove flags once the application is dry or as directed by the product's label.

IV. Planting Bed Maintenance

1. Pruning

- a. Trees, shrubs and evergreens should be pruned, trimmed or sheared at the appropriate time for each species to maintain the plant's proper form. Methods and timing shall conform to standard horticultural practices. The initial spring pruning will include:
- Removal of dead or injured limbs.
- 2. Removal of branches that are touching structures. Shaping and internal thinning of the plant to allow for its natural form and habit.
- b. Shrubs will be pruned two (2) additional times at the appropriate time so as not to interfere with
- c. Trees over 6" in diameter will not be pruned other than removal of low branches hazardous to pedestrian traffic and sucker growth which may occur.
- d. Groundcovers should be pruned twice during the season to maintain a neat appearance.
- e. Ornamental grasses should be trimmed during the spring cleanup.
- f. All pruning debris shall be removed from the site by the contractor immediately after the work is complete.

2. Fertilizer & Weed Control

- a. Pesticides must be applied by a licensed individual.
- c. Pre-emergent weed control shall be applied at the beginning of the growing season.
- d. Post emergent applications or hand pulling shall be used on any weeds that appear throughout the

b. Notice shall be given to the homeowner's association 1 week prior to any pesticide application.

e. Trees, shrubs and groundcover shall be fertilized one (1) time during the season. The application rate will be determined by the specific needs of the plant material.

C.Spring & Fall Cleanup

- 1. Spring Cleanup
- a. Lawn areas and planting beds will be raked as necessary to remove leaves, dead branches, litter and
- b. All mulch beds shall be cultivated to break up any existing compaction in the mulch.

c. Fresh mulch should be applied to any bare spots in the planting beds.

- d. Monitor plant health and notify homeowner's association or owner's representative of any dead plants.
- e. Debris generated during the cleanup shall be disposed of legally off site.

2. Fall Cleanup

- a. All lawn areas will have leaves removed either by raking or through the mowing process so as to preve leaf buildup on the turf on a weekly basis.
- b. All planting beds will have leaves and debris removed at the end of the season.
- c. Perennials without winter interest shall be cut back.
- d. Monitor plant health and notify homeowner's association or owner's representative of any dead plants.
- e. Debris generated during the cleanup shall be disposed of legally off site.

V. PERSONAL CONDUCT / SAFETY

Landscape Contractor Signature___

- 1. Consumption of alcoholic beverages or drugs on the job site is strictly prohibited.
- 2. Any offensive or obnoxious behavior (loud radio, profanity, etc.) is strictly prohibited.
 - 3. Reckless operation of vehicles or equipment by Subcontractor's employees while in the subdivision will not be tolerated.
 - 4. Hard hats to be worn by all employees at all times.
- 5. Failure to comply with Lennar's Safety Policy, OSHA or any other presiding safety institution could result in fines starting at \$100.00 per occurrence.
- 6. Subcontractor to provide a competent person trained in OSHA requirements on site at all times.

Landscape Contractor Name	
Landscape Contractor Company	



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04.16.2024 PROJECT NO. LN23147 CLE CHECKED





FINAL STORMWATER MANAGEMENT REPORT

FOR

Lakewood Prairie Subdivision Unit 3 Barberry Way and Theodore Street Joliet, Kendall County, Illinois

Prepared By:



Mackie Consultants, LLC 9575 W. Higgins Road, Suite 500 Rosemont, IL 60018 (847)696-1400 www.mackieconsult.com

Dated: April 12, 2023

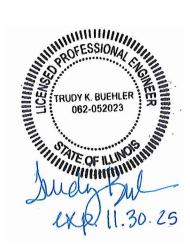


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NARRATIVE DESCRIPTION LAKEWOOD PRAIRIE UNIT 3

Introduction

The Lakewood Prairie Unit 3 Single Family Community project site is located in Joliet, Kendall County, Illinois, east of Barberry Way and south of Theodore Street. The proposed site consists of 68.2 acres and will contain 213 single-family homes. Stormwater management for the site was constructed as part of the Lakewood Prairie Development completed in 2005. Refer to existing conditions exhibit in Tab 2 of this report for basin information.

Per the City of Joliet Stormwater Management Code, Bulletin 70 rainfall data was used for all calculations within this report.

Description of Existing Stormwater Management System

The subject property is 68.2 acres and is currently undeveloped. The stormwater detention facilities have been approved and built. The basins are located directly south of the Unit 4 community. The basin has been sized for Units 2, 3, and 4 in their built-out condition. While Unit 3 has not yet been constructed, all calculations assume the development has been built. Refer to existing conditions exhibit in Tab 2 of this report for exact basin locations.

Soils Review

An NRCS Soil Survey of the site was used to determine the overall soil group classification. (Please refer to the NRCS Soils Survey Map). Predominately, the soils on the site are silt loam soil group C; therefore, Soil Group C has been utilized in determining the proposed runoff curve number (CN) based on land use characteristics.

Wetland Review

A Wetland Delineation Report, prepared by Midwest Ecological, dated October 23, 2023, states that two wetlands totaling 0.61 acres in size were identified on the subject property and are anticipated to be Isolated Wetlands of Kendall County. Per correspondence from Rob Vanni of Midwest Ecological, isolated wetland mitigation is not expected to be required for these wetlands as long as they are confirmed isolated by the Army Corps of Engineers.

The first wetland, Drainage Ditch #1, is 0.09 acres, located on the north property line, and appears to be a previous draintile excavation completed in 2006. The U.S. Fish and Wildlife Service National Wetlands Inventory Map shows a blue line riverine in this location through the site. This blue line also appears on the USGS map for this area. According to the Kendall County Stormwater Ordinance, "Streams appearing as blue on a USGS Quadrangle map shall be assumed perennial unless better data is obtained." Rob Vanni of Midwest Ecological Inc advised "There is no indication that a stream was present on-site. It is either a mapping error or was tiled long ago, prior to 1939", therefore deeming this riverine to not be perennial, but this conclusion requires concurrence with the City of Joliet. The second wetland, Farmed Wetland #1, is 0.52 acres, located in the northeast corner of the site. A jurisdictional determination from the US Army Corps of Engineers is required to confirm Midwest Ecological's findings.

Floodplain Review

A FEMA Flood Insurance Study was revised January 8, 2014 and establishes a base flood elevation (BFE) of 619.4'. The site lies within Zone "X" by map.

Proposed Conditions

Detention Required for the Proposed Improvements

Overall stormwater detention for this parcel has been provided in the stormwater basins located south of unit 4, previously approved by the City of Joliet. In accordance with the approved plan, the subject property shall maintain a curve number of 83 or less. The proposed site has a curve number of 82.45 and is therefore compliant with the approved design.

The site is conveyed to the detention basins via a storm sewer system and overland flood route. The majority of the site is conveyed south through Unit 2 and the townhome development via 36-inch and 42-inch storm sewers at the point of connection. An overland flood route was previously developed and confirmed as part of the stormwater management report for the Townhome Development.

Portions of the west side of the site drain to Barberry Way. Based on the storm sewer sizing and previously provided plans, this tributary area was included as part of the storm sewer sizing in Barberry Way.

Refer to existing conditions Exhibit in Tab 2 of this report for these tributary areas, the existing storm sewer sizing and overland flood route locations.

Storm Sewer and Overland Flood Route Sizing

A composite rational runoff coefficient (C) 0.63 was used for all on-site tributary areas for storm sewer and overland flood route calculations.

StormCAD modeling is provided in this report to show that the proposed and existing pipes are sized sufficiently to convey both the existing offsite and on-site flows. Proposed storm sewer were designed using Manning's Equation to determine the flow capacity in the storm network in the 10-TR rainfall event. Proposed tributary areas were delineated and added into the StormCAD model as catchment areas to determine the proposed flow to the sewer system. For the on-site tributary areas, a time of concentration of 10 minutes for paved areas and 15 minutes for lawn areas was used. All storm sewers have sufficient capacity for the offsite and onsite flows.

Overland Flood Route calculations are provided in this report to ensure sufficient channel capacity and freeboard from the proposed buildings for the 100-YR offsite and proposed on-site flows. The rational method was utilized to calculate the flows tributary to each overland flood route. A site runoff coefficient (C) of 0.63 was calculated based on the impervious areas of the proposed site. A time of concentration of 15 minutes was used for onsite overland flood routes. All overland flood routes have 1' of freeboard from the high-water level to the Grade at Foundation of the adjacent homes. Flowmaster was used to calculate water depths.

Delineated tributary areas can be found on the Tributary Area Exhibit within Tab 3 of this report. More detailed modeling will be provided at Final Engineering.

Soil Erosion/Sediment Control Measures

An extensive Stormwater Pollution Prevention Plan (SWPPP) has been created in the Final Engineering Plans in order to protect the existing natural resources located within the general proximity to the project site.

Maintenance Plan

An ongoing stormwater system maintenance plan must be undertaken for the storm water system to operate as designed. These systems will be privately maintained, though easements will be provided to facilitate maintenance and public access. The stormwater management

basing will continue to be maintained by the Lakewood Prairie Unit 1 Homeowner's Association. See Tab 4 for a Maintenance Plan for New Facilities for additional considerations and checklist for managing stormwater systems.

Summary

The proposed stormwater management strategy has been designed to minimize the potential for any adverse stormwater impacts to neighboring and downstream resources and properties and meet the criteria of the City of Joliet and Kendall County Ordinances.

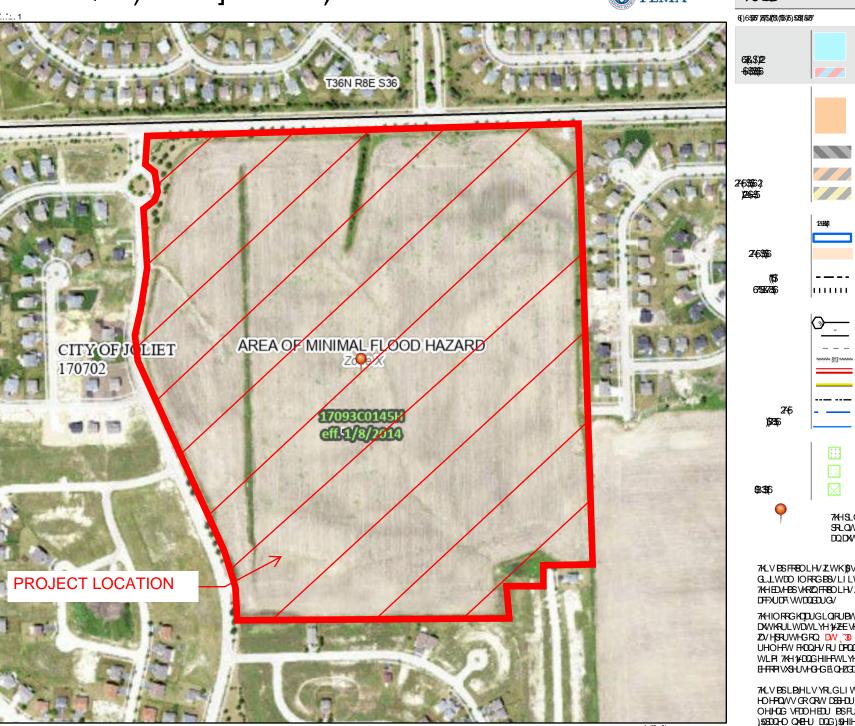
TAB 1: MAPS AND PERMITS





1DWLRQDO (DRRG-EDUGIDHU)51WWH







7KHIORRGKODUGLQRUBWLRQLVGHULYHGGLUHFWO\IURPWKH DXVKRULWDWLYH1#JEVHUYLFHVSURYLG+GE167KLVPS DOGG GRHV CRW UHOHEW FROOHVRU DPOOPDWV WELHTXHOW WRWKLV ODWHDOG WLFI 7KH1/FDQGHIHFWLYHLQRUBWLRQBIFKDQHRU ETTPI VS-UVHG+GEQ+ZQDWDRYHU WLPI

7/LV PSLPJHLV YRLGLI WKHROHRU RUHRI WKHIROORZQJPS HOHPOWY OR CRW DSSHOU, EDWHPS LPUHU\ IORRG ROHODEHOV OHHOG VEDOHEDU PSFÜHDWLRQEDWH FRROLIWLGHOWLILHUV)55800+O QMEHU DOG)55HIHFWLYHODWH DSLPJHVIRU XCPSS+GDCGXCRC+UCL.)+GDUHDV FDCCRW EHXHGIRU UHJYO DWRU\ SYUSRAHY



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

(o)

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole Slide or Slip

Sodic Spot

å

Spoil Area Stony Spot

Very Stony Spot

Ŷ

Wet Spot Other

Δ

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

00

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kendall County, Illinois Survey Area Data: Version 20, Aug 28, 2023

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Jul 4, 2020—Oct 13, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
148C2	Proctor silt loam, 5 to 10 percent slopes, eroded	15.0	21.8%	
152A	Drummer silty clay loam, 0 to 2 percent slopes	5.7	8.3%	
356A	Elpaso silty clay loam, 0 to 2 7.7 percent slopes		11.2%	
442A	Mundelein silt loam, 0 to 2 percent slopes	11.3	16.4%	
443B	Barrington silt loam, 2 to 4 percent slopes	3.8	5.5%	
541A	Graymont silt loam, 0 to 2 percent slopes	2.2	3.3%	
541B	Graymont silt loam, 2 to 5 percent slopes	23.1	33.5%	
Totals for Area of Interest		68.8	100.0%	

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

Custom Soil Resource Report

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

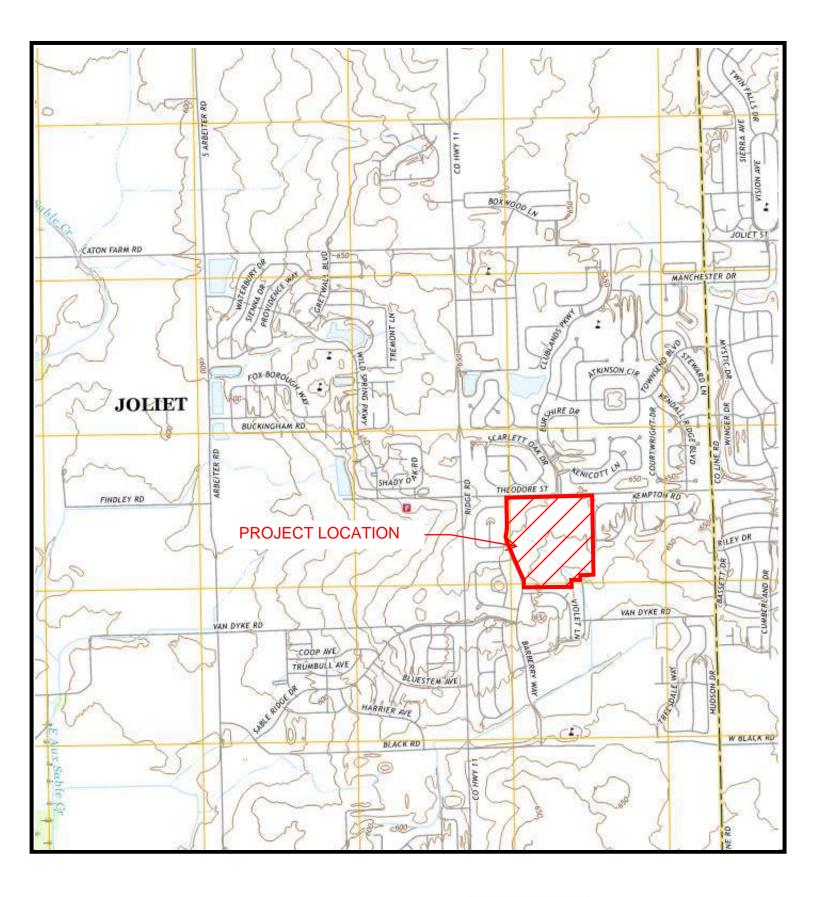
Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.





U.S. Fish and Wildlife Service National Wetlands Inventory

LAKEWOOD PRAIRIE UNIT 3



December 11, 2023

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Lake

Other

Riverine

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





Applicant: MACKIE CONSULTANTS LLC IDNR Project Number: 2404849

Contact: Oksana Zurawel Date: 09/20/2023

Address: 9575 W HIGGINS RD. SUITE 500

ROSEMONT, IL 60018

Project: Lakewood Prairie Unit 3 Single Family Homes Community

Address: W Theodore Rd & Barberry Way, Joliet

Description: Lennar Homes wishes to complete Lakewood Prairie Unit 3 which was started 20 years

ago.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

Consultation is terminated. This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Kendall

Township, Range, Section:

35N, 8E, 1 36N, 8E, 36

IL Department of Natural Resources Contact

Adam Rawe 217-785-5500

Division of Ecosystems & Environment



Government Jurisdiction

IL Environmental Protection Agency Permits Section Post Office Box 19276 Springfield, Illinois 62794 -9276

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

- 1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.
- 2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.
- 3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.



Kendall County Joliet East of Barberry Way Section:1-Township:35N-Range:8E IEPA New construction, Lakewood Prairie Unit 3

October 12, 2023

Oksana Zurawel Mackie Consultants, LLC 9575 W. Higgins Road, Suite 500 Rosemont, IL 60018 PLEASE REFER TO: SHPO LOG #025092023

The Illinois State Historic Preservation Office is required by the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420, as amended, 17 IAC 4180) to review all state undertakings for their effect on cultural resources. Pursuant to this requirement, we have received information regarding the above referenced project for our comment.

According to the information provided there is no federal involvement in your project. Be aware the state law is less restrictive than the federal cultural resource laws concerning archaeology. If your project will use federal loans or grants, need federal agency permits, use federal property, or involve assistance from a federal agency, then your project must be reviewed under the National Historic Preservation Act of 1966, as amended. Please notify us immediately if such is the case.

Our files do not identify any known historic properties within this proposed project area, nor is it within the high probability area for archaeological resources as defined in the state Act. Accordingly, this project is **EXEMPT** pursuant to Section 6 of the Illinois State Agency Historic Resources Preservation Act. An archaeological survey for your above referenced project is not required under Illinois law. Please know, however, we are always receptive to reviewing the results of any due diligence survey coverages.

This does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Remains Protection Act (20 ILCS 3440).

If further assistance is needed please contact Jeff Kruchten, Principal Archaeologist, at 217/785-1279 or jeff.kruchten@illinois.gov.

Sincerely,

Carey L. Mayer, AIA Deputy State Historic

Preservation Officer

TAB 2 - EXISTING CONDITIONS

PREVIOUS APPROVED STORMWATER REPORT EXCERPTS

STORMWATER MANAGEMENT REPORT

LAKEWOOD HOMES (LAKEWOOD PRAIRIE DEVELOPMENT) JOLIET, ILLINOIS

FEBRUARY 2005



PREPARED FOR:

CHRISTIAN-ROGE & ASSOC., INC. 211 WEST WACKER DRIVE CHICAGO, ILLINOIS 60606 PREPARED BY:

CIVIL ENGINEERING SERVICES, INC. 700 EAST DIEHL ROAD, SUITE 180 NAPERVILLE, !LLINOIS 60563

TABLE 1

		ALLOWABLE		ALLOWABLE		HIGH		OVERFLOW		10yr HIGH WATER
1	DRAINAGE AREA, ac			ľ	• •———	WATER LEVEL, ft	REQUIRED, ac-ft	ELEVATION, ft	WEIR LENGTH, ft	LEVEL, ft
Northwest Pond	10.00	1.00	1.00	0.40	0.40	660.04	3.666			
Large South Pond	287,41	28.74	28.72	11.50	11.49	618.12	109.288	618.13	West - 50, East - 50	
Outlot U - School	17.23	1.72	1.70	0.69	0.68	618.65	7.632	618.70	30	616.58
Outlot B - Well	5.53		0.55	0.22	0.21	618.82	2.347	618.83	20	
Black Road	3.97	0.40	0.39	0.16	0.16	618.68	1.663	618.70	20	617.16

Name.... LARGE SOUTH POND

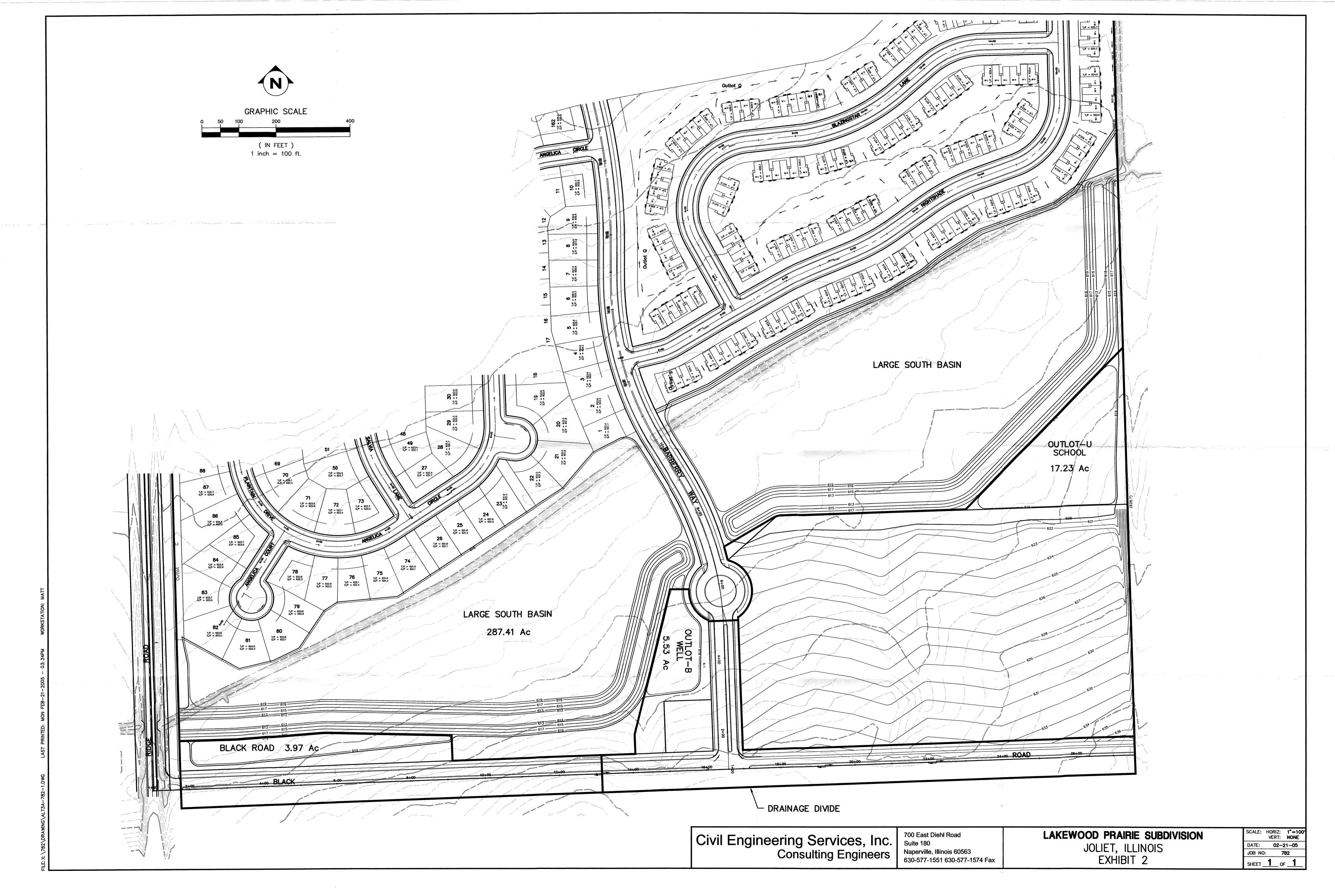
Page 4.01

File.... X:\782\Hyd\PondPack\Final Calcs\LARGE SOUTH POND-FINAL.PPW

RUNOFF CURVE NUMBER DATA

Previously Approved Curve Number for Lakewood Prairie (All Units)

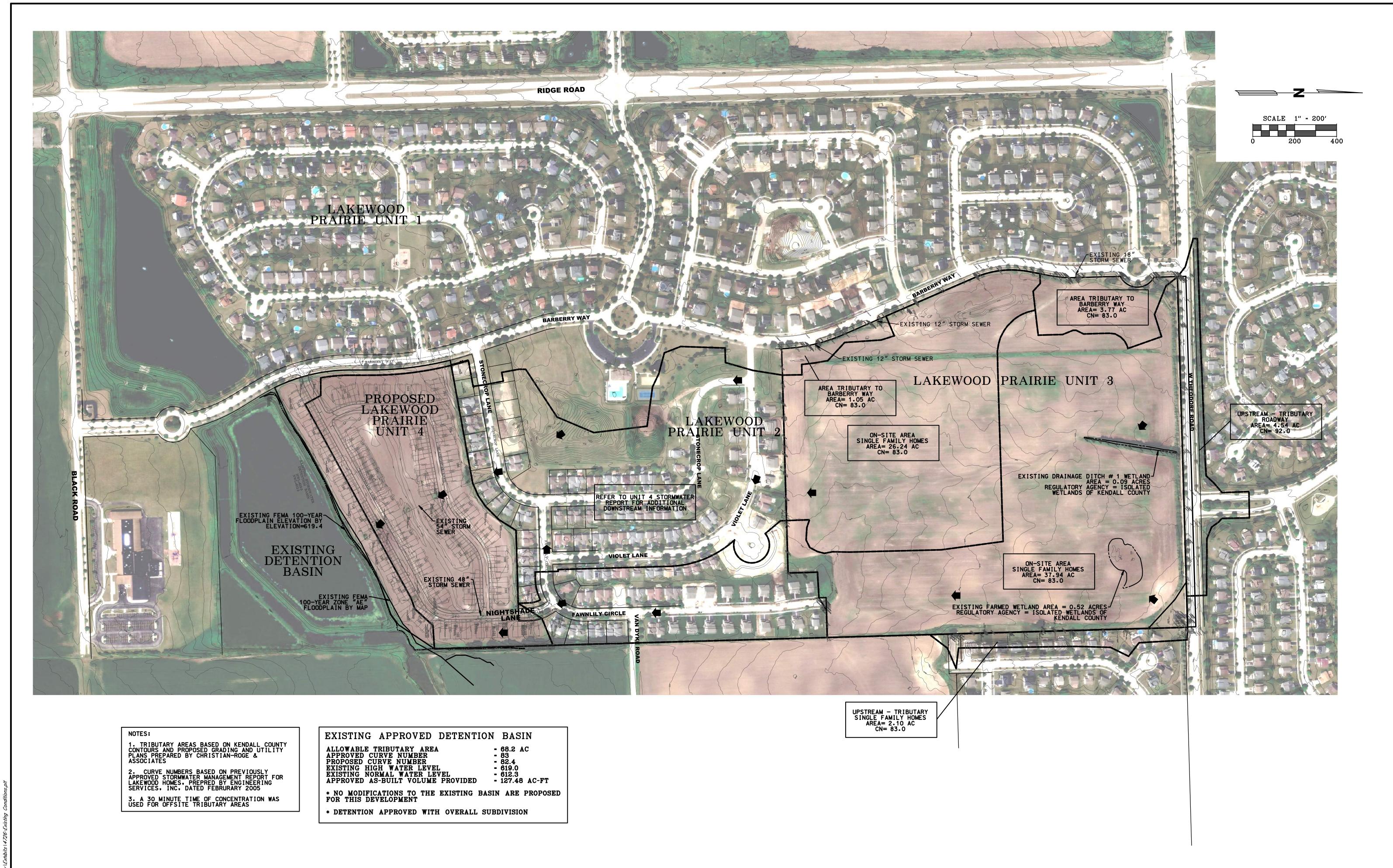
Soil/Surface Description	CN	Area acres	Impervious Adjustment %C %UC	Adjusted CN	
1/4 acre	83	179.410			
1/8 acre (town houses)	90	22.310		83.00	CN used for Single Family Homes
Country Homes	90	37.410		90.00	
Parks	74	6.810		90.00	
Club House & Park	80	11.970		74.00	
Detention Pond-Wet Area	98	20.340		80.00	
Detention Pond Area-Above NWL	74	9.160		98.00 74.00	
COMPOSITE AREA & WEIGHTED CN>	:::::	287.410		84.89 (85) :::



Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Landscape **■USGS 66 km SW of Chicago, Illinois, United States** 27 Mar 1999 EXHIBIT PROJECT SITE THEODORE VAN DYKE RD ا.5Km

Image courtesy of the U.S. Geological Survey
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EXISTING CONDITIONS EXHIBIT



Mackie Consultants, LLC 9575 W. Higgins Road, Suite 500 Rosemont, IL 60018 (847)696-1400 www.mackieconsult.com

CLIENT:

LENNAR HOMES

			DESIGNED	KCC\JT
			DRAWN	KCC\JT
			APPROVED	MTL
			DATE	01/09/2024
DATE	DESCRIPTION OF REVISION	BY	SCALE	1"=200'

EXISTING CONDITIONS EXHIBIT LAKEWOOD PRAIRIE UNIT 3
JOLIET, ILLINOIS

SHEET

PROJECT NUMBER: 4726

© MACKIE CONSULTANTS LLC, 2024

ILLINOIS FIRM LICENSE 184-002694

CURVE NUMBER CALCULATIONS

Existing Curve Number - Offsite East

Lakewood Prairie Residential Community Joliet, IL

	Total	Total	Percent	Curve
	Area	Area	of Disturbed	Number
Location	(sq ft)	(acres)	Area	

Areas

Single Family Homes 83,190 1.91 100% 83.00

Existing Neustroneshire 83,190 1.91 100.0%

Weighted Curve Number: 83.00

Total Area (used for TR20) 0.00298 sq. mi

Notes:

- 1. Curve numbers taken from previously approved Stormwater Management Report, prepared by Civil Engineering Services, Inc, dated February 2005.
- 2. Curve number used to determine offsite flow to proposed Lakewood Prairie Unit 4

Existing Curve Number - Offsite East

Lakewood Prairie Residential Community Joliet, IL

Location	Total Area (sq ft)	Total Area (acres)	Percent of Disturbed Area	Curve Number
Areas Roadway Pervious Area	164,466 54,822	3.78 1.26	75% 25%	98.00 74.00
Existing Theodore Road	219,288	5.03	100.0%	
		Weighted C	urve Number:	92.00

Total Area (used for TR20) 0.00787 sq. mi

Notes:

1. Assumed 75% impervious area per roadway cross section

TAB 3 - PROPOSED CONDITIONS

Proposed Curve Number

Lakewood Prairie Unit 3 Residential Community Joliet, IL

		Total	Total	Percent	Curve
	Area	Area	Area	of Disturbed	Number
Location	(sq ft)	(sq ft)	(acres)	Area	
Pervious Areas		1,924,415	44.18	64.8%	74.00
Impervious Areas					
Sidewalk		104,948	2.41	4%	98.00
Roads		318,859	7.32	11%	98.00
Homesite Coverage And	are	232,418	5.34	8%	98.00
Homesite Coverage Hori	zon	353,760	8.12	11%	98.00
Drive Aprons		36,423	0.84	1%	98.00
			24.02		
Disturbed Project Area		2,970,823	68.20	100.0%	

Weighted Curve Number (CN): 82.45

Notes:

- 1. Proposed curve number is less than the previously approved curve number (83) from the Stormwater Report prepared by Civil Engineering Services, Inc, dated February 2005. Refer to Existing Conditions Tab
- 2. Homesite Coverage is based on the average homesite coverage of the Horizon Series product lineup.

Proposed Runoff Coefficient

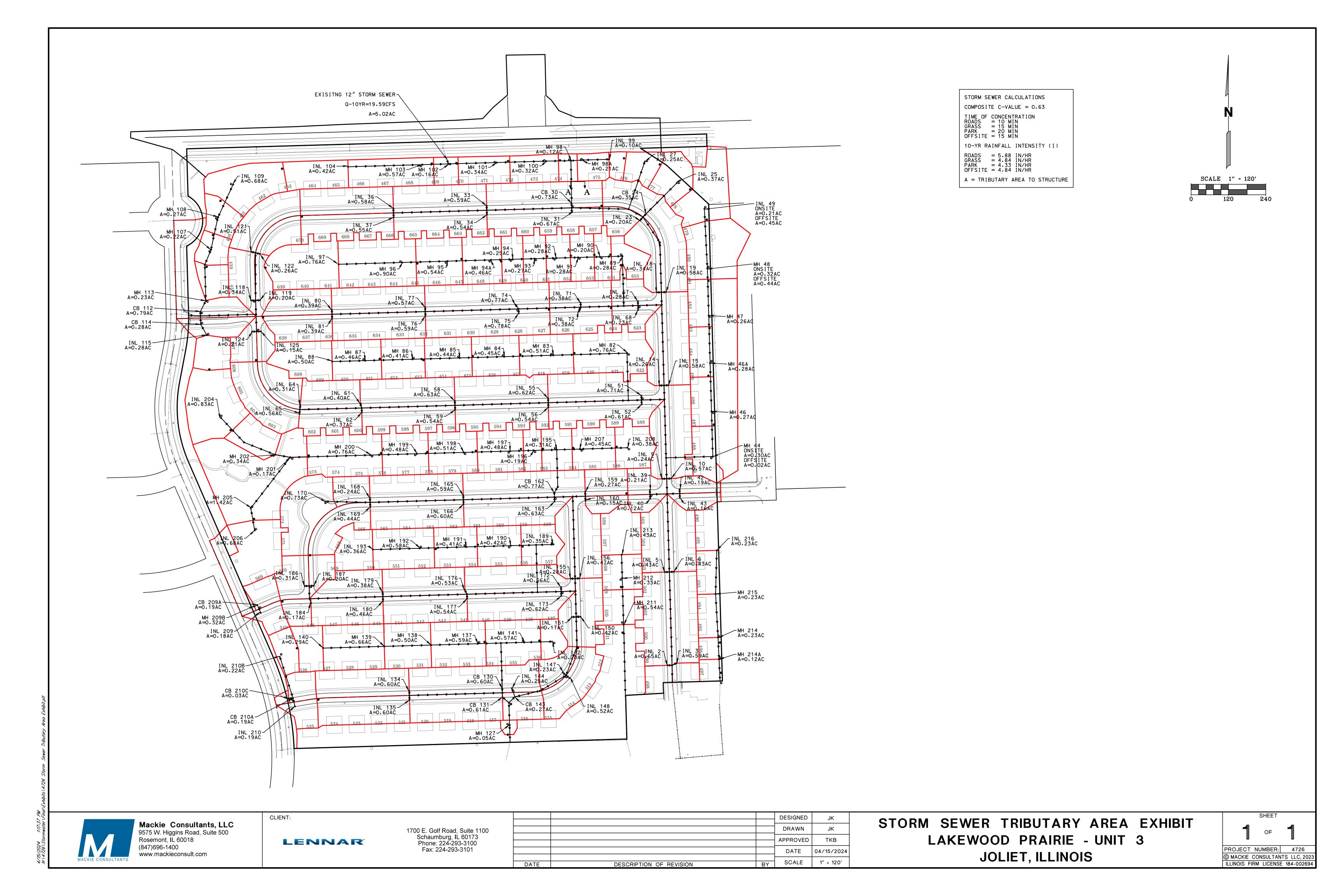
Lakewood Prairie Unit 3 Residential Community Joliet, IL

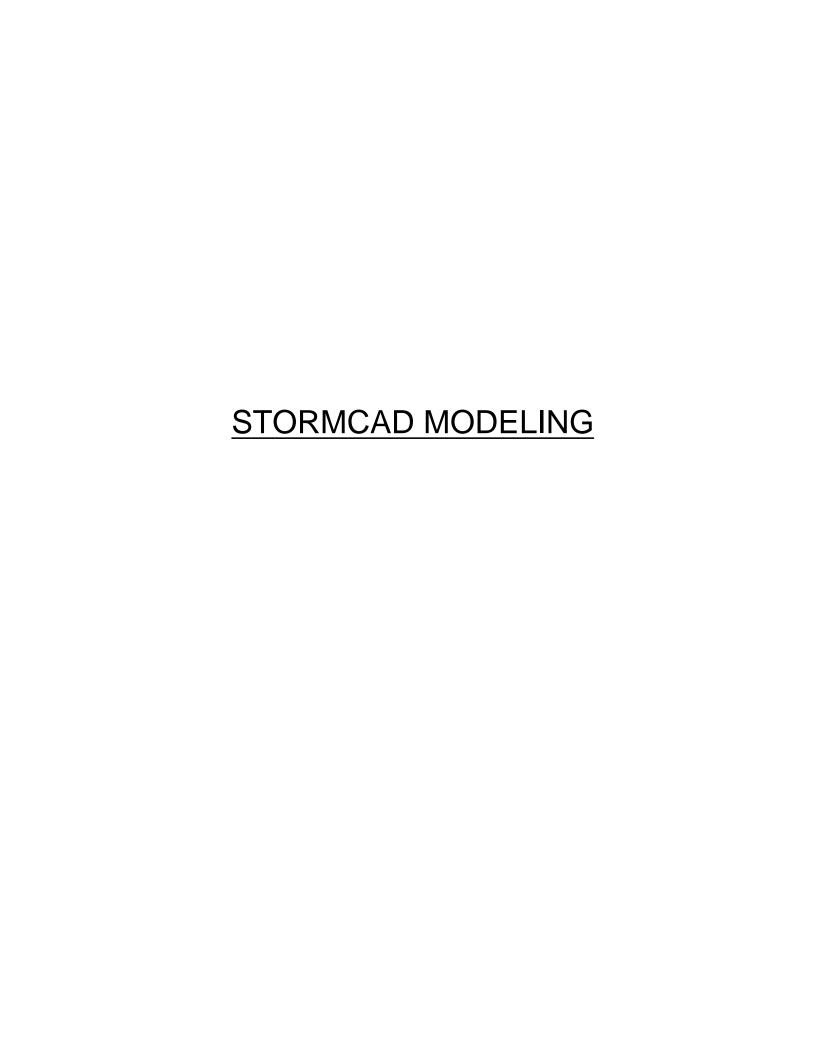
Location	Area (sq ft)	Total Area (sq ft)	Total Area (acres)	Percent of Disturbed Area	C-Value
Pervious Areas		1,924,415	44.18	64.8%	0.45
Impervious Areas					
Sidewalk		104,948	2.41	4%	0.95
Roads		318,859	7.32	11%	0.95
Homesite Coverage And	are	232,418	5.34	8%	0.95
Homesite Coverage Hori	zon	353,760	8.12	12%	0.95
Drive Aprons		36,423	0.84	1%	0.95
Disturbed Project Area		2,970,823	68.20	100.0%	

Weighted C-Value:

0.63

STORM SEWER TRIBUTARY AREA EXHIBIT





Lakewood Prairie 10-Year Storm Design Revised: April 15, 2024

								Length				Hydraulic	Hydraulic						Upstream						
			Elevation	Elevation				(User	Slope			Grade	Grade			Upstream		System	Structure		Upstream	System			Capacity
			Ground	Ground	Invert	Invert	Diameter	Defined)	(Calculated)		Manning's	Line (In)	Line (Out)	Cover	Cover	Inlet Area	Upstream	Intensity		System CA	Inlet Tc	Rational	Velocity		(Full Flow)
Label	Start Node	Stop Node			(Start) (ft)		(in)	(ft)	(%)	Material	n	(ft)	(ft)	(Start) (ft)		(acres)	Inlet C	(in/h)	Surface) (cfs)	(acres)	(min)	Flow (cfs)	(ft/s)	Flow (cfs)	(cfs)
CO-1	INL-2	MH-1	638.16	638.75	635.16	634.88	12	14	2	Concrete	0.013	637.43	637.37	2	2.87	0.65	0.63	5.88	2.43	0.41	10	2.43	3.09	2.43	5.04
CO-2	INL-3	MH-1	638.21	638.75	635.21	634.88	12	14.4	2.29	Concrete	0.013	637.42	637.37	2	2.87	0.591	0.63	5.88	2.21	0.372	10	2.21	2.81	2.21	5.39
CO-3	MH-4	MH-1	643.79	638.75	637.3	632.92	42	300	1.46	Concrete	0.013	640.38	637.37	2.99	2.33	(N/A)	(N/A)	4.194	0	23.894	0	101.02	14.13	101.02	121.56
CO-4	INL-5	MH-4	643.2	643.79	640.2	639.92	12	14	2	Concrete	0.013	640.74	640.33	2	2.87	0.428	0.63	5.88	1.6	0.269	10	1.6	5.69	1.6	5.04
CO-5	INL-6	MH-4	643.2	643.79	640.2	639.92	12	14	2	Concrete	0.013	640.74	640.33	2	2.87	0.429	0.63	5.88	1.6	0.27	10	1.6	5.69	1.6	5.04
CO-6	MH-7	MH-4	648.29	643.79	641.79	637.3	42	251	1.79	Concrete	0.013	644.85	640.38	3	2.99	(N/A)	(N/A)	4.222	0	23.355	0	99.4	15.3	99.4	134.56
CO-7	MH-8	MH-7	648.77	648.29	642.27	641.79	42	49	0.98	Concrete	0.013	645.31	644.85	3	3	(N/A)	(N/A)	4.229	0	22.922	0	97.72	11.8	97.72	99.57
CO-8	INL-9	MH-8	648.18	648.77	645.18	644.9	12	14	2	Concrete	0.013	645.58	645.31	2	2.87	0.243	0.63	5.88	0.91	0.153	10	0.91	4.85	0.91	5.04
CO-9	INL-10	MH-8	648.18	648.77	645.18	644.9	12	14	2	Concrete	0.013	645.8	645.38	2	2.87	0.571	0.63	5.88	2.13	0.36	10	2.13	6.15	2.13	5.04
CO-10	MH-11	MH-8	649.23	648.77	642.94	642.27	42	67	1	Concrete	0.013	645.96	645.31	2.79	3	(N/A)	(N/A)	4.239	0	22.41	0	95.76	11.9	95.76	100.6
CO-11	MH-12	MH-11	650.55	649.23	643.88	642.94	42	188	0.5	Concrete	0.013	647.61	645.96	3.17	2.79	(N/A)	(N/A)	4.274	0	20.793	0	89.57	9.31	89.57	71.14
CO-12	MH-13	MH-12	650.87	650.55	644.11	643.88	42	45	0.51	Concrete	0.013	647.81	647.61	3.26	3.17	(N/A)	(N/A)	4.285	0	15.229	0	65.78	6.84	65.78	71.92
CO-13	INL-14	MH-13	650.28	650.87	647.28	647	12	14	2	Concrete	0.013	647.74	647.81	2	2.87	0.261	0.63	5.88	0.97	0.164	10	0.97	4.96	0.97	5.04
CO-14	INL-15	MH-13	650.28	650.87	647.28	647	12	14	2	Concrete	0.013	647.91	647.81	2	2.87	0.584	0.63	5.88	2.18	0.368	10	2.18	6.19	2.18	5.04
CO-15	MH-16	MH-13	652.68	650.87	645.22	644.11	42	259	0.43	Concrete	0.013	648.87	647.81	3.96	3.26	(N/A)	(N/A)	4.351	0	14.697	0	64.46	6.7	64.46	65.86
CO-16	MH-17	MH-16	652.96	652.68	646.63	646.22	30	40.5	1.01	Concrete	0.013	649.26	648.87	3.83	3.96	(N/A)	(N/A)	4.438	0	9.049	0	40.48	8.25	40.48	41.27
CO-17	INL-18	MH-17	652.37	652.96	649.37	649.09	12	14	2	Concrete	0.013	649.84	649.44	2	2.87	0.335	0.63	5.88	1.25	0.211	10	1.25	5.32	1.25	5.04
CO-18	INL-19	MH-17	652.37	652.96	649.37	649.09	12	14	2	Concrete	0.013	650	649.58	2	2.87	0.58	0.63	5.88	2.16	0.365	10	2.16	6.18	2.16	5.04
CO-21	MH-22	MH-21	654.77	654.08	648.68	648.1	30	98.6	0.59	Concrete	0.013	651.51	650.65	3.59	3.48	(N/A)	(N/A)	4.494	0	8.473	0	38.38	7.82	38.38	31.49
CO-22	INL-23	MH-22	654.18	654.77	651.18	650.9	12	14	2	Concrete	0.013	651.54	651.51	2	2.87	0.202	0.63	5.88	0.75	0.127	10	0.75	4.61	0.75	5.04
CO-23	CB-24	MH-22	654.18	654.77	651.18	650.9	12	14	2	Concrete	0.013	651.81	651.39	2	2.87	0.35	0.63	4.775	1.31	0.456	10	2.2	6.2	2.2	5.04
CO-24	MH-26	MH-22	655.14	654.77	648.99	648.68	30	52.4	0.59	Concrete	0.013	651.91	651.51	3.65	3.59	(N/A)	(N/A)	4.507	0	7.889	0	35.84	7.3	35.84	31.49
CO-25	INL-25	CB-24	655.3	654.18	652.3	651.18	12	141.5	0.79	Concrete	0.013	652.75	651.81	2	2	0.375	0.63	4.84	1.15	0.236	15	1.15	3.72	1.15	3.17
CO-26	INL-27	MH-26	655.7	655.14	652.7	648.99	12	161.6	2.3	Concrete	0.013	653.07	651.91	2	5.15	0.252	0.63	4.84	0.77	0.159	15	0.77	4.88	0.77	5.4
CO-29	INL-31	MH-29	654.62	655.21	651.62	651.34	12	14	2	Concrete	0.013	653.35	653.28	2	2.87	0.675	0.63	5.88	2.52	0.425	10	2.52	3.21	2.52	5.04
CO-30	CB-30	MH-29	654.62	655.21	649.54	649.26	30	14	2	Concrete	0.013	653.34	653.28	2.58	3.45	0.728	0.63	4.554	2.72	5.881	10	27	5.5	27	58
CO-31	MH-32	MH-29	656.94	655.21	652.86	649.26	21	273	1.32	Concrete	0.013	653.92	653.28	2.33	4.2	(N/A)	(N/A)	5.676	0	1.424	0	8.15	7.35	8.15	18.19
CO-32	INL-33	MH-32	656.35	656.94	653.35	653.07	12	14	2	Concrete	0.013	653.98	653.92	2	2.87	0.585	0.63	5.88	2.19	0.369	10	2.19	6.19	2.19	5.04
CO-33	INL-34	MH-32	656.35	656.94	653.35	653.07	12	14	2	Concrete	0.013	653.96	653.92	2	2.87	0.544	0.63	5.88	2.03	0.343	10	2.03	6.07	2.03	5.04
CO-34	MH-35	MH-32	659.33	656.94	655.46	652.86	15	300	0.87	Concrete	0.013	656.29	653.92	2.62	2.83	(N/A)	(N/A)	5.872	0	0.712	0	4.22	5.3	4.22	6.01
CO-35	INL-36	MH-35	658.74	659.33	655.74	655.46	12	14	2	Concrete	0.013	656.37	656.29	2	2.87	0.583	0.63	5.88	2.18	0.368	10	2.18	6.18	2.18	5.04
CO-36	INL-37	MH-35	658.74	659.33	655.74	655.46	12	14	2	Concrete		656.35	656.29	2	2.87	0.547	0.63	5.88	2.04	0.345	10	2.04	6.08	2.04	5.04
CO-37	MH-38	MH-7	647.95	648.29	644.08	642.98	12	55	2	Concrete	0.013	644.91	644.85	2.87	4.31	(N/A)	(N/A)	5.868	0	0.209	0	1.23	5.3	1.23	5.04
CO-39	INL-39	MH-38	647.36	647.95	644.36	644.08	12	14	2	Concrete	0.013	644.88	644.91	2	2.87	0.207	0.63	5.88	0.77	0.131	10	0.77	4.65	0.77	5.04
CO-40	INL-40	MH-38	647.36	647.95	644.36	644.08	12	14	2	Concrete	0.013	644.9	644.91	2	2.87	0.124	0.63	5.88	0.46	0.078	10	0.46	4	0.46	5.04
CO-41	MH-41	MH-7	649.21	648.29	645.34	644.53	12	40.5	2	Concrete	0.013	645.83	644.88	2.87	2.76	(N/A)	(N/A)	5.869	0	0.224	0	1.32	5.4	1.32	5.04
CO-42	INL-42	MH-41	648.62	649.21	645.62	645.34	12	14	2	Concrete	0.013	645.97	645.83	2	2.87	0.193	0.63	5.88	0.72	0.121	10	0.72	4.55	0.72	5.04
CO-43	INL-43	MH-41	648.62	649.21	645.62	645.34	12	14	2	Concrete	0.013	645.94	645.83	2	2.87	0.162	0.63	5.88	0.61	0.102	10	0.61	4.33	0.61	5.04
CO-44	MH-44	MH-11	649	649.23	644.7	643.91	18	150.2	0.53	Concrete	0.013	646.7	645.96	2.8	3.82	0.32	0.63	4.54	0.98	1.617	15	7.4	4.19	7.4	7.62
CO-48	MH-48	MH-47	652.8	651.7	649.47	648.12	12	152	0.89	Concrete	0.013	651.72	649.48	2.33	2.58	0.756	0.63	4.773	2.32	0.9	15	4.33	5.51	4.33	3.36
CO-49	INL-49	MH-48	654.6	652.8	651.6	649.47	12	191.8	1.11	Concrete	0.013	652.26	651.72	2	2.33	0.672	0.63	4.84	2.07	0.424	15	2.07	4.9	2.07	3.75
CO-50	MH-50	MH-12	649.4	650.55	644.51	644.31	30	73.6	0.27	Concrete	0.013	647.88	647.61	2.39	3.74	(N/A)	(N/A)	4.405	0	5.564	0	24.7	5.03	24.7	21.38
CO-51	INL-51	MH-50	648.91	649.4	645.91	645.63	12	14	2	Concrete	0.013	647.96	647.88	2	2.77	0.705	0.63	5.88	2.63	0.444	10	2.63	3.35	2.63	5.04
CO-52	INL-52	MH-50	649.41	649.4	645.91	645.63	12	14	2	Concrete	0.013	647.94	647.88	2.5	2.77	0.61	0.63	5.88	2.28	0.384	10	2.28	2.9	2.28	5.04
CO-53	MH-53	MH-50	649.8	649.4	644.72	644.51	30	42.4	0.5	Concrete	0.013	647.99	647.88	2.58	2.39	(N/A)	(N/A)	4.422	0	4.735	0	21.11	4.3	21.11	28.86
CO-54	MH-54	MH-53	653.38	649.8	649.51	644.72	18	257.6	1.86	Concrete		652.14	647.99	2.37	3.58	(N/A)	(N/A)	5.276	0	2.505	0	13.32	7.54	13.32	14.32

Lakewood Prairie 10-Year Storm Design Revised: April 15, 2024

								Length				Hydraulic	Hydraulic						Upstream			_			
			Elevation	Elevation	1	1	D:	(User	Slope		N 4 =	Grade	Grade	C	C	Upstream	Unatara	System	Structure	C	Upstream	System	\/-l:\		Capacity
Lahal	Chamb Nada	Cham Nada	Ground	Ground	Invert	Invert	Diameter	Defined)	(Calculated)	Matarial	Manning's	Line (In)	Line (Out)	Cover	Cover	Inlet Area	Upstream	Intensity	•	System CA	Inlet Tc	Rational	Velocity	Flam (afa)	(Full Flow)
Label	Start Node				(Start) (ft)	(Stop) (ft)	(in)	(ft)	(%)	Material	0.010	(11)	(11)	(Start) (ft)		(acres)	Inlet C	(in/h)	Surface) (cfs)	(acres)	(min)	Flow (cfs)	(ft/s)	Flow (cfs)	(cfs)
CO-55	INL-55	MH-54	652.79	653.38	649.79	649.51	12	14	2	Concrete	0.013	652.2	652.14	2	2.87	0.624	0.63	5.88	2.33	0.393	10	2.33	2.97	2.33	5.04
CO-56	INL-56	MH-54	652.79	653.38	649.79	649.51	12	14	2	Concrete	0.013	652.18	652.14	2	2.87	0.539	0.63	5.88	2.01	0.34	10	2.01	2.56	2.01	5.04
CO-57 CO-58	MH-57 INL-58	MH-54 MH-57	655.48 654.89	653.38 655.48	651.61 651.89	649.51 651.61	18 12	300 14	0.7 2	Concrete	0.013 0.013	654.73 654.79	652.14 654.73	2.37	2.37 2.87	(N/A) 0.634	(N/A) 0.63	5.465 5.88	0 2.37	1.772 0.399	0 10	9.76 2.37	5.52 3.01	9.76 2.37	8.79 5.04
CO-59	INL-58	MH-57	654.89	655.48	651.89	651.61	12	14	2	Concrete Concrete	0.013	654.77	654.73	2	2.87	0.54	0.63	5.88	2.02	0.34	10	2.02	2.57	2.02	5.04
CO-60	MH-60	MH-57	657.58	655.48	653.74	651.61	15	300	0.71	Concrete	0.013	657.24	654.73	2.59	2.62	(N/A)	(N/A)	5.68	0	1.033	0	5.92	4.82	5.92	5.44
CO-61	INL-61	MH-60	657.04	657.58	654.02	653.74	12	14	2	Concrete	0.013	657.27	657.24	2.02	2.84	0.4	0.63	5.88	1.49	0.252	10	1.49	1.9	1.49	5.04
CO-62	INL-62	MH-60	656.99	657.58	653.99	653.74	12	14	1.79	Concrete	0.013	657.27	657.24	2	2.84	0.366	0.63	5.88	1.37	0.231	10	1.37	1.74	1.37	4.76
CO-63	MH-63	MH-60	659.86	657.58	655.99	653.74	12	198.7	1.13	Concrete	0.013	658.89	657.24	2.87	2.84	(N/A)	(N/A)	5.847	0	0.55	0	3.24	4.13	3.24	3.79
CO-64	INL-64	MH-63	659.27	659.86	656.27	655.99	12	14	2	Concrete	0.013	658.91	658.89	2	2.87	0.311	0.63	5.88	1.16	0.196	10	1.16	1.48	1.16	5.04
CO-65	INL-65	MH-63	659.27	659.86	656.27	655.99	12	14	2	Concrete	0.013	658.94	658.89	2	2.87	0.563	0.63	5.88	2.1	0.354	10	2.1	2.67	2.1	5.04
CO-66	MH-66	MH-16	652.09	652.68	646.29	645.22	36	76.1	1.41	Concrete	0.013	648.94	648.87	2.8	4.46	(N/A)	(N/A)	4.364	0	5.648	0	24.85	9.9	24.85	79.08
CO-67	INL-67	MH-66	651.5	652.09	648.5	648.22	12	14	2	Concrete	0.013	648.93	648.94	2	2.87	0.279	0.63	5.88	1.04	0.176	10	1.04	5.06	1.04	5.04
CO-68	INL-68	MH-66	651.5	652.09	648.5	648.22	12	14	2	Concrete	0.013	648.89	648.94	2	2.87	0.229	0.63	5.88	0.86	0.144	10	0.86	4.79	0.86	5.04
CO-69	MH-69	MH-66	652.28	652.09	646.37	646.29	36	45.9	0.17	Concrete	0.013	648.99	648.94	2.91	2.8	(N/A)	(N/A)	4.382	0	5.328	0	23.53	4.42	23.53	27.84
CO-70	MH-70	MH-69	652.04	652.28	647.06	646.37	30	138.4	0.5	Concrete	0.013	649.12	648.99	2.48	3.41	(N/A)	(N/A)	5.345	0	2.677	0	14.42	5.89	14.42	28.96
CO-71	INL-71	MH-70	651.45	652.04	648.45	648.17	12	14	2	Concrete	0.013	649.08	649.12	2	2.87	0.383	0.63	5.88	1.43	0.242	10	1.43	5.52	1.43	5.04
CO-72	INL-72	MH-70	651.45	652.04	648.45	648.17	12	14.5	1.93	Concrete	0.013	649.08	649.12	2	2.87	0.378	0.63	5.88	1.41	0.238	10	1.41	5.43	1.41	4.95
CO-73	MH-73	MH-70	652.04	652.04	647.46	647.06	24	200	0.2	Concrete	0.013	649.7	649.12	2.58	2.98	(N/A)	(N/A)	5.523	0	2.198	0	12.23	3.89	12.23	10.12
CO-74	INL-74 INL-75	MH-73	651.45	652.04	648.45 648.45	648.11 648.17	12 12	16.9 14	2.01	Concrete	0.013 0.013	649.81 649.8	649.7 649.7	2	2.93 2.87	0.767 0.781	0.63	5.88 5.88	2.86	0.483 0.492	10 10	2.86 2.91	3.64 3.71	2.86 2.91	5.05 5.04
CO-75 CO-76	MH-76	MH-73 MH-73	651.45 653.96	652.04 652.04	649.88	647.46	18	300	0.81	Concrete Concrete	0.013	650.91	649.7	2.58	3.08	(N/A)	0.63 (N/A)	5.7	2.91 0	1.223	0	7.03	5.85	7.03	9.43
CO-77	INL-77	MH-76	653.37	653.96	650.37	650.09	12	14	2	Concrete	0.013	651	650.91	2.30	2.87	0.575	0.63	5.88	2.15	0.362	10	2.15	6.16	2.15	5.04
CO-78	INL-78	MH-76	653.37	653.96	650.37	650.09	12	14	2	Concrete	0.013	651	650.91	2	2.87	0.585	0.63	5.88	2.19	0.369	10	2.19	6.19	2.19	5.04
CO-79	MH-79	MH-76	658.53	653.96	654.66	649.88	12	300	1.59	Concrete	0.013	655.39	650.91	2.87	3.08	(N/A)	(N/A)	5.871	0	0.492	0	2.91	6.09	2.91	4.5
CO-80	INL-80	MH-79	657.94	658.53	654.94	654.66	12	14	2	Concrete	0.013	655.45	655.39	2	2.87	0.388	0.63	5.88	1.45	0.244	10	1.45	5.54	1.45	5.04
CO-81	INL-81	MH-79	657.94	658.53	654.94	654.66	12	14	2	Concrete	0.013	655.45	655.39	2	2.87	0.394	0.63	5.88	1.47	0.248	10	1.47	5.57	1.47	5.04
CO-82	MH-82	MH-53	649.5	649.8	645.64	644.72	24	152	0.6	Concrete	0.013	648.3	647.99	1.86	3.08	0.759	0.63	4.503	2.33	2.23	15	10.12	3.22	10.12	17.58
CO-83	MH-83	MH-82	651.4	649.5	647.07	645.64	21	237	0.6	Concrete	0.013	648.93	648.3	2.58	2.11	0.513	0.63	4.622	1.58	1.752	15	8.16	3.39	8.16	12.31
CO-84	MH-84	MH-83	652.4	651.4	648.57	647.07	18	158	0.95	Concrete	0.013	649.57	648.93	2.33	2.83	0.45	0.63	4.666	1.38	1.429	15	6.72	6.18	6.72	10.23
CO-85	MH-85	MH-84	653.3	652.4	649.72	648.57	15	143	0.8	Concrete	0.013	650.68	649.57	2.33	2.58	0.444	0.63	4.712	1.36	1.146	15	5.44	5.37	5.44	5.79
CO-86	MH-86	MH-85	654.8	653.3	651.22	649.72	15	152	0.99	Concrete	0.013	652.05	650.68	2.33	2.33	0.411	0.63	4.758	1.26	0.866	15	4.15	5.56	4.15	6.42
CO-87	MH-87	MH-86	656.1	654.8	652.77	651.22	12	152	1.02	Concrete	0.013	653.51	652.05	2.33	2.58	0.465	0.63	4.809	1.43	0.607	15	2.94	5.11	2.94	3.6
CO-88	INL-88	MH-87	658.2	656.1	655.2	652.77	12	106.1	2.29	Concrete	0.013	655.72	653.51	2	2.33	0.499	0.63	4.84	1.53	0.314	15	1.53	5.91	1.53	5.39
CO-89	MH-89	MH-69	651.5	652.28	646.66	646.37	30	160	0.18	Concrete	0.013	649.13	648.99	2.34	3.41	0.277	0.63	4.453	0.85	2.651	15	11.9	3.83	11.9	17.46
CO-90	MH-90	MH-89	651.5	651.5	646.8	646.66	24	72.5	0.19	Concrete	0.013	649.3	649.13	2.7	2.84	0.198	0.63	4.488	0.61	2.476	15	11.2	3.57	11.2	9.94
CO-91 CO-92	MH-91 MH-92	MH-90 MH-91	651.5 651.5	651.5 651.5	646.94 647.11	646.8 646.94	24 24	70 70	0.2 0.24	Concrete Concrete	0.013 0.013	649.46 649.6	649.3 649.46	2.56 2.39	2.7 2.56	0.277 0.281	0.63 0.63	4.523 4.561	0.85 0.86	2.351 2.177	15 15	10.72 10.01	3.41 3.19	10.72 10.01	10.12 11.15
CO-92	MH-93	MH-92	651.6	651.5	647.28	647.11	21	70	0.24	Concrete	0.013	649.84	649.6	2.57	2.64	0.267	0.63	4.592	0.82	2.177	15	9.26	3.85	9.26	7.81
CO-94	MH-94	MH-93	652	651.6	647.45	647.28	21	70	0.24	Concrete	0.013	650.04	649.84	2.8	2.57	0.25	0.63	4.626	0.77	1.832	15	8.54	3.55	8.54	7.81
CO-96	MH-96	MH-95	653.6	652.3	650.02	648.22	15	146	1.23	Concrete	0.013	651.66	650.77	2.33	2.83	0.898	0.63	4.787	2.76	1.045	15	5.05	4.11	5.05	7.17
CO-97	INL-97	MH-96	657.7	653.6	654.7	650.02	12	204.1	2.29	Concrete	0.013	655.35	651.66	2	2.58	0.762	0.63	4.84	2.34	0.48	15	2.34	6.63	2.34	5.39
CO-98	MH-98	CB-30	654.9	654.62	649.82	649.54	30	137.5	0.2	Concrete	0.013	653.86	653.34	2.58	2.58	0.123	0.63	4.6	0.38	5.423	15	25.15	5.12	25.15	18.51
CO-100	MH-100	MH-98	654.9	654.9	650.57	649.82	30	79.9	0.94	Concrete	0.013	654.13	653.86	1.83	2.58	0.316	0.63	4.628	0.97	5.151	15	24.03	4.9	24.03	39.75
CO-101	MH-101	MH-100	656	654.9	651.67	650.57	24	159.3	0.69	Concrete	0.013	655.82	654.13	2.33	2.33	0.336	0.63	4.665	1.03	4.951	15	23.28	7.41	23.28	18.8
CO-102	MH-102	MH-101	657.7	656	653.37	651.67	24	155.8	1.09	Concrete	0.013	657.36	655.82	2.33	2.33	0.161	0.63	4.702	0.5	4.74	15	22.47	7.15	22.47	23.63

Lakewood Prairie 10-Year Storm Design

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								Longth				Hydraulic	Hydraulic						Upstream						
			Elevation	Elevation				Length (User	Slope			Grade	Grade			Upstream		System	Structure		Upstream	System			Capacity
			Ground	Ground	Invert	Invert	Diameter	Defined)	(Calculated)		Manning's	Line (In)	Line (Out)	Cover	Cover	Inlet Area	Upstream	Intensity	l	System CA	Inlet Tc	Rational	Velocity		(Full Flow)
Label	Start Node	Ston Node			(Start) (ft)	(Stop) (ft)	(in)	(ft)	(%)	Material	n n	(ft)	(ft)	(Start) (ft)		(acres)	Inlet C	(in/h)	Surface) (cfs)	(acres)	(min)	Flow (cfs)	(ft/s)	Flow (cfs)	(cfs)
CO-103	MH-103	MH-102	657.9	657.7	654.32	653.37	15	83.1	1.14	Concrete	0.013	657.53	657.36	2.33	3.08	0.567	0.63	4.761	1.74	0.622	15	2.99	2.43	2.99	6.91
CO-103	INL-104	MH-103	661.6	657.9	658.6	654.32	12	238.9	1.79	Concrete	0.013	659.08	657.53	2.33	2.58	0.307	0.63	4.701	1.74	0.022	15	1.29	5.16	1.29	4.77
CO-106	MH-107	MH-106	661.9	664.5	657.78	657.57	15	53	0.4	Concrete	0.013	659.73	659.57	2.87	5.68	0.224	0.63	4.714	0.69	0.735	15	3.49	2.85	3.49	4.1
CO-107	MH-108	MH-107	661.9	661.9	658.32	657.78	12	107	0.5	Concrete	0.013	660.41	659.73	2.58	3.12	0.267	0.63	4.765	0.82	0.594	15	2.85	3.63	2.85	2.53
CO-108	INL-109	MH-108	661.9	661.9	658.9	658.32	12	116.2	0.5	Concrete	0.013	660.81	660.41	2	2.58	0.676	0.63	4.84	2.08	0.426	15	2.08	2.65	2.08	2.52
CO-110	CB-112	MH-111	660.43	660.77	656.81	656.72	15	11.9	0.75	Concrete	0.013	659.08	658.96	2.37	2.8	0.792	0.63	4.592	2.96	1.382	10	6.4	5.21	6.4	5.61
CO-111	MH-113	CB-112	660.9	660.43	657.09	656.81	15	40.7	0.69	Concrete	0.013	659.24	659.08	2.56	2.37	0.235	0.63	4.613	0.72	0.883	15	4.11	3.35	4.11	5.35
CO-112	CB-114	MH-111	660.43	660.77	657.08	656.72	12		1.34	Concrete	0.013	659.02	658.96	2.35	3.05	0.281	0.63	4.775	1.05	0.351	10	1.69	2.15	1.69	4.12
CO-113	INL-115	CB-114	660.6	660.43	657.6	657.08	12	41.3	1.26	Concrete	0.013	659.04	659.02	2	2.35	0.276	0.63	4.84	0.85	0.174	15	0.85	1.08	0.85	4
CO-114	MH-116	MH-111	662	660.77	657.61	656.72	18	178.7	0.5	Concrete	0.013	659.54	658.96	2.89	2.55	(N/A)	(N/A)	5.669	0	1.049	0	6	3.39	6	7.41
CO-115	MH-117	MH-116	661.85	662	657.98	657.61	12	44.7	0.83	Concrete	0.013	660.33	659.54	2.87	3.39	(N/A)	(N/A)	5.695	0	0.824	0	4.73	6.02	4.73	3.24
CO-116	INL-118	MH-117	661.22	661.85	658.26	657.98	12	14	2	Concrete	0.013	660.35	660.33	1.96	2.87	0.341	0.63	5.88	1.27	0.215	10	1.27	1.62	1.27	5.04
CO-117	INL-119	MH-117	661.22	661.85	658.26	657.98	12	14	2	Concrete	0.013	660.34	660.33	1.96	2.87	0.198	0.63	5.88	0.74	0.125	10	0.74	0.94	0.74	5.04
CO-118	MH-120	MH-117	662.7	661.85	658.83	657.98	12	152.7	0.56	Concrete	0.013	661.31	660.33	2.87	2.87	(N/A)	(N/A)	5.841	0	0.485	0	2.85	3.63	2.85	2.66
CO-119	INL-121	MH-120	662.1	662.7	659.11	658.83	12	14	2	Concrete	0.013	661.35	661.31	1.99	2.87	0.508	0.63	5.88	1.9	0.32	10	1.9	2.42	1.9	5.04
CO-120	INL-122	MH-120	662.1	662.7	659.11	658.83	12	14	2	Concrete	0.013	661.32	661.31	1.99	2.87	0.261	0.63	5.88	0.98	0.165	10	0.98	1.24	0.98	5.04
CO-121	MH-123	MH-116	661.76	662	657.89	657.61	12	55.5	0.5	Concrete	0.013	659.62	659.54	2.87	3.39	(N/A)	(N/A)	5.813	0	0.225	0	1.32	1.68	1.32	2.53
CO-122	INL-124	MH-123	661.17	661.76	658.17	657.89	12	14	2	Concrete	0.013	659.62	659.62	2	2.87	0.206	0.63	5.88	0.77	0.13	10	0.77	0.98	0.77	5.04
CO-123	INL-125	MH-123	661.17	661.76	658.17	657.89	12	14	2	Concrete	0.013	659.62	659.62	2	2.87	0.152	0.63	5.88	0.57	0.096	10	0.57	0.72	0.57	5.04
CO-131	INL-134	MH-133	648.31	648.88	645.31	645.03	12	14	2	Concrete	0.013	645.94	645.9	2	2.85	0.58	0.63	5.88	2.16	0.365	10	2.16	6.17	2.16	5.04
CO-132	INL-135	MH-133	648.31	648.88	645.31	645.03	12	14	2	Concrete	0.013	645.94	645.9	2	2.85	0.579	0.63	5.88	2.16	0.365	10	2.16	6.17	2.16	5.04
CO-133	CB-143	MH-128	643.01	643.6	637.27	637.23	36	27	0.15	Concrete	0.013	640.94	640.81	2.74	3.37	0.266	0.63	3.752	0.99	12.577	10	47.56	6.73	47.56	25.89
CO-134	INL-144	CB-143	642.51	643.01	639.51	638.92	12	29.4	2	Concrete	0.013	640.97	640.94	2	3.09	0.254	0.63	5.88	0.95	0.16	10	0.95	1.21	0.95	5.04
CO-135	MH-145	CB-143	643.47	643.01	637.39	637.27	36	82.5	0.15	Concrete	0.013	641.35	640.94	3.08	2.74	(N/A)	(N/A)	3.773	0	12.249	0	46.59	6.59	46.59	25.89
CO-136	MH-146	MH-145	643.14	643.47	637.54	637.39	36	98.2	0.15	Concrete	0.013	641.83	641.35	2.6	3.08	(N/A)	(N/A)	3.798	0	12.249	0	46.9	6.63	46.9	25.89
CO-137	INL-147	MH-146 MH-146	642.55	643.14	639.55	639.27	12	14	2	Concrete	0.013	641.84	641.83	2	2.87	0.23 0.518	0.63	5.88	0.86	0.145 0.326	10	0.86	1.09 2.46	0.86	5.04
CO-138	INL-148		642.55	643.14	639.55	639.27	12 36	14	0.15	Concrete	0.013	641.87	641.83	2.8	2.87		0.63	5.88 3.824	1.93		10 0	1.93 45.41		1.93	5.04 25.89
CO-139 CO-140	MH-149 MH-150	MH-146 MH-149	643.49 643.15	643.14 643.49	637.69 637.84	637.54 637.69	36	98.2 96	0.15	Concrete	0.013 0.013	642.29 642.74	641.83 642.29	2.8	2.6 2.8	(N/A) (N/A)	(N/A) (N/A)	3.85	0	11.778 11.778	0	45.41	6.42 6.47	45.41 45.71	25.89
CO-140 CO-141	INL-151	MH-150	642.56	643.15	639.56	639.28	12	14	0.15	Concrete	0.013	642.74	642.74	2.31	2.87	0.171	0.63	5.88	0.64	0.108	10	0.64	0.47	0.64	5.04
CO-141	INL-151	MH-150	642.56	643.15	639.56	639.28	12	14	2	Concrete	0.013	642.77	642.74	2	2.87	0.171	0.63	5.88	1.58	0.168	10	1.58	2.02	1.58	5.04
CO-143		MH-150		643.15	637.96	637.84	36	82.9	0.15	Concrete	0.013	643.11	642.74	2.41	2.31	(N/A)	(N/A)	3.872	0	11.403	0	44.51	6.3	44.51	25.89
CO-144		MH-153	643.93	643.37	638.13	637.96	36	40.5	0.43	Concrete	0.013	643.19	643.11	2.8	2.41	(N/A)	(N/A)	3.889	0	7.565	0	29.65	4.2	29.65	43.55
CO-145		MH-154	643.34	643.93	640.34	640.06	12	14	2	001101010	0.013	643.2	643.19	2	2.87	0.282	0.63	5.88	1.05	0.178	10	1.05	1.34	1.05	5.04
CO-147		MH-136	642.7	644.1	639.25	638.88	12	74.9	0.49	Concrete	0.013	642.47	642.16	2.45	4.22	0.573	0.63	4.649	1.76	0.49	15	2.29	2.92	2.29	2.5
CO-148		MH-141	642.7	642.7	639.7	639.25	12	89.3	0.5	Concrete	0.013	642.5	642.47	2	2.45	0.204	0.63	4.84	0.63	0.128	15	0.63	0.8	0.63	2.53
CO-149		MH-136	644.5	644.1	641.17	638.88	12	75	3.05	Concrete	0.013	644.28	642.16	2.33	4.22	0.586	0.63	4.653	1.8	1.278	15	5.99	7.63	5.99	6.23
CO-150		MH-137	647	644.5	643.67	641.17	12	150	1.67	Concrete	0.013	646.47	644.28	2.33	2.33	0.499	0.63	4.7	1.53	0.909	15	4.3	5.48	4.3	4.6
CO-151		MH-138	649.6	647	646.27	643.67	12	150	1.73	Concrete	0.013	647.44	646.47	2.33	2.33	0.656	0.63	4.771	2.02	0.594	15	2.86	3.64	2.86	4.69
CO-152		MH-139	653.3	649.6	650.3	646.27	12	197.1	2.04	Concrete	0.013	650.69	647.44	2	2.33	0.287	0.63	4.84	0.88	0.181	15	0.88	4.86	0.88	5.09
CO-153	INL-156	MH-154	643.34	643.93	640.34	640.06	12	14	2	Concrete	0.013	643.22	643.19	2	2.87	0.474	0.63	5.88	1.77	0.299	10	1.77	2.25	1.77	5.04
CO-154	MH-157	MH-154	646.08	643.93	639.26	638.13	30	263.5	0.43	Concrete	0.013	644.45	643.19	4.32	3.3	(N/A)	(N/A)	3.967	0	7.089	0	28.35	5.77	28.35	26.78
CO-157	MH-164	MH-161	647.64	645.7	643.77	639.51	18	292.8	1.46	Concrete	0.013	646.64	644.71	2.37	4.69	(N/A)	(N/A)	5.488	0	1.542	0	8.53	4.83	8.53	12.67
CO-158	MH-167	MH-164	650.23	647.64	646.36	643.77	15	300	0.86	Concrete	0.013	648.17	646.64	2.62	2.62	(N/A)	(N/A)	5.765	0	0.794	0	4.61	3.76	4.61	6
CO-159	INL-170	MH-167	651.02	650.23	648.02	646.36	12	141.8	1.17	Concrete	0.013	649.01	648.17	2	2.87	0.734	0.63	5.88	2.74	0.462	10	2.74	5.33	2.74	3.85
CO-160	INL-168	MH-167	649.64	650.23	646.64	646.36	12	14	2		0.013	648.17	648.17	2	2.87	0.236	0.236	5.88	0.33	0.056	10	0.33	0.42	0.33	5.04

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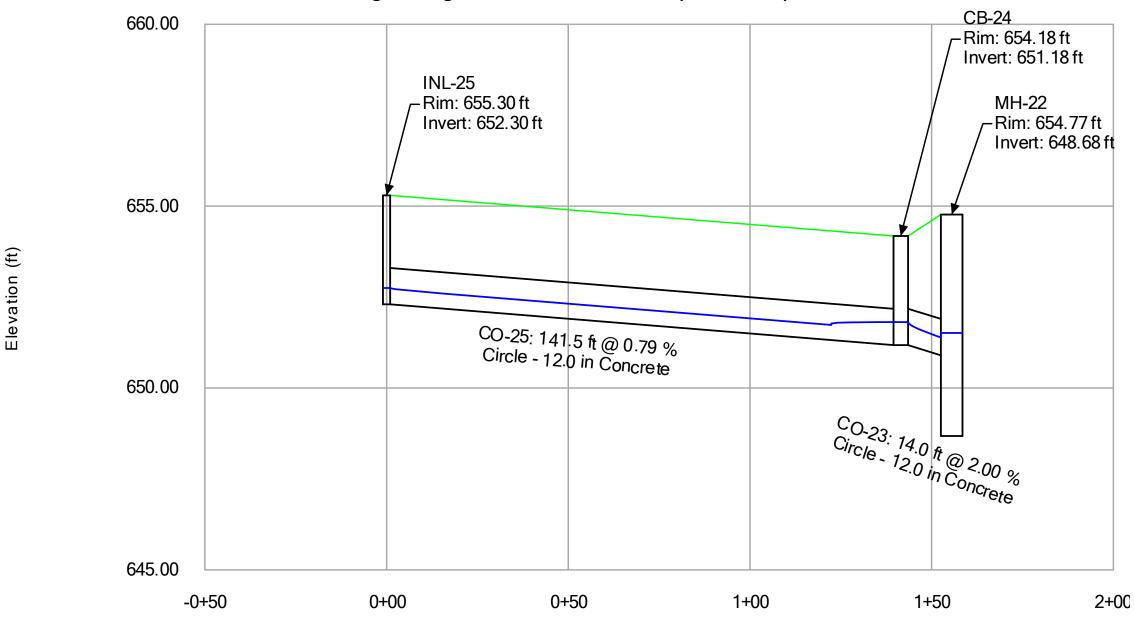
								Length				Hydraulic	Hydraulic						Upstream						
			Elevation	Elevation				(User	Slope			Grade	Grade			Upstream		System	Structure		Upstream	System			Capacity
			Ground	Ground	Invert	Invert	Diameter	Defined)	(Calculated)		Manning's	Line (In)	Line (Out)	Cover	Cover	Inlet Area	Upstream	Intensity	Flow (Total	System CA	Inlet Tc	Rational	Velocity		(Full Flow)
Label	Start Node	Stop Node	(Start) (ft)	(Stop) (ft)	(Start) (ft)	(Stop) (ft)	(in)	(ft)	(%)	Material	n	(ft)	(ft)	(Start) (ft)	(Stop) (ft)	(acres)	Inlet C	(in/h)	Surface) (cfs)	(acres)	(min)	Flow (cfs)	(ft/s)	Flow (cfs)	(cfs)
CO-161	INL-169	MH-167	649.64	650.23	646.64	646.36	12	14	2		0.013	648.2	648.17	2	2.87	0.437	0.63	5.88	1.63	0.276	10	1.63	2.08	1.63	5.04
CO-162	INL-166	MH-164	647.05	647.64	644.05	643.77	12	14	2		0.013	646.7	646.64	2	2.87	0.603	0.63	5.88	2.25	0.38	10	2.25	2.86	2.25	5.04
CO-163	INL-165	MH-164	647.05	647.64	644.05	643.77	12	14	2		0.013	646.69	646.64	2	2.87	0.585	0.63	5.88	2.19	0.369	10	2.19	2.78	2.19	5.04
CO-164	INL-163	MH-161	645.11	645.7	642.11	641.83	12	14	2	Concrete	0.013	644.77	644.71	2	2.87	0.628	0.63	5.88	2.35	0.396	10	2.35	2.99	2.35	5.04
CO-165	CB-162	MH-161	645.11	645.7	639.57	639.51	30	14	0.43	Concrete	0.013	644.74	644.71	3.04	3.69	0.765	0.63	3.991	2.86	4.891	10	19.67	4.01	19.67	26.78
CO-166	MH-158	MH-157	646.68	646.08	642.81	641.99	12	40.5	2.02	Concrete	0.013	644.52	644.45	2.87	3.09	(N/A)	(N/A)	5.81	0	0.26	0	1.52	1.94	1.52	5.07
CO-167	INL-159	MH-158	646.09	646.68	643.09	642.81	12	14	2	Concrete	0.013	644.53	644.52	2	2.87	0.267	0.63	5.88	1	0.168	10	1	1.27	1	5.04
CO-168	INL-160	MH-158	646.09	646.68	643.09	642.81	12	14	2	Concrete	0.013	644.52	644.52	2	2.87	0.146	0.63	5.88	0.55	0.092	10	0.55	0.69	0.55	5.04
CO-169	MH-161	MH-157	645.7	646.08	639.51	639.26	30	58.9	0.43	Concrete	0.013	644.71	644.45	3.69	4.32	(N/A)	(N/A)	3.985	0	6.828	0	27.43	5.59	27.43	26.78
CO-170	MH-171	MH-153	643.39	643.37	638.06	637.96	36	45.9	0.22	Concrete	0.013	643.14	643.11	2.33	2.41	(N/A)	(N/A)	4.284	0	3.838	0	16.57	2.34	16.57	31.13
CO-171	INL-172	MH-171	642.8	643.39	639.8	639.52	12	14	2	Concrete	0.013	643.2	643.14	2	2.87	0.657	0.63	5.88	2.45	0.414	10	2.45	3.12	2.45	5.04
CO-172	INL-173	MH-171	642.8	643.39	639.8	639.52	12	14	2	Concrete	0.013	643.2	643.14	2	2.87	0.624	0.63	5.88	2.33	0.393	10	2.33	2.97	2.33	5.04
CO-173	MH-174	MH-171	643.9	643.39	638.57	638.06	36	76.1	0.67	Concrete	0.013	643.17	643.14	2.33	2.33	(N/A)	(N/A)	4.353	0	3.032	0	13.3	1.88	13.3	54.6
CO-174	MH-175	MH-174	646.43	643.9	641.1	638.57	21	226.9	1.12	Concrete	0.013	643.98	643.17	3.58	3.58	(N/A)	(N/A)	5.574	0	1.691	0	9.5	3.95	9.5	16.73
CO-175	MH-178	MH-175	649.71	646.43	645.83	641.1	15	270.5	1.75	Concrete	0.013	646.81	643.98	2.63	4.08	(N/A)	(N/A)	5.699	0	1.013	0	5.82	7.49	5.82	8.54
CO-176	MH-181	MH-178	653.95	649.71	649.33	645.83	12	235.9	1.48	Concrete	0.013	650.01	646.81	3.62	2.88	(N/A)	(N/A)	5.842	0	0.425	0	2.5	5.72	2.5	4.34
CO-178	MH-185	MH-181	653.82	653.95	649.95	649.33	12	41.8	1.48	Concrete	0.013	650.53	650.01	2.87	3.62	(N/A)	(N/A)	5.869	0	0.317	0	1.88	5.33	1.88	4.34
CO-179	INL-186	MH-185	653.23	653.82	650.23	649.95	12	14	2	Concrete	0.013	650.68	650.53	2	2.87	0.307	0.63	5.88	1.14	0.193	10	1.14	5.2	1.14	5.04
CO-180	INL-187	MH-185	653.23	653.82	650.23	649.95	12	14	2	Concrete	0.013	650.59	650.53	2	2.87	0.197	0.63	5.88	0.74	0.124	10	0.74	4.58	0.74	5.04
CO-183	INL-179	MH-178	649.11	649.71	646.11	645.83	12	14	2	Concrete	0.013	646.78	646.81	2	2.88	0.379	0.63	5.88	1.41	0.239	10	1.41	5.5	1.41	5.04
CO-184	INL-180	MH-178	649.11	649.71	646.11	645.83	12	14	2.19		0.013	646.72 644.03	646.81	2	2.88 2.87	0.555	0.63	5.88 5.88	2.07	0.35	10	2.07	6.1 2.53	2.07	5.04
CO-185 CO-186	INL-176 INL-177	MH-175 MH-175	645.91 645.84	646.43 646.43	642.91 642.84	642.56 642.56	12 12	16 14	2.19	Concrete	0.013 0.013	644.03	643.98 643.98	2	2.87	0.532 0.543	0.63 0.63	5.88	1.99 2.03	0.335 0.342	10 10	1.99 2.03	2.58	1.99 2.03	5.27 5.04
CO-180 CO-188	INL-177	MH-188	644	645	641	639.67	12	55.9	2.38	Concrete	0.013	643.23	643.18	2	4.33	0.355	0.63	4.84	1.09	0.224	15	1.09	1.39	1.09	5.5
CO-188	MH-190	MH-188	645.3	645	641.47	639.67	18	82.2	2.19	Concrete	0.013	643.39	643.18	2.33	3.83	0.42	0.63	4.693	1.29	1.117	15	5.29	2.99	5.29	15.54
CO-189	MH-191	MH-190	646.5	645.3	642.92	641.47	15	142.8	1.02	Concrete	0.013	643.86	643.39	2.33	2.58	0.42	0.63	4.736	1.26	0.853	15	4.07	5.6	4.07	6.51
CO-191	MH-192	MH-191	647.5	646.5	644.17	642.92	12	150	0.83	Concrete	0.013	644.9	643.86	2.33	2.58	0.584	0.63	4.791	1.8	0.595	15	2.87	4.67	2.87	3.25
CO-192	INL-193	MH-192	650.4	647.5	647.4	644.17	12	150.2	2.15	Concrete	0.013	647.84	644.9	2.33	2.33	0.36	0.63	4.84	1.11	0.227	15	1.11	5.28	1.11	5.22
CO-193	MH-194	CB-162	646	645.11	639.66	639.57	30	21.9	0.43	Concrete	0.013	644.78	644.74	3.84	3.04	(N/A)	(N/A)	4.001	0	4.408	0	17.78	3.62	17.78	26.78
CO-194	MH-195	MH-194	645.5	646	640.17	639.66	30	119.4	0.43	Concrete	0.013	645.01	644.78	2.83	3.84	0.314	0.63	4.057	0.97	4.408	15	18.03	3.67	18.03	26.78
CO-195	MH-196	MH-195	646	645.5	640.87	640.17	24	75	0.93	Concrete	0.013	645.35	645.01	3.13	3.33	0.191	0.63	4.084	0.59	3.687	15	15.18	4.83	15.18	21.86
CO-196			645.9	646	641.57	640.87	24	75	0.93	Concrete		645.67	645.35	2.33	3.13	0.48	0.63	4.111	1.47	3.567	15	14.78	4.71	14.78	21.85
CO-197	MH-198	MH-197	646.8	645.9	642.72	641.57	21	150	0.77	Concrete	0.013	646.79	645.67	2.33	2.58	0.506	0.63	4.156	1.56	3.265	15	13.68	5.69	13.68	13.87
CO-198	MH-199	MH-198	648	646.8	643.92	642.72	21	150	0.8	Concrete	0.013	647.72	646.79	2.33	2.33	0.482	0.63	4.205	1.48	2.946	15	12.49	5.19	12.49	14.17
CO-199	MH-200	MH-199	649.7	648	645.62	643.92	21	150	1.13	Concrete	0.013	648.49	647.72	2.33	2.33	0.765	0.63	4.26	2.35	2.643	15	11.35	4.72	11.35	16.87
CO-200	MH-201	MH-200	652	649.7	647.92	645.62	21	257.2	0.89		0.013	649.29	648.49	2.33	2.33	0.173	0.63	4.327	0.47	2.161	20	9.42	6.58	9.42	14.98
CO-201	MH-202	MH-201	658.1	652	649.39	647.92	12	49.1	2.99	Concrete	0.013	650.19	649.29	7.71	3.08	0.337	0.63	4.761	1.03	0.733	15	3.52	8.11	3.52	6.16
CO-202	MH-203	MH-202	659.8	658.1	656.16	654	12	107.8	2	Concrete	0.013	656.84	654.5	2.64	3.1	(N/A)	(N/A)	4.79	0	0.521	0	2.51	6.42	2.51	5.04
CO-203	INL-204	MH-203	659.7	659.8	656.7	656.16	12	107.2	0.5	Concrete	0.013	657.52	656.84	2	2.64	0.827	0.63	4.84	2.54	0.521	15	2.54	3.67	2.54	2.53
CO-204	MH-205	MH-201	652.6	652	648.87	647.92	15	206.5	0.46	Concrete	0.013	651.3	649.29	2.48	2.83	1.418	0.63	4.793	4.36	1.319	15	6.37	5.19	6.37	4.38
CO-205	INL-206	MH-205	652.6	652.6	649.6	648.87	12	72.8	1	Concrete	0.013	651.55	651.3	2	2.73	0.676	0.63	4.84	2.08	0.426	15	2.08	2.65	2.08	3.57
CO-206	MH-207	MH-195	646	645.5	641.53	640.17	12	75	1.82	Concrete	0.013	645.37	645.01	3.47	4.33	0.45	0.63	4.665	1.38	0.523	15	2.46	3.13	2.46	4.81
CO-207	INL-208	MH-207	647.3	646	644.3	641.53	12	152	1.82	Concrete	0.013	645.54	645.37	2	3.47	0.38	0.63	4.84	1.17	0.24	15	1.17	1.49	1.17	4.81
CO-208	MH-212	MH-211	642.9	641.3	639.57	637.97	12	225	0.71	Concrete	0.013	640.23	638.81	2.33	2.33	0.332	0.63	4.816	1.02	0.478	15	2.32	4.22	2.32	3
CO-209	INL-213	MH-212	644.1	642.9	641.1	639.57	12	75	2.04	Concrete	0.013	641.58	640.23	2	2.33	0.426	0.63	4.84	1.31	0.269	15	1.31	5.43	1.31	5.09
CO-210	MH-215	MH-214	642.4	639.8	638.31	636.63	12	140.1	1.2	Concrete	0.013	638.81	637.33	3.09	2.17	0.234	0.63	4.793	0.72	0.293	15	1.42	4.57	1.42	3.9
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Lakewood Prairie 10-Year Storm Design

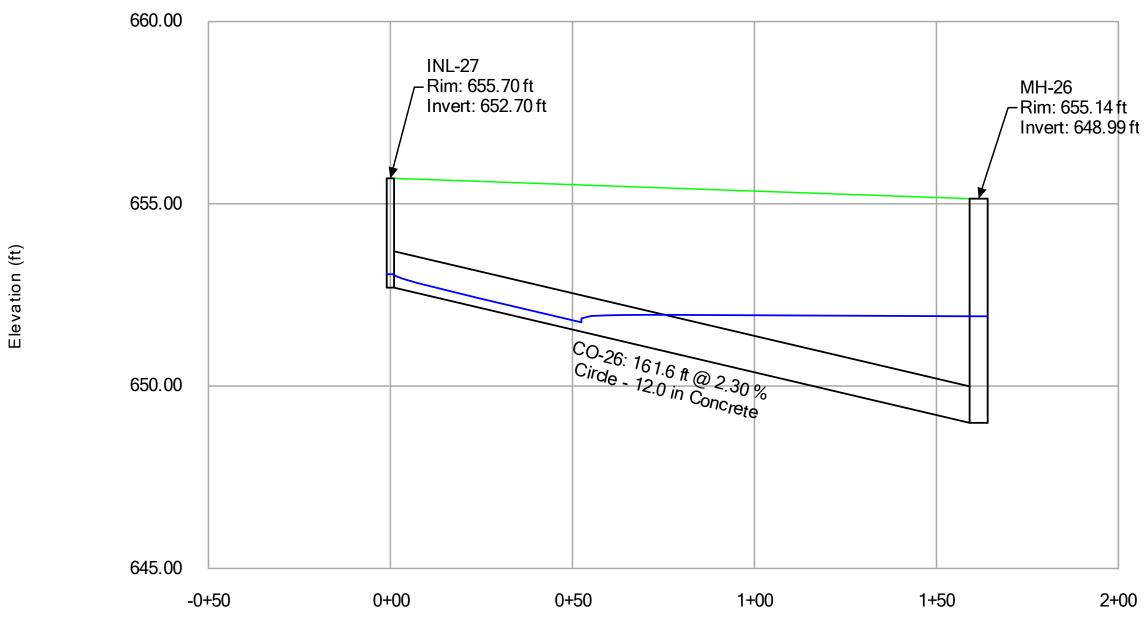
Revised: April 15, 2024

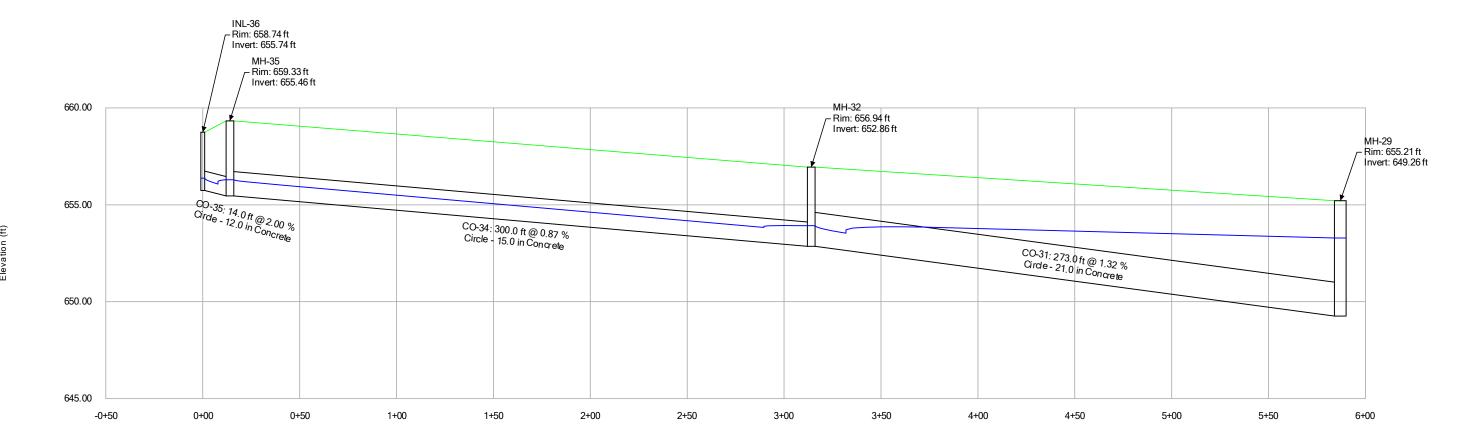
								Length				Hydraulic	Hydraulic						Upstream					1	
			Elevation	Elevation				(User	Slope			Grade	Grade			Upstream		System	Structure		Upstream	System		1	Capacity
			Ground	Ground	Invert	Invert	Diameter	Defined)	(Calculated)		Manning's	Line (In)	Line (Out)	Cover	Cover	Inlet Area	Upstream	Intensity	Flow (Total	System CA	Inlet Tc	Rational	Velocity	1	(Full Flow)
Label	Start Node	Stop Node	(Start) (ft)	(Stop) (ft)	(Start) (ft)	(Stop) (ft)	(in)	(ft)	(%)	Material	n	(ft)	(ft)	(Start) (ft)	(Stop) (ft)	(acres)	Inlet C	(in/h)	Surface) (cfs)	(acres)	(min)	Flow (cfs)	(ft/s)	Flow (cfs)	(cfs)
CO-211	INL-216	MH-215	645.3	642.4	642.3	638.31	12	140.1	2.85	Concrete	0.013	642.65	638.81	2	3.09	0.232	0.63	4.84	0.71	0.146	15	0.71	5.15	0.71	6.01
CO-214	MH-127	0-5	642.5	643.04	637.12	637.04	36	53.5	0.15	Concrete	0.013	640.23	639.54	2.38	3	0.051	0.63	3.73	0.19	15.866	10	59.66	8.44	59.66	25.89
CO-215	MH-211	0-3	641.3	636.92	637.97	634.1	12	155.5	2.49	Concrete	0.013	638.81	634.71	2.33	1.82	0.538	0.63	4.725	1.65	0.817	15	3.89	7.72	3.89	5.62
CO-217	MH-1	0-6	638.75	636.9	632.92	630.9	42	300.3	0.67	Concrete	0.013	637.37	634.01	2.33	2.5	(N/A)	(N/A)	4.158	0	24.676	0	103.42	10.75	103.42	82.51
CO-218	MH-111	0-7	660.77	662.22	656.72	656.37	18	77	0.45	Concrete	0.013	658.96	657.72	2.55	4.35	(N/A)	(N/A)	4.588	0	2.782	0	12.87	7.28	12.87	7.08
CO-220	INL-EX	MH-102	660.14	657.7	656.34	653.37	12	53.9	5.51	Concrete	0.013	673.66	657.36	2.8	3.33	5.02	0.8	4.84	19.59	4.016	15	19.59	24.95	19.59	8.36
CO-221	MH-188	MH-174	645	643.9	639.67	638.57	36	152	0.72	Concrete	0.013	643.18	643.17	2.33	2.33	(N/A)	(N/A)	4.646	0	1.341	0	6.28	0.89	6.28	56.74
CO-222	MH-94A	MH-94	651.7	652	647.62	647.45	21	70	0.24	Concrete	0.013	650.21	650.04	2.33	2.8	0.459	0.63	4.662	1.41	1.674	15	7.87	3.27	7.87	7.81
CO-223	MH-95	MH-94A	652.3	651.7	648.22	647.62	18	140	0.43	Concrete	0.013	650.77	650.21	2.58	2.58	0.539	0.63	4.727	1.66	1.385	15	6.6	3.73	6.6	6.88
CO-225	MH-209B	0-9	654.83	655.15	651.03	651.05	15	28.7	-0.07	Concrete	0.013	651.91	651.69	2.55	2.85	0.316	0.63	5.831	1.18	0.433	10	2.55	2.07	2.55	1.7
CO-227	MH-210C	0-2	653.64	653.91	650.3	649.81	12	47.9	1.02	Concrete	0.013	650.89	650.33	2.34	3.1	0.035	0.63	4.748	0.13	0.401	10	1.92	4.66	1.92	3.6
CO-99(1)	INL-99	MH-98A	656.1	654.9	653.1	650.88	12	82.9	2.68	Concrete	0.013	653.89	653.89	2	3.02	0.103	0.63	4.84	0.32	0.065	15	0.32	3.97	0.32	5.84
CO-99(2)	MH-98A	MH-98	654.9	654.9	650.88	649.82	12	39.3	2.68	Concrete	0.013	653.89	653.86	3.02	4.08	0.206	0.63	4.804	0.63	0.194	15	0.94	1.2	0.94	5.84
CO-228	MH-29	MH-26	655.21	655.14	649.26	648.99	30	183.1	0.15	Concrete	0.013	653.28	651.91	3.45	3.65	(N/A)	(N/A)	4.55	0	7.73	0	35.45	7.22	35.45	15.75
CO-229	INL-184	MH-181	653.28	653.95	650.28	649.98	12	14.7	2.04	Concrete	0.013	650.61	650.22	2	2.97	0.171	0.63	5.88	0.64	0.108	10	0.64	4.42	0.64	5.09
CO-146(1)	MH-136	CB-130	644.1	642.73	638.88	638.4	18	146	0.33	Concrete	0.013	642.16	641.27	3.72	2.83	(N/A)	(N/A)	4.605	0	1.767	0	8.2	4.64	8.2	6.02
CO-146(2)	CB-130	MH-129	642.73	643.32	638.4	638.1	18	14	2.11	Concrete	0.013	641.27	641.15	2.83	3.72	0.6	0.63	4.551	2.24	2.145	10	9.84	5.57	9.84	15.26
CO-126(1)	MH-129	CB-131	643.32	642.73	638.1	637.81	18	14	2.11	Concrete	0.013	641.15	640.93	3.72	3.42	(N/A)	(N/A)	4.546	0	2.875	0	13.18	7.46	13.18	15.26
CO-126(2)	CB-131	MH-128	642.73	643.6	637.81	637.23	24	27.4	2.11	Concrete	0.013	640.93	640.81	2.92	4.37	0.607	0.63	4.543	2.27	3.257	10	14.92	4.75	14.92	32.87
CO-230	MH-128	MH-127	643.6	642.5	637.23	637.12	36	72.1	0.15	Concrete	0.013	640.81	640.23	3.37	2.38	(N/A)	(N/A)	3.745	0	15.834	0	59.77	8.46	59.77	25.89
CO-47(1)	MH-47	MH-46A	651.7	650.7	648.12	647.12	15	152.8	0.65	Concrete	0.013	649.48	648.53	2.33	2.33	0.263	0.63	4.726	0.81	1.065	15	5.08	4.14	5.08	5.23
CO-47(2)	MH-46A	MH-46	650.7	649.6	647.12	645.57	15	154.6	1	Concrete	0.013	648.53	647.27	2.33	2.78	0.278	0.63	4.663	0.86	1.241	15	5.83	4.75	5.83	6.47
CO-231	MH-46	MH-44	649.6	649	645.57	644.7	18	145	0.6	Concrete	0.013	647.27	646.7	2.53	2.8	0.278	0.63	4.607	0.86	1.416	15	6.58	3.72	6.58	8.14
CO-232	INL-210	CB-210A	652.97	652.97	650.51	650.37	12	28	0.5	Concrete	0.013	650.99	650.98	1.46	1.6	0.186	0.63	5.88	0.69	0.117	10	0.69	2.74	0.69	2.52
CO-233	CB-210A	MH-210C	652.97	653.64	650.37	650.3	12	13.1	0.53	Concrete	0.013	650.98	650.89	1.6	2.34	0.192	0.63	4.755	0.72	0.38	10	1.82	3.59	1.82	2.6
CO-234	INL-210B	CB-210A	653.6	652.97	651.1	650.37	12	138.9	0.53	Concrete	0.013	651.45	650.98	1.5	1.6	0.225	0.63	4.84	0.69	0.142	15	0.69	2.79	0.69	2.58
CO-235	MH-133	MH-129	648.88	643.32	645.03	638.1	12	299	2.32	Concrete	0.013	645.9	641.15	2.85	4.22	(N/A)	(N/A)	5.872	0	0.73	0	4.32	7.67	4.32	5.42
CO-224(1)	INL-209	CB-209A	654.1	654.1	651.27	651.12	15	30	0.5	Concrete	0.013	651.91	651.91	1.58	1.73	0.184	0.63	5.88	0.69	0.116	10	0.69	2.68	0.69	4.57
CO-224(2)	CB-209A	MH-209B	654.1	654.83	651.12	651.03	15	11.3	0.8	Concrete	0.013	651.91	651.91	1.73	2.55	0.188	0.63	5.841	0.7	0.234	10	1.38	3.86	1.38	5.77
CO-236	MH-21	MH-17	654.08	652.96	648.1	646.63	30	159.9	0.92	Concrete	0.013	650.65	649.26	3.48	3.83	(N/A)	(N/A)	4.473	0	8.473	0	38.2	7.78	38.2	39.33
CO-216(1)	MH-214	MH-214A	639.8	639.2	636.63	636.28	12	69.9	0.5	Concrete	0.013	637.33	637.06	2.17	1.92	0.234	0.63	4.741	0.72	0.44	15	2.1	3.59	2.1	2.52
CO-216(2)	MH-214A	0-4	639.2	639.65	636.28	635.92	12	71	0.51	Concrete	0.013	637.06	636.59	1.92	2.73	0.117	0.63	4.708	0.36	0.514	15	2.44	3.68	2.44	2.54
CO-237	MH-106	MH-113	664.5	660.9	657.57	657.09	15	114.8	0.42	Concrete	0.013	659.57	659.24	5.68	2.56	(N/A)	(N/A)	4.683	0	0.735	0	3.47	2.83	3.47	4.16

Profile Report
Engineering Profile - INL-25 to MH-22 (FINAL.stsw)

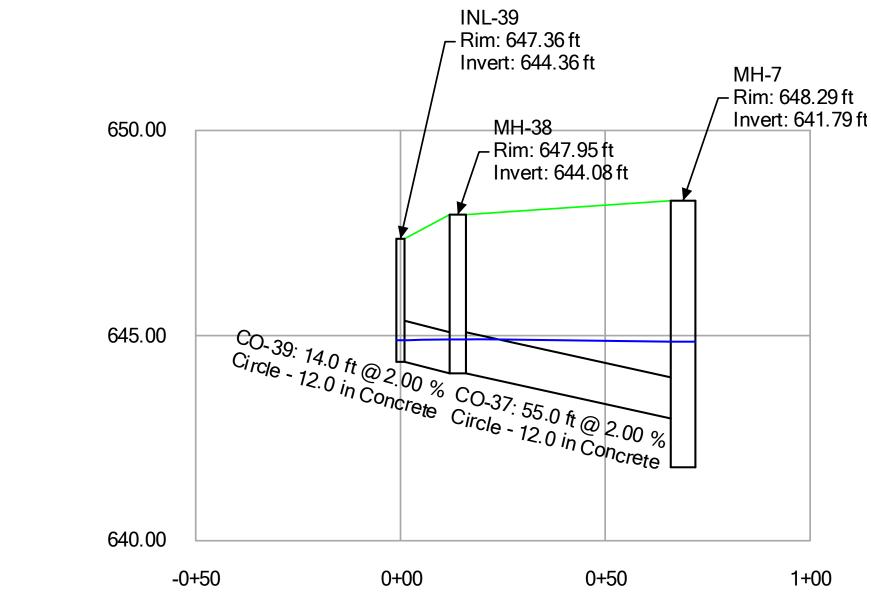


Profile Report
Engineering Profile - INL-27 to MH-26 (FINAL.stsw)



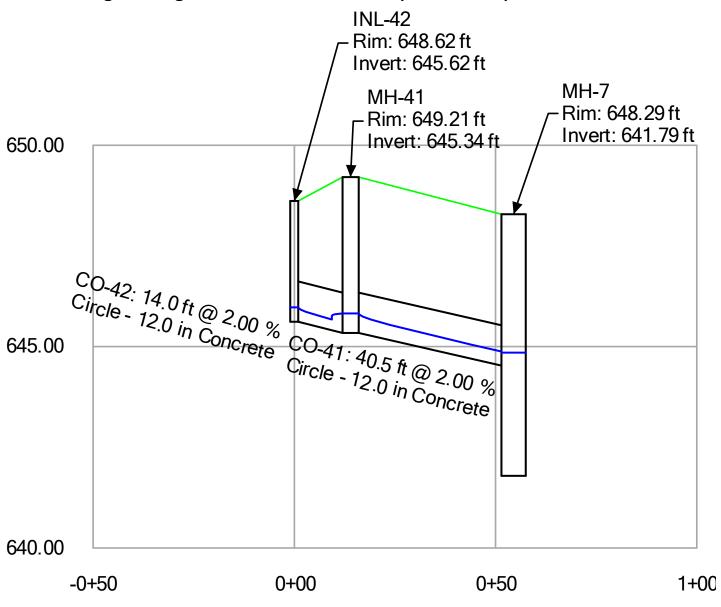


Profile Report Engineering Profile - INL-39 to MH-7 (FINAL.stsw)



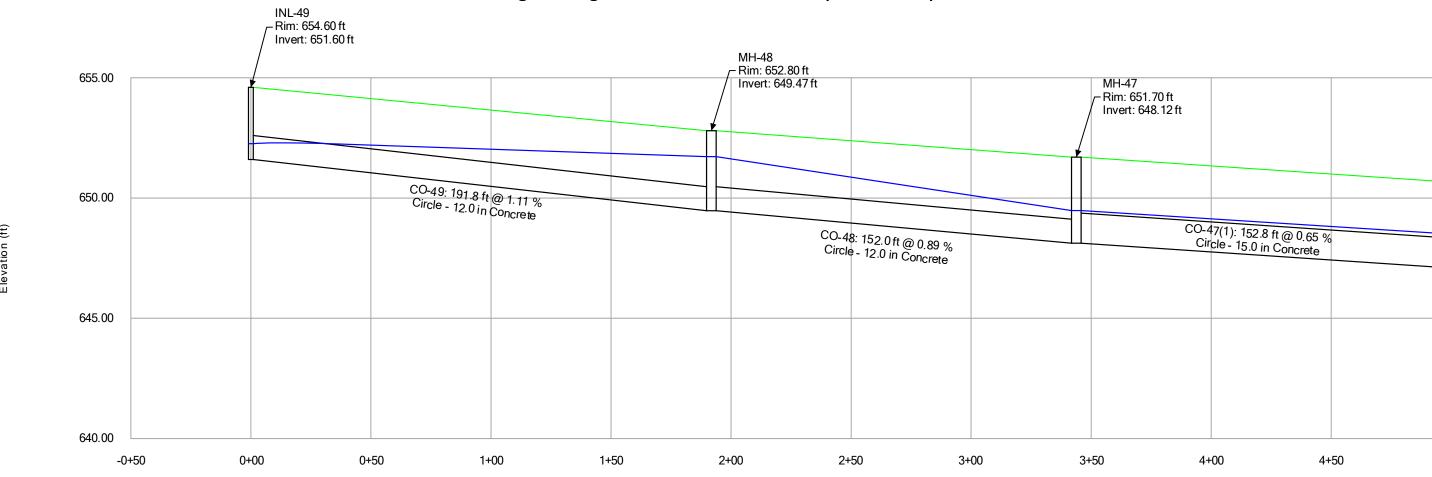
Elevation (ft)

Profile Report
Engineering Profile - INL-42 to MH-7 (FINAL.stsw)



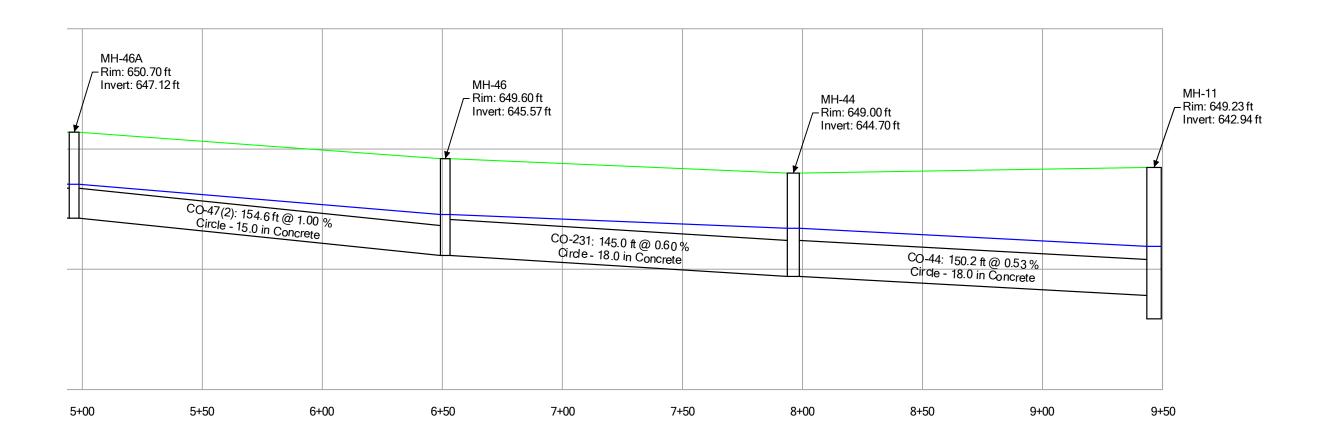
Elevation (ft)

Profile Report Engineering Profile - INL-49 to MH-11 (FINAL.stsw)

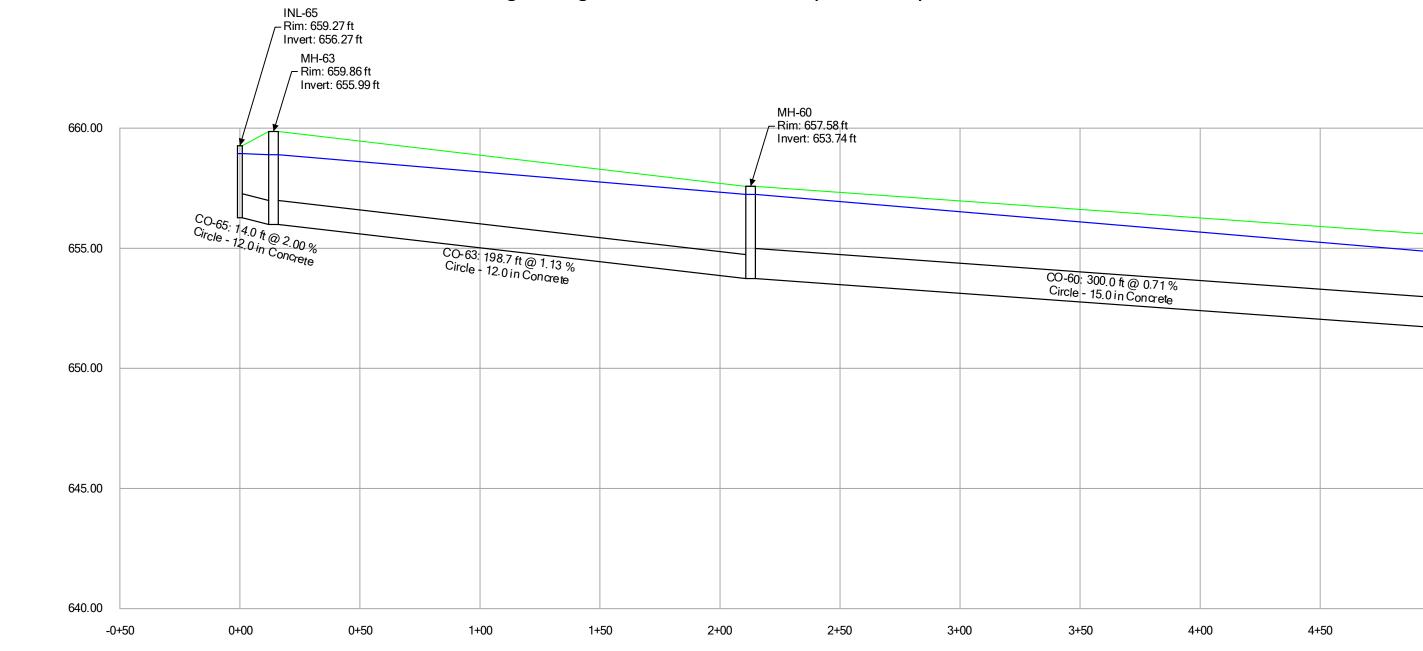


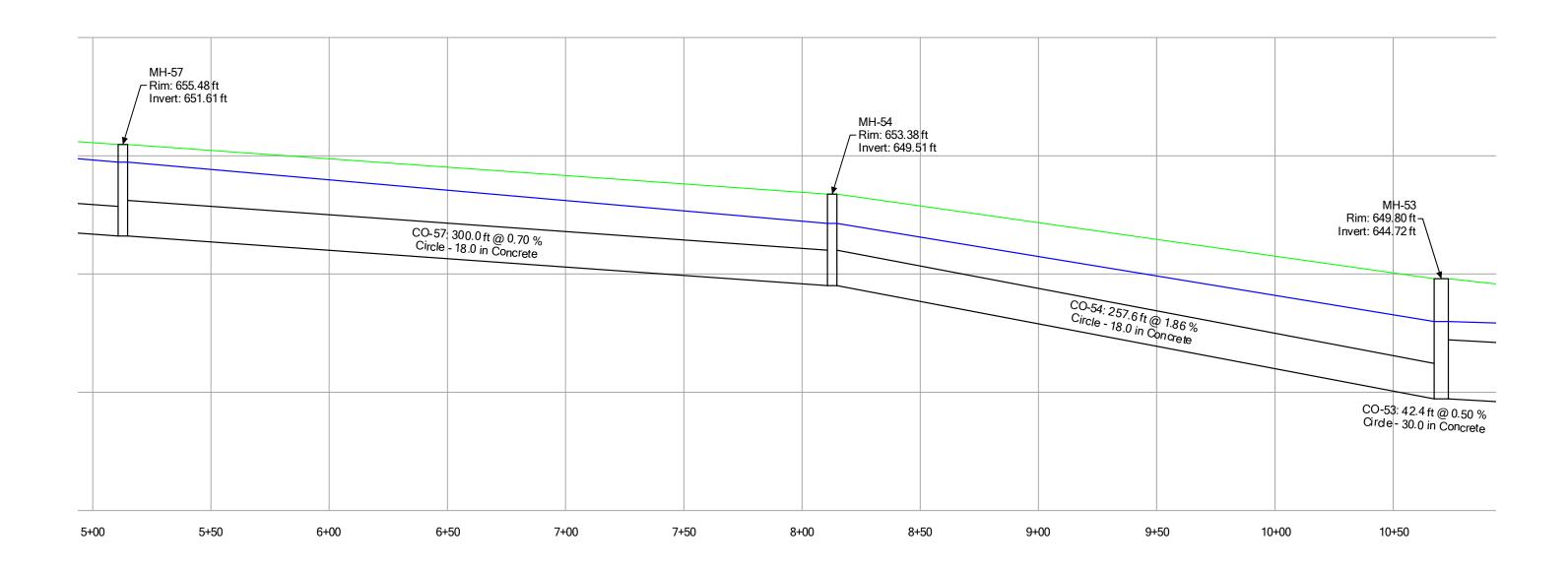
Station (ft)

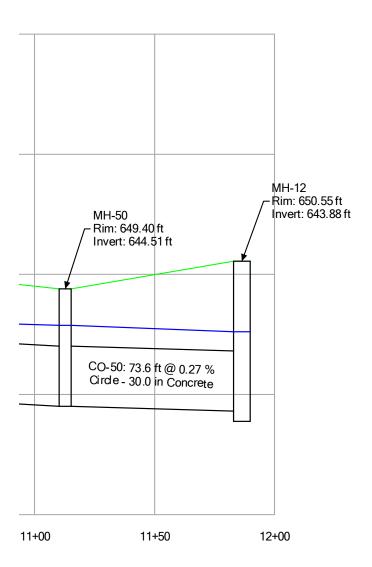
StormCAD [10.03.04.53] Page 1 of 2



Profile Report
Engineering Profile - INL-65 to MH-12 (FINAL.stsw)

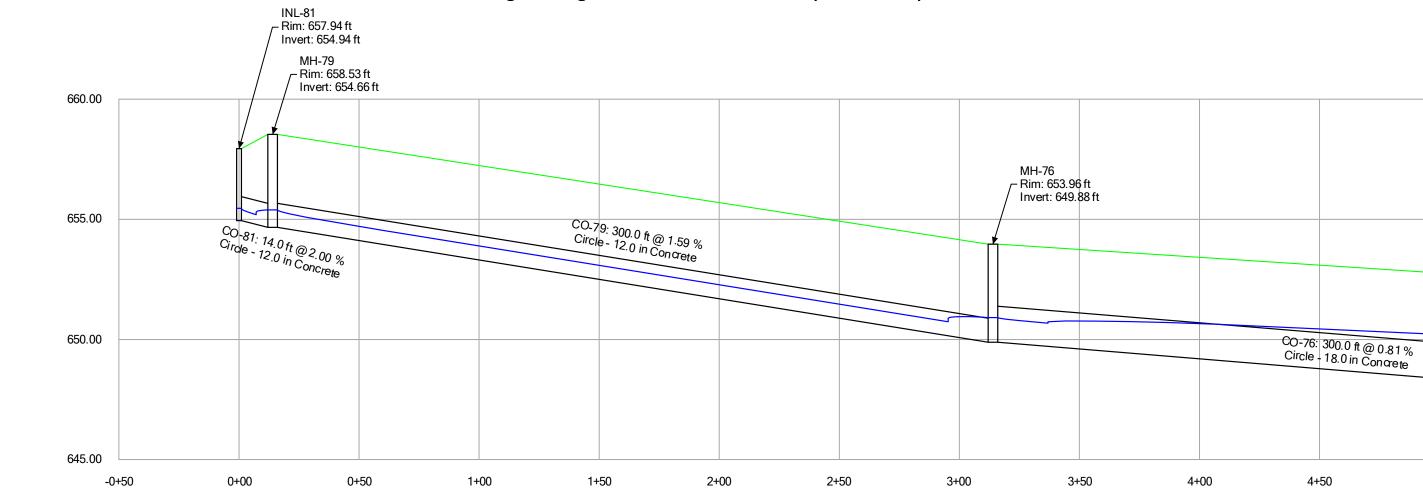


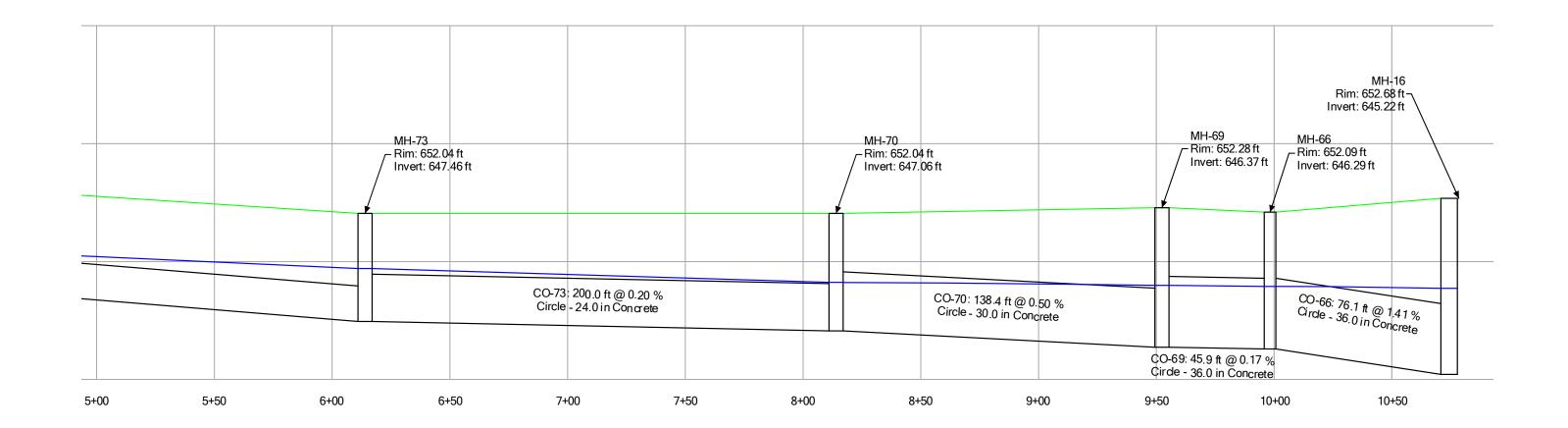




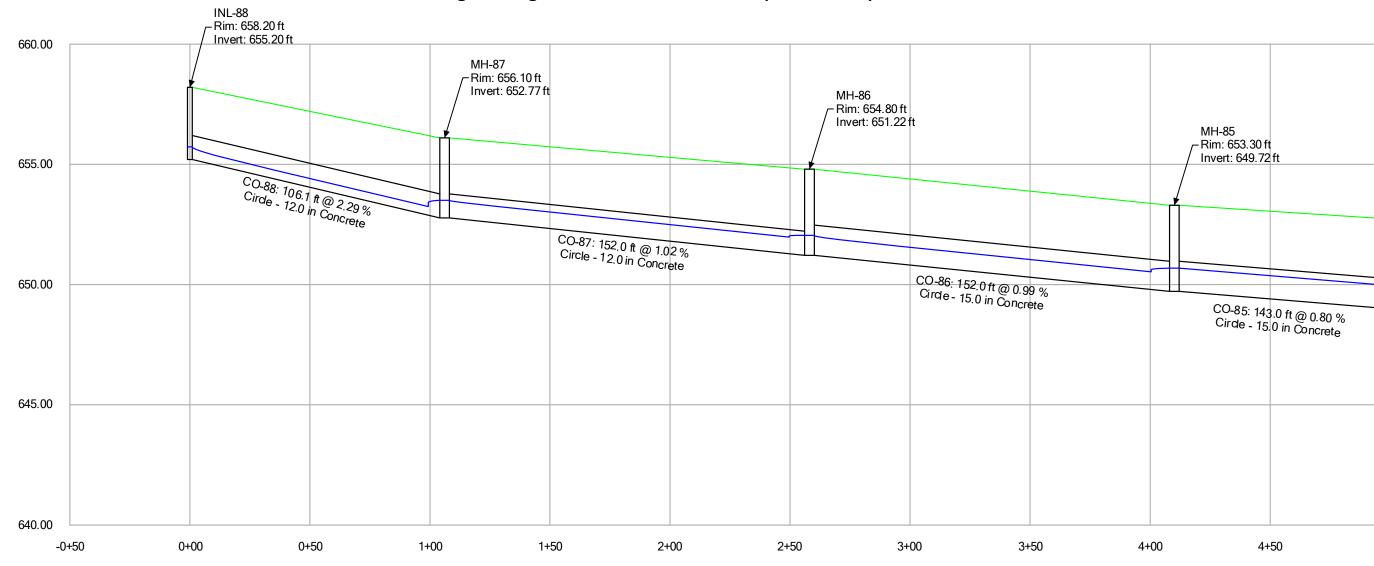
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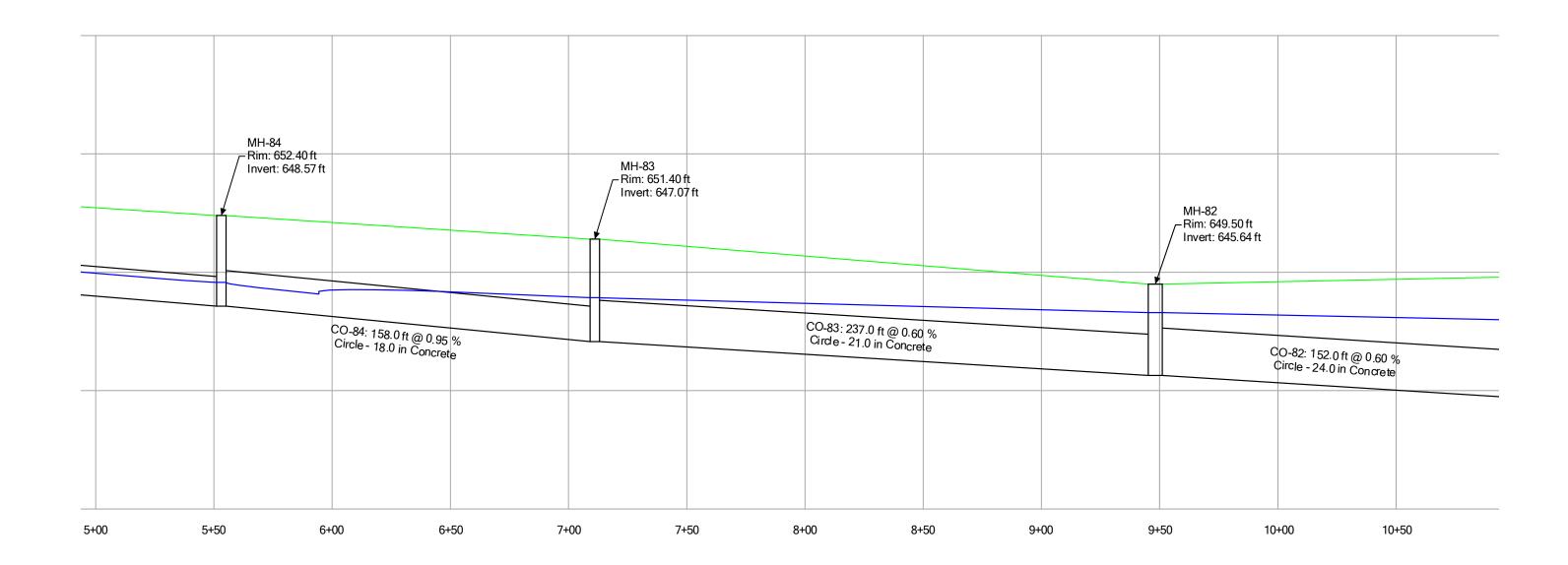
Profile Report Engineering Profile - INL-81 to MH-16 (FINAL.stsw)

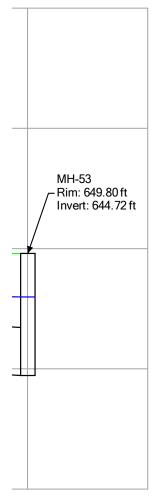




Profile Report
Engineering Profile - INL-88 to MH-53 (FINAL.stsw)

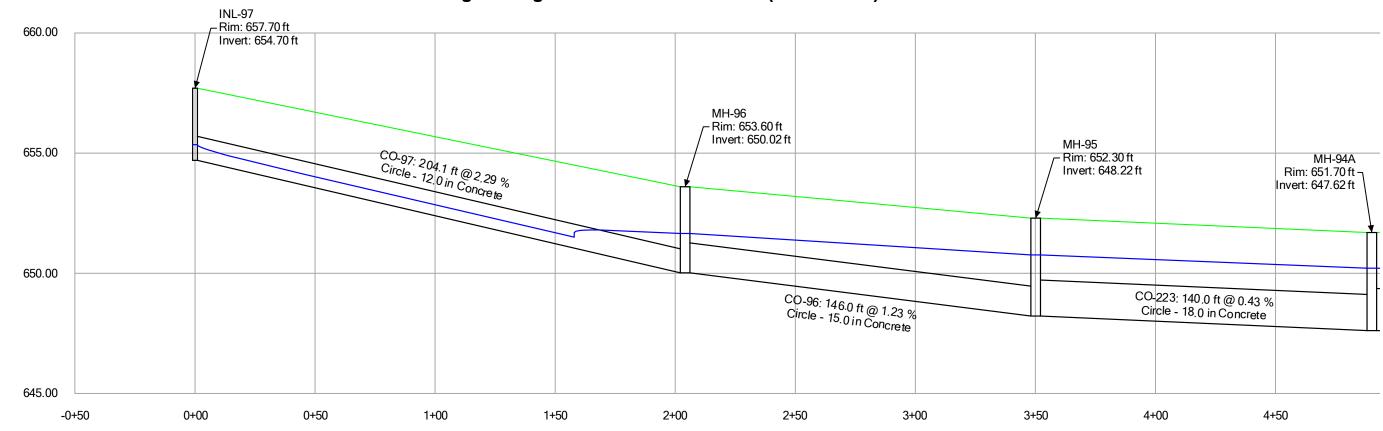


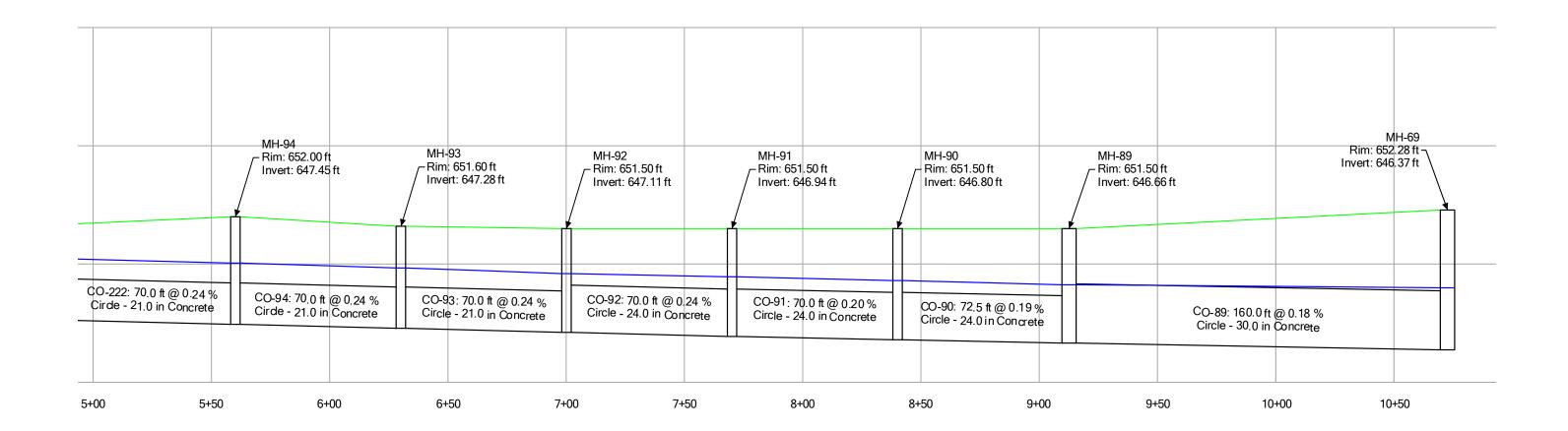




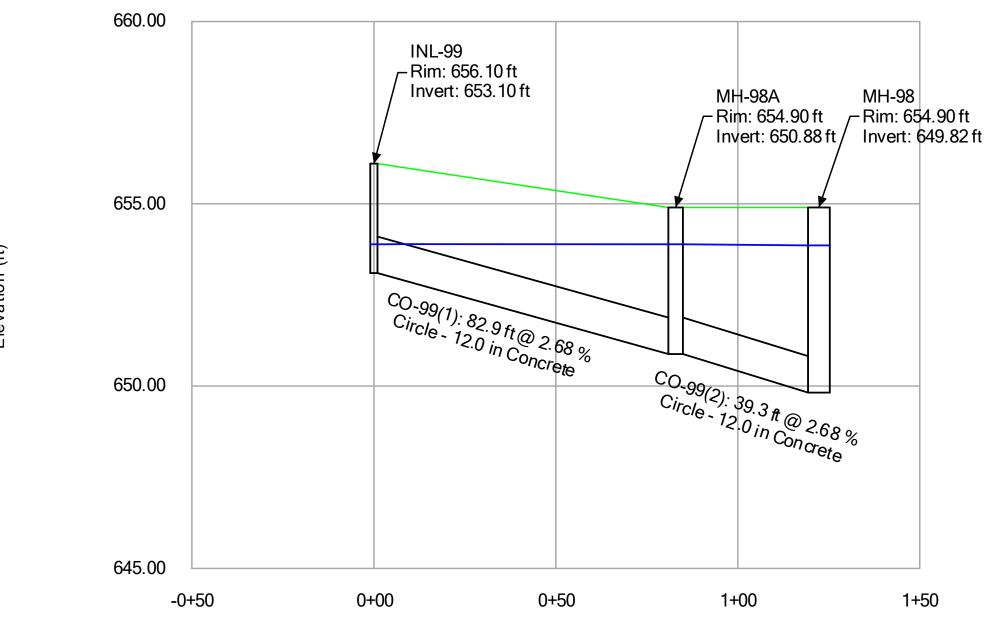
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Profile Report Engineering Profile - INL-97 to MH-69 (FINAL.stsw)

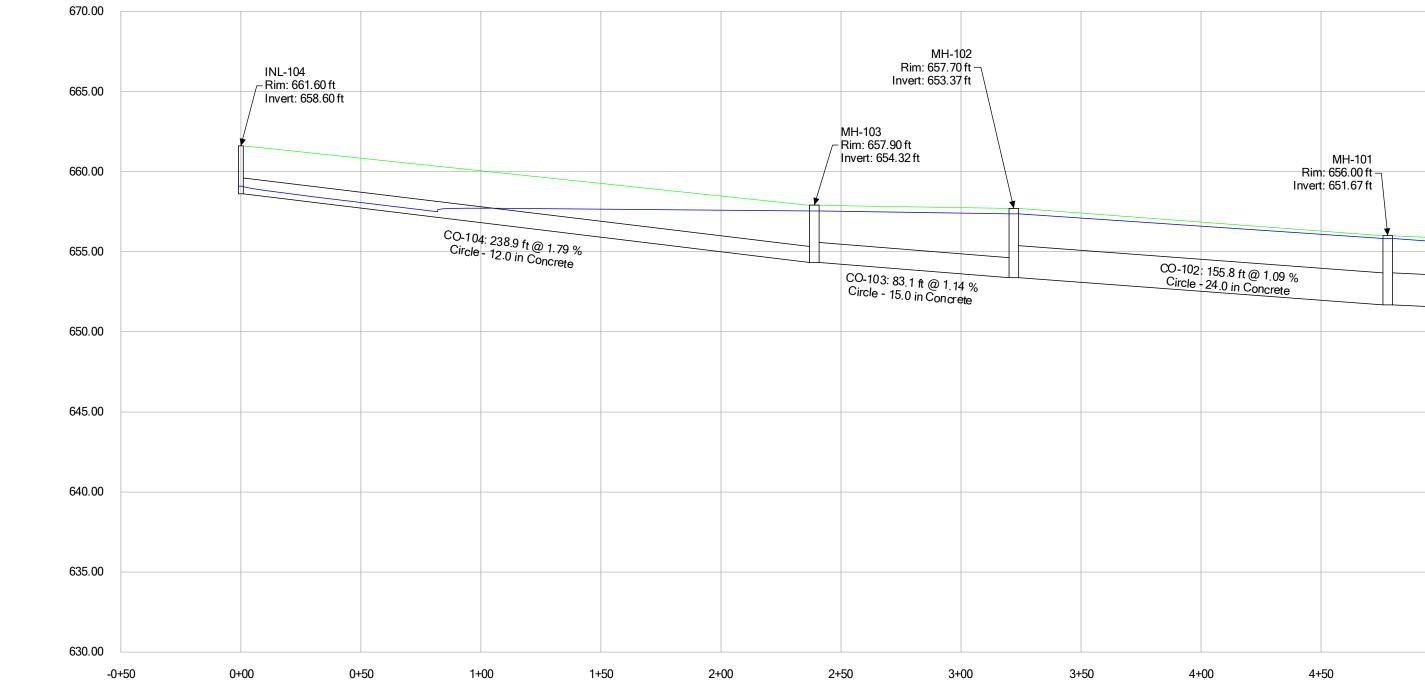


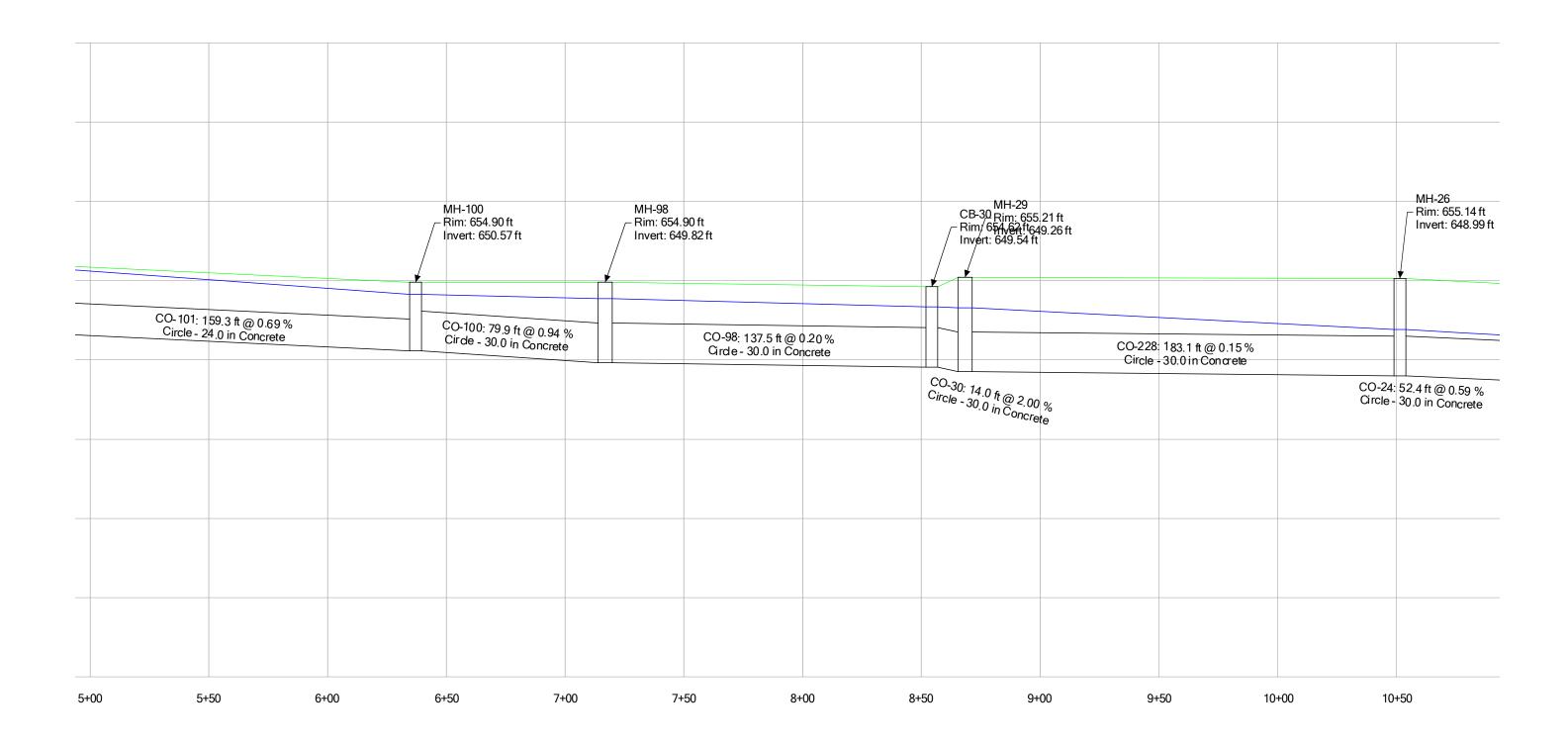


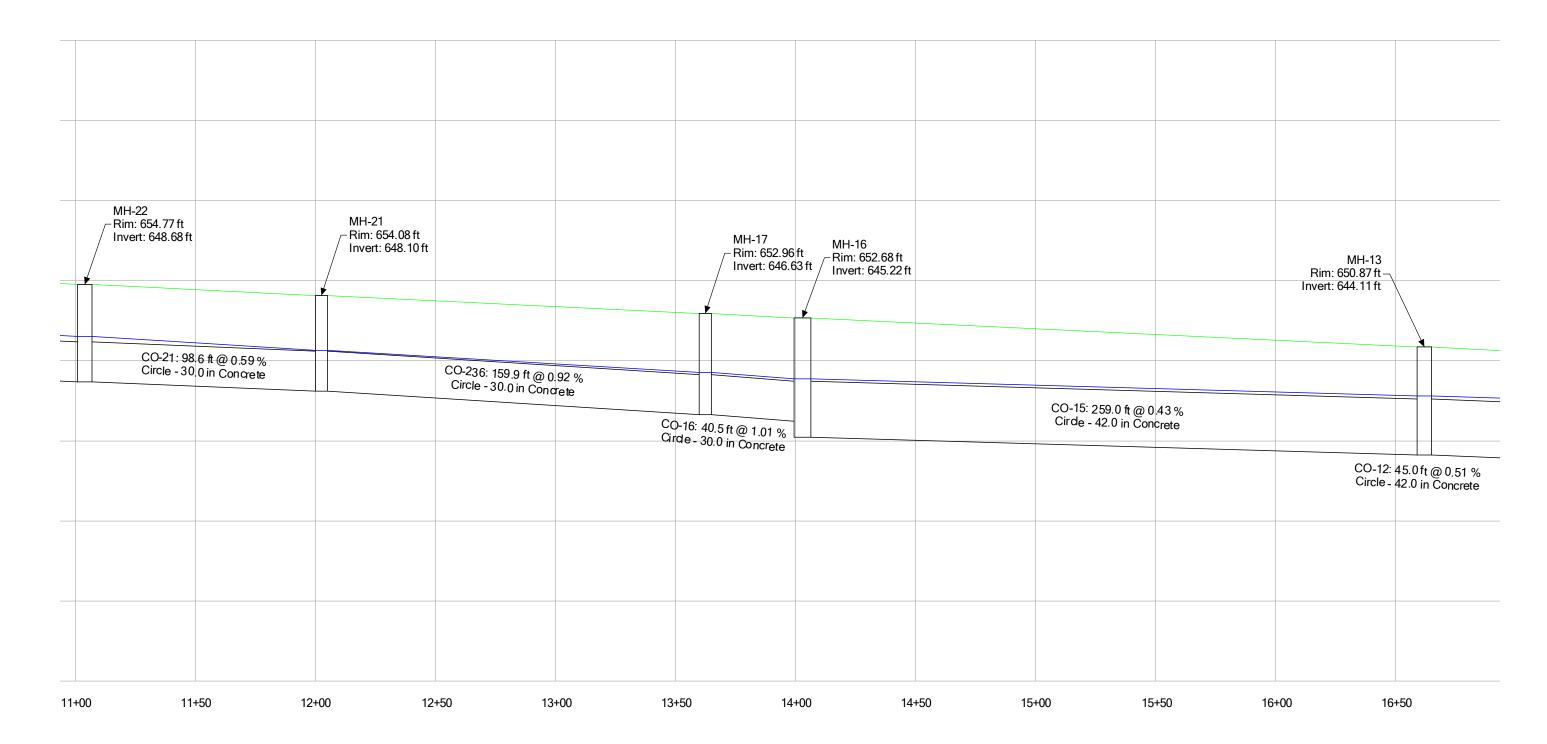
Profile Report
Engineering Profile - INL-99 to MH-98 (FINAL.stsw)

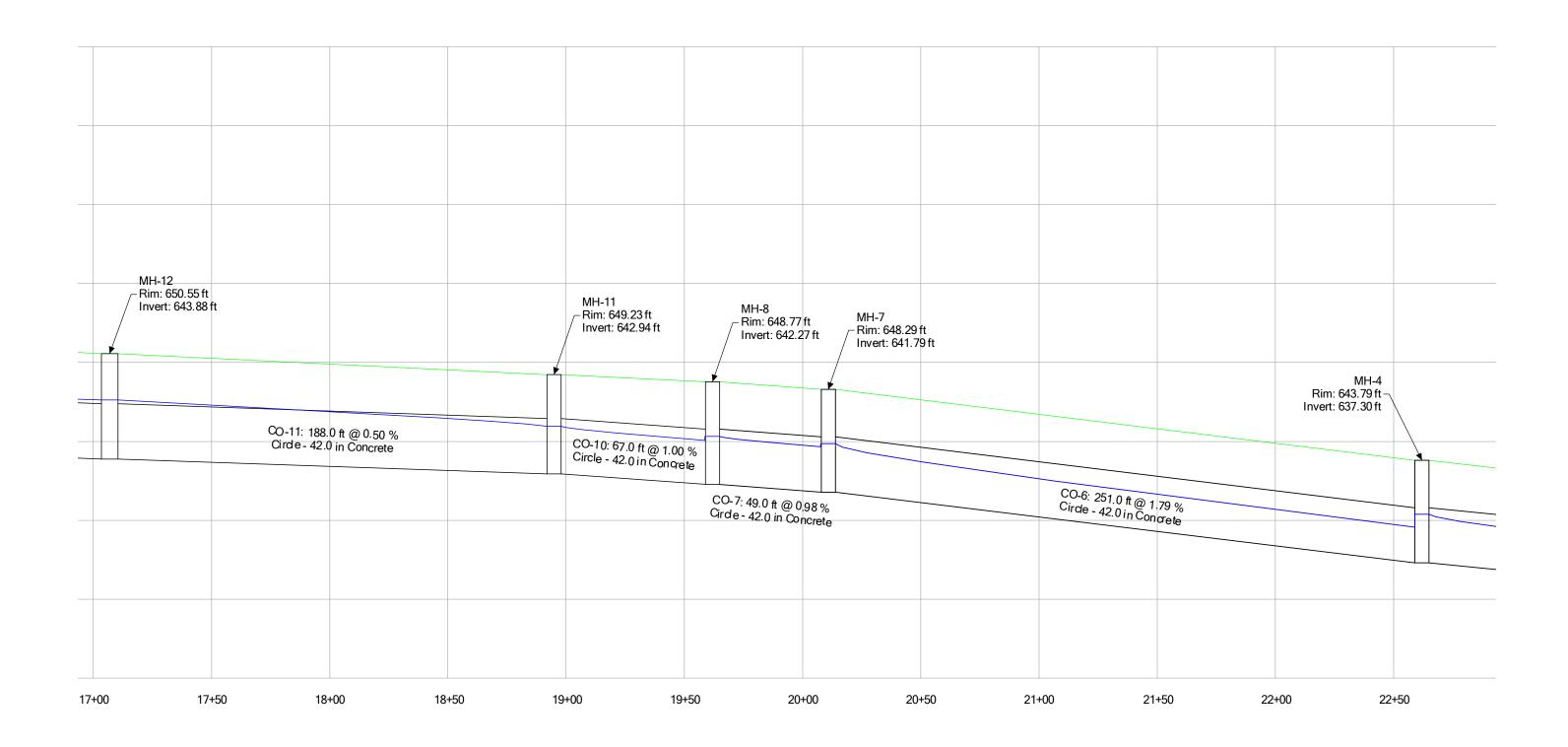


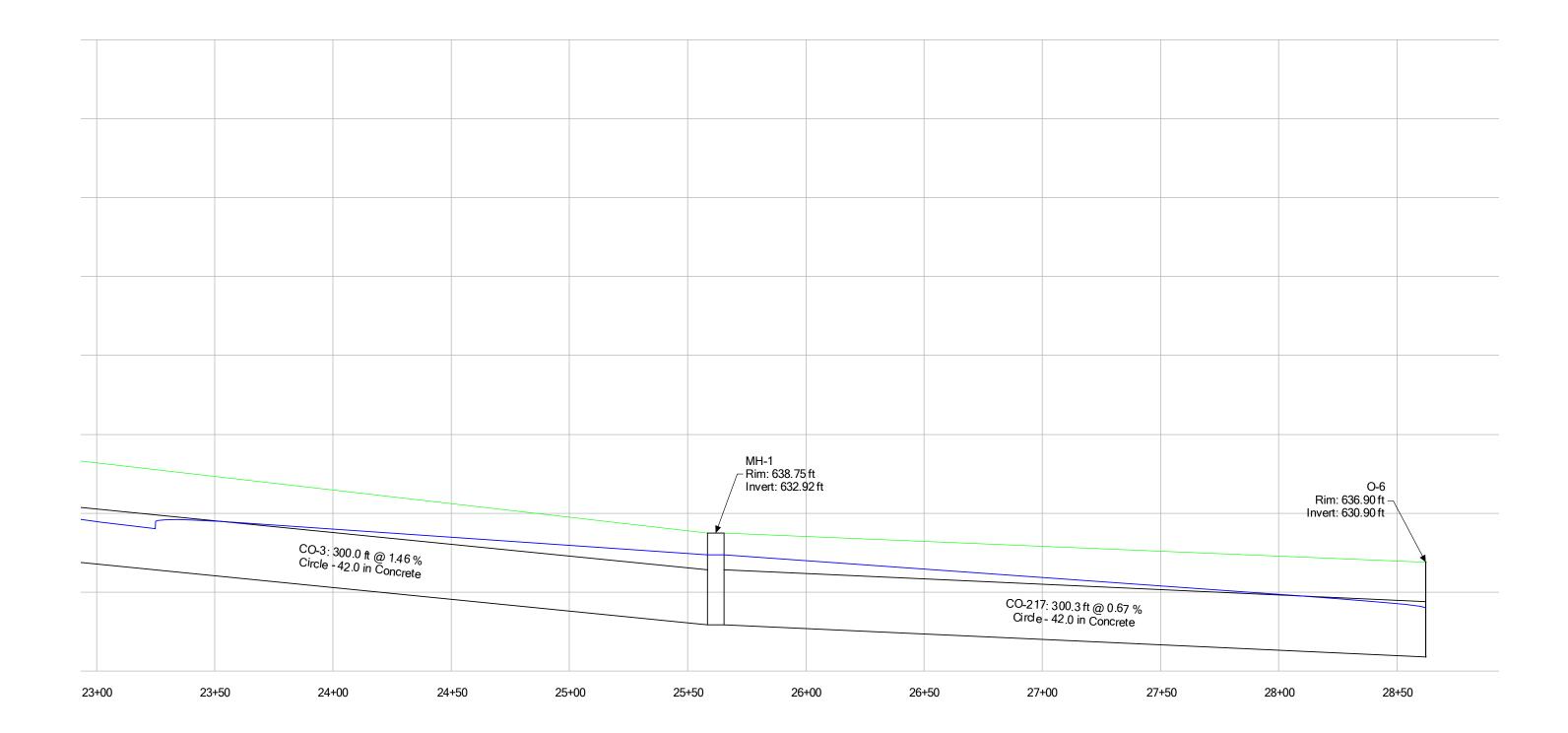
Profile Report
Engineering Profile - INL-104 to O-6 (FINAL.stsw)

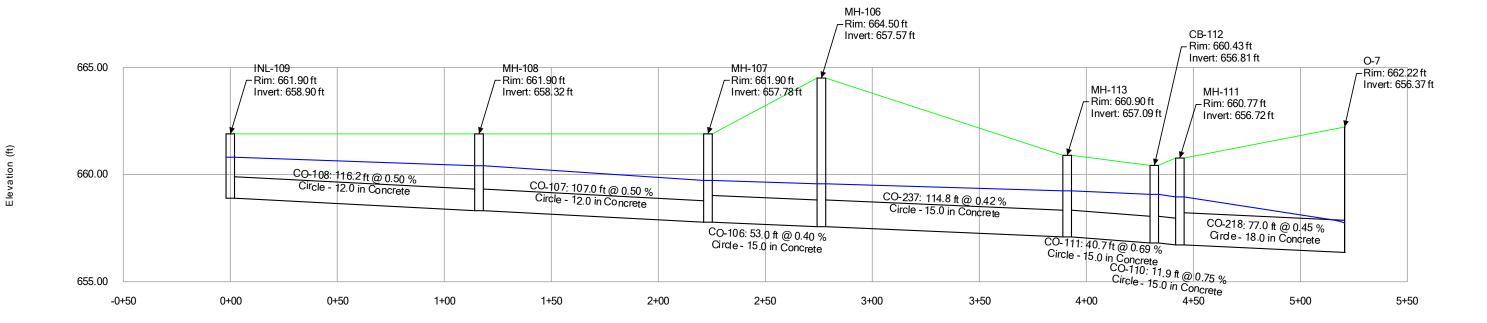




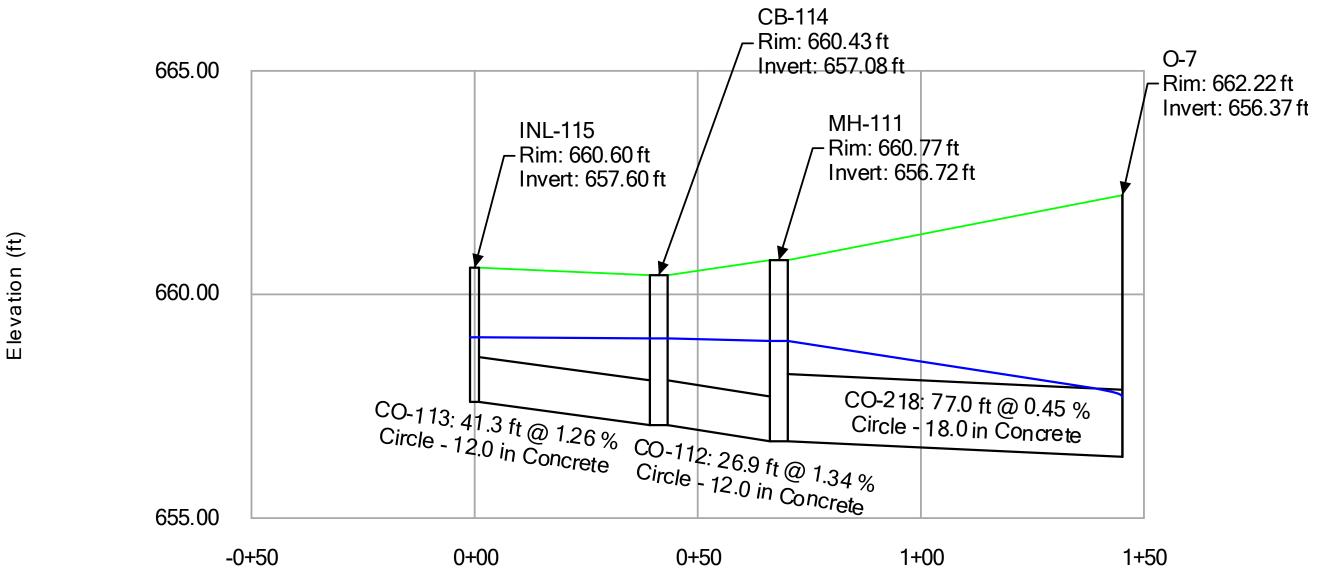




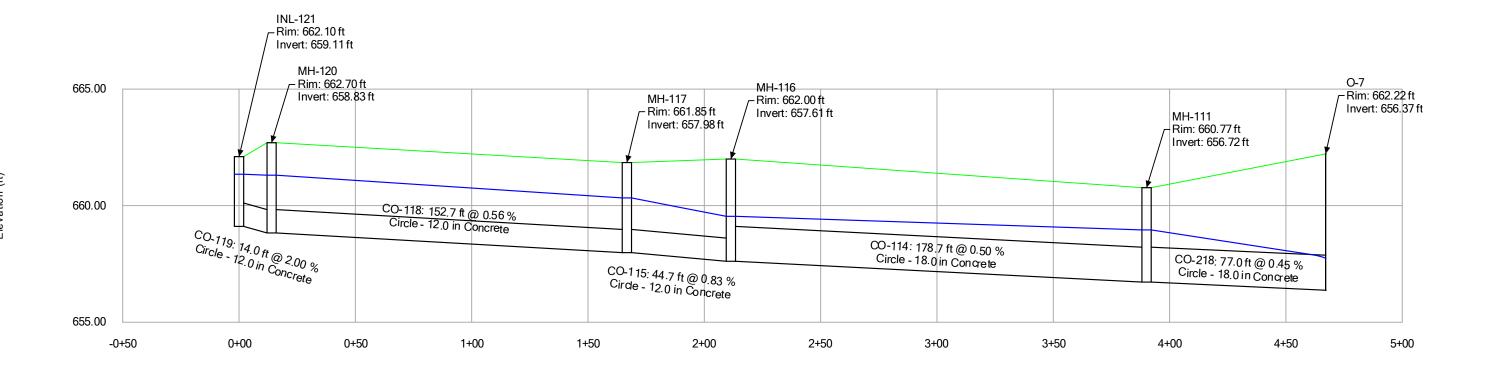




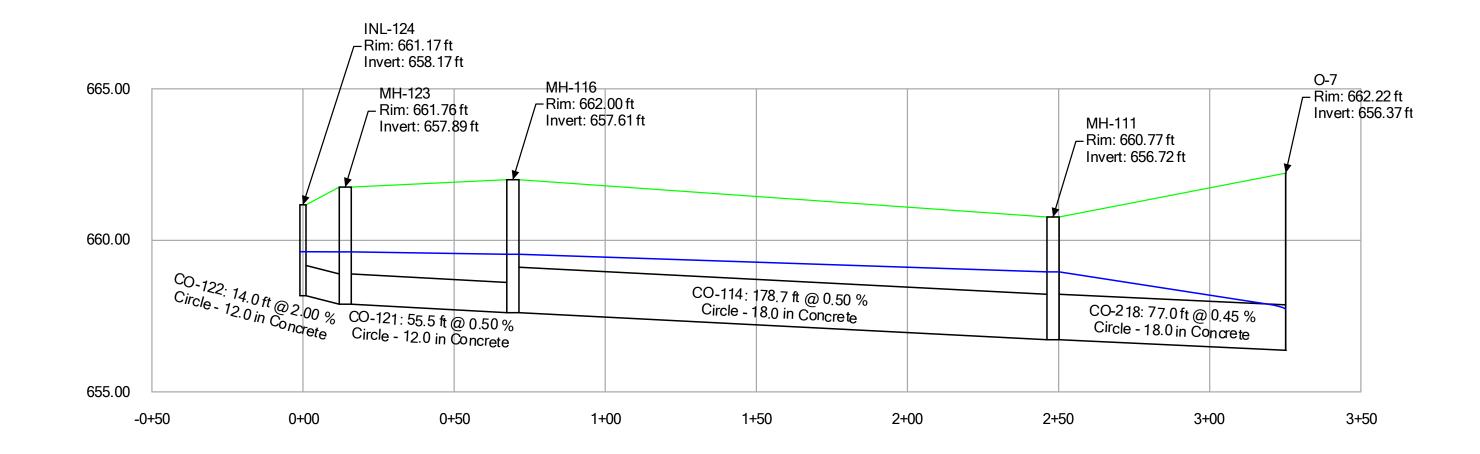
Profile Report
Engineering Profile - INL-115 to O-7 (FINAL.stsw)



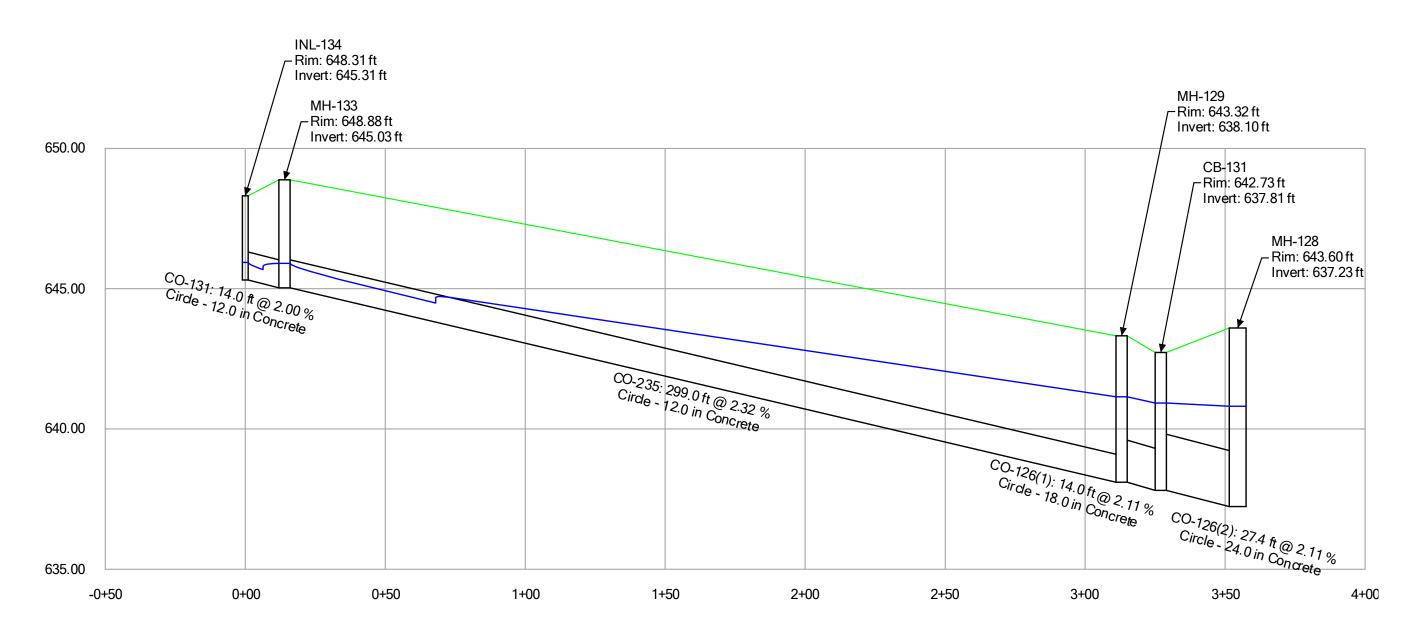
Profile Report Engineering Profile - INL-121 to O-7 (FINAL.stsw)



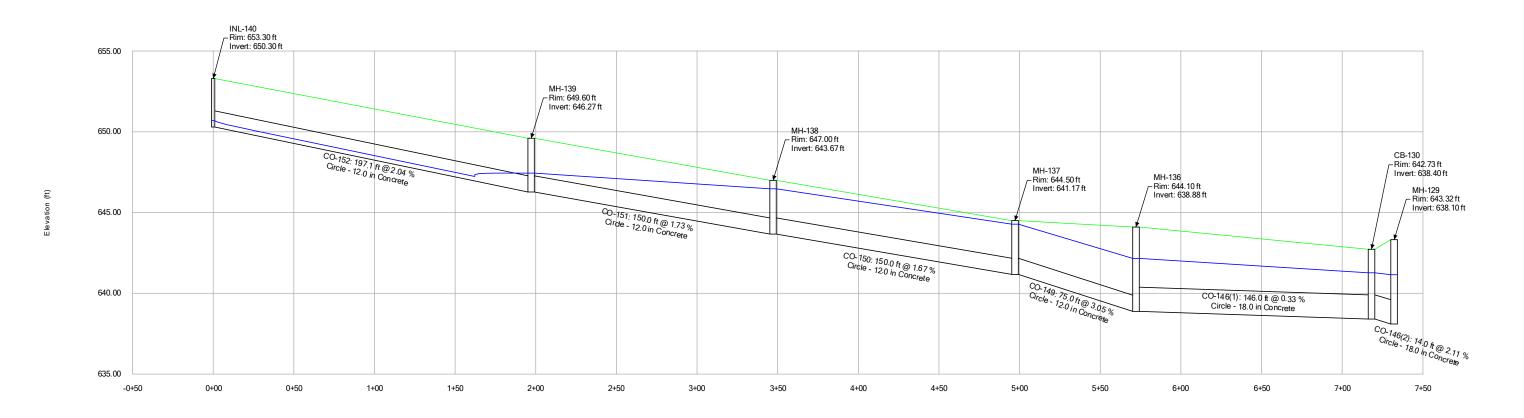
Profile Report Engineering Profile - INL-124 to O-7 (FINAL.stsw)



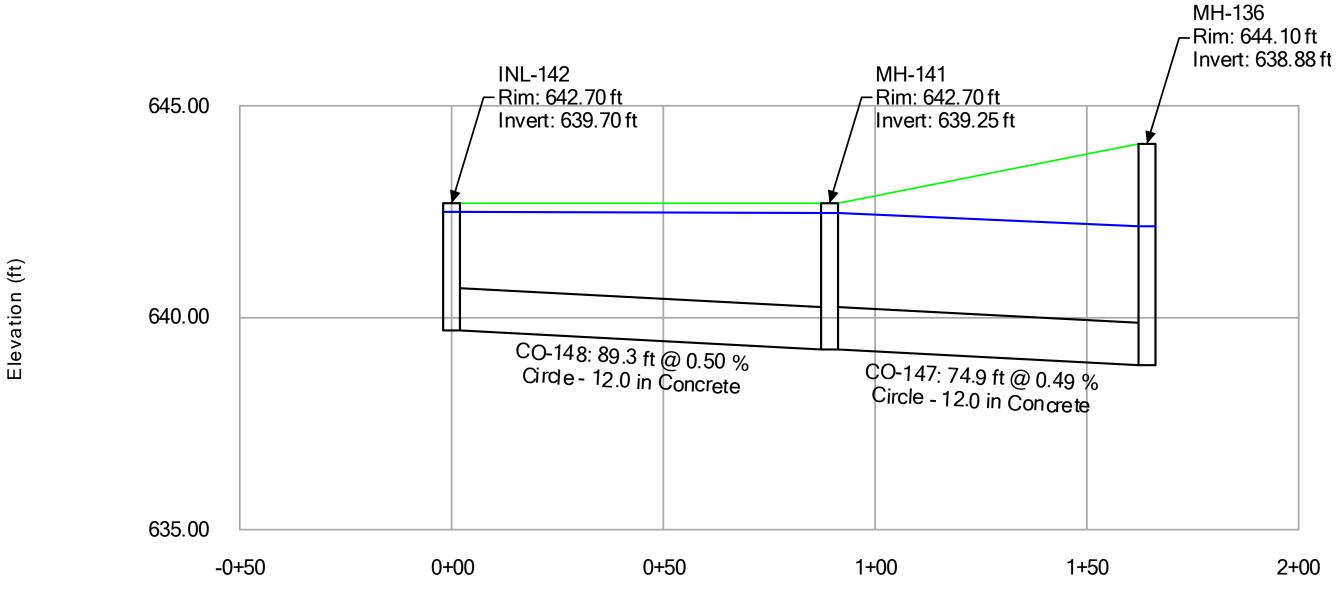
Profile Report Engineering Profile - INL-134 to MH-128 (FINAL.stsw)



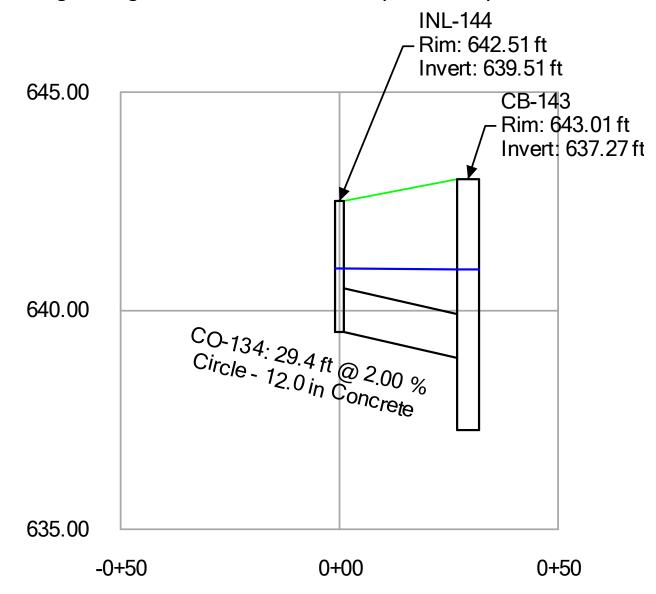
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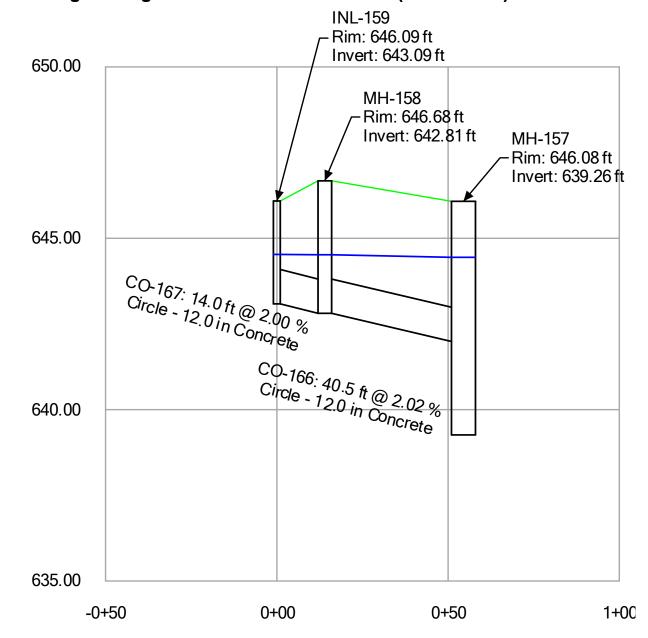
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Profile Report
Engineering Profile - INL-144 to CB-143 (FINAL.stsw)

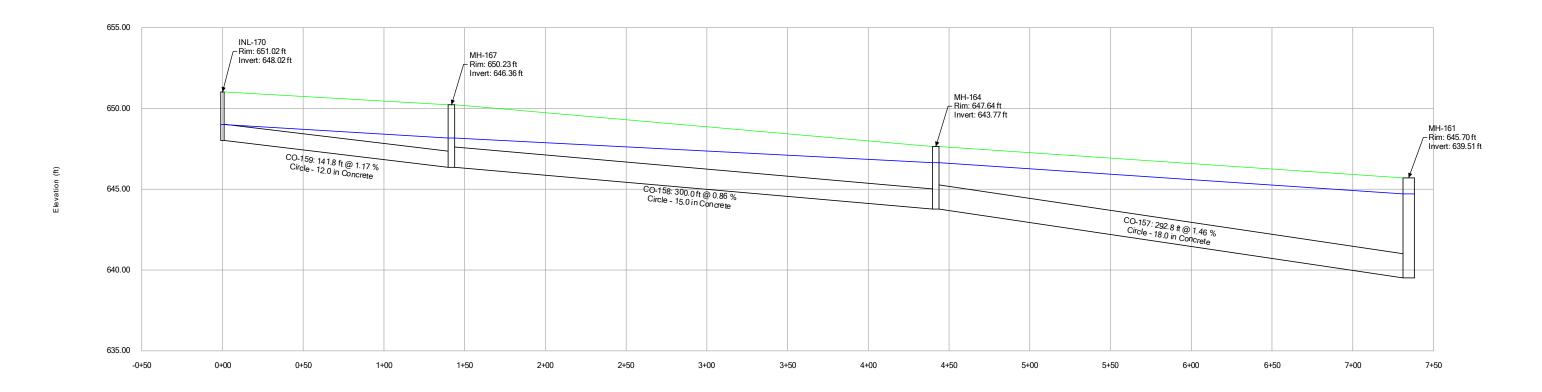


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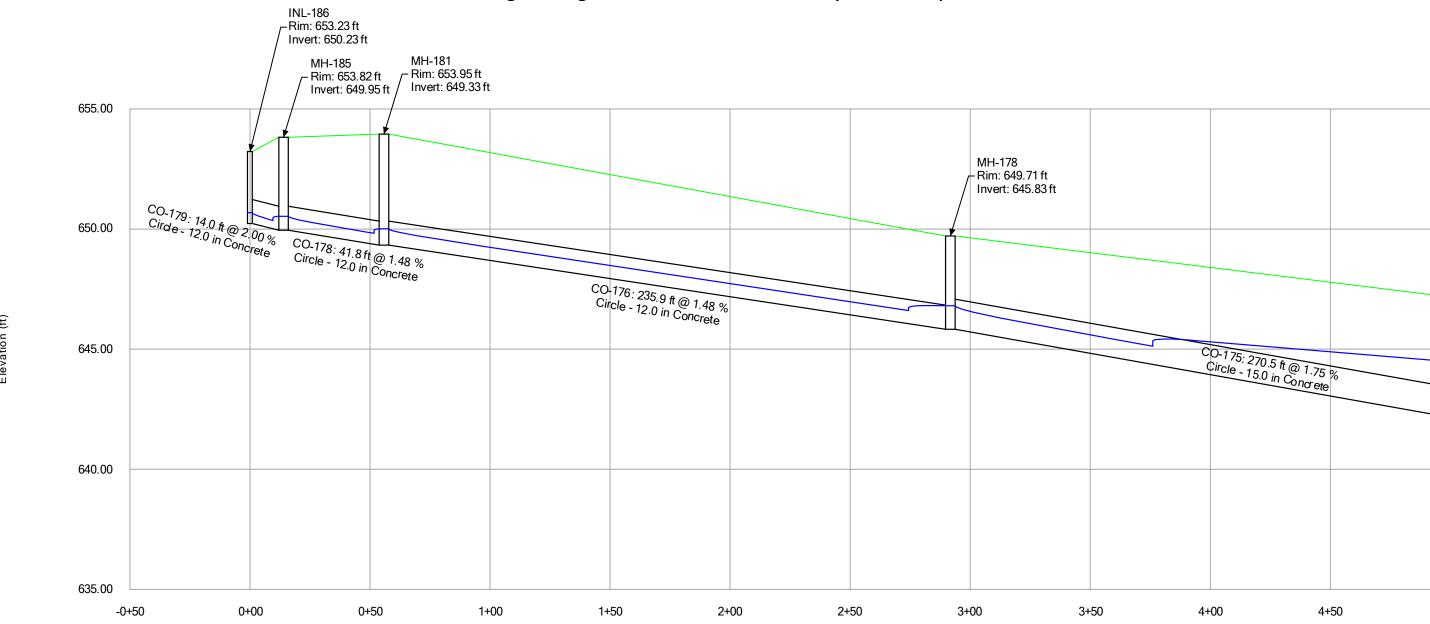


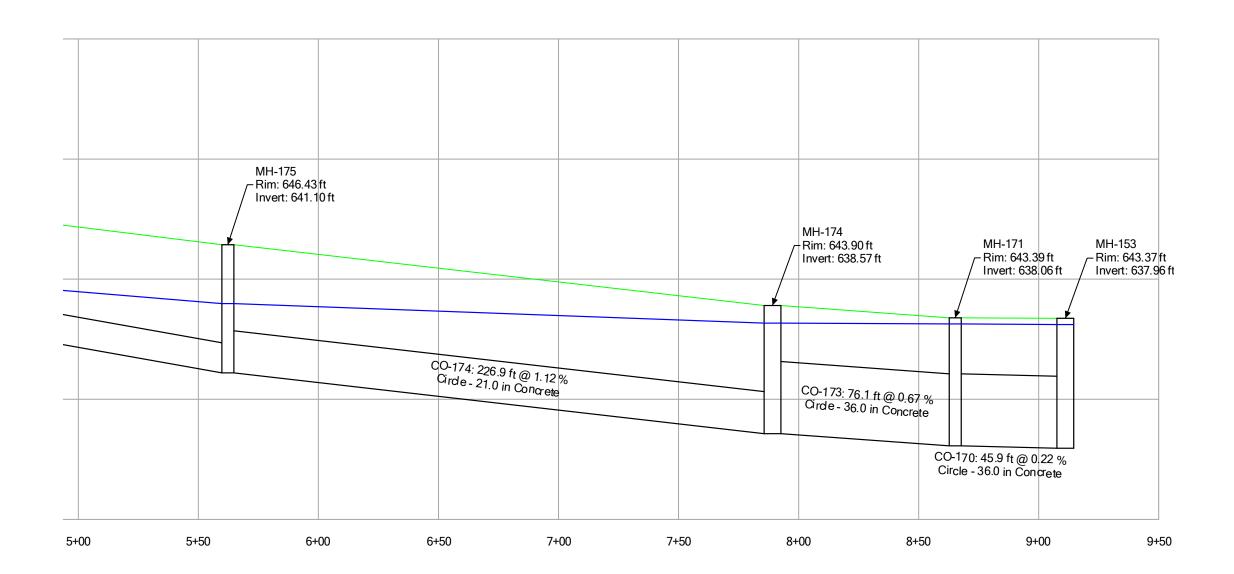
Elevation (ft)

Profile Report Engineering Profile - INL-170 to MH-161 (FINAL.stsw)

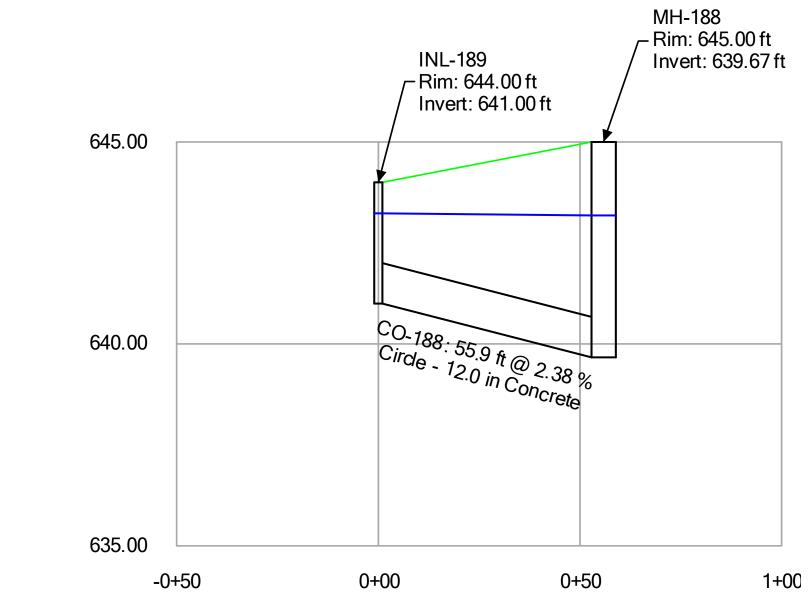


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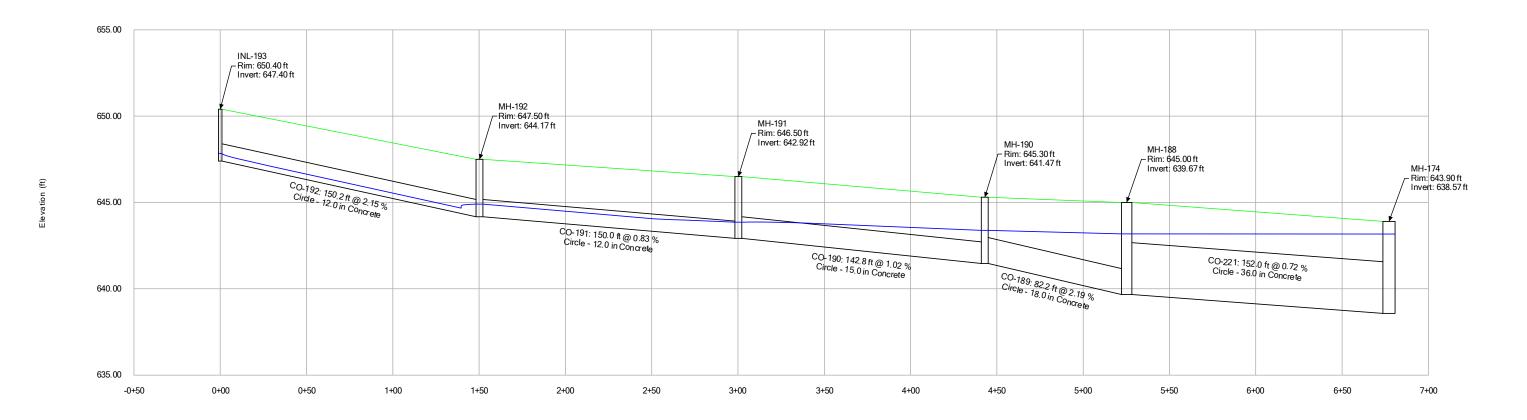




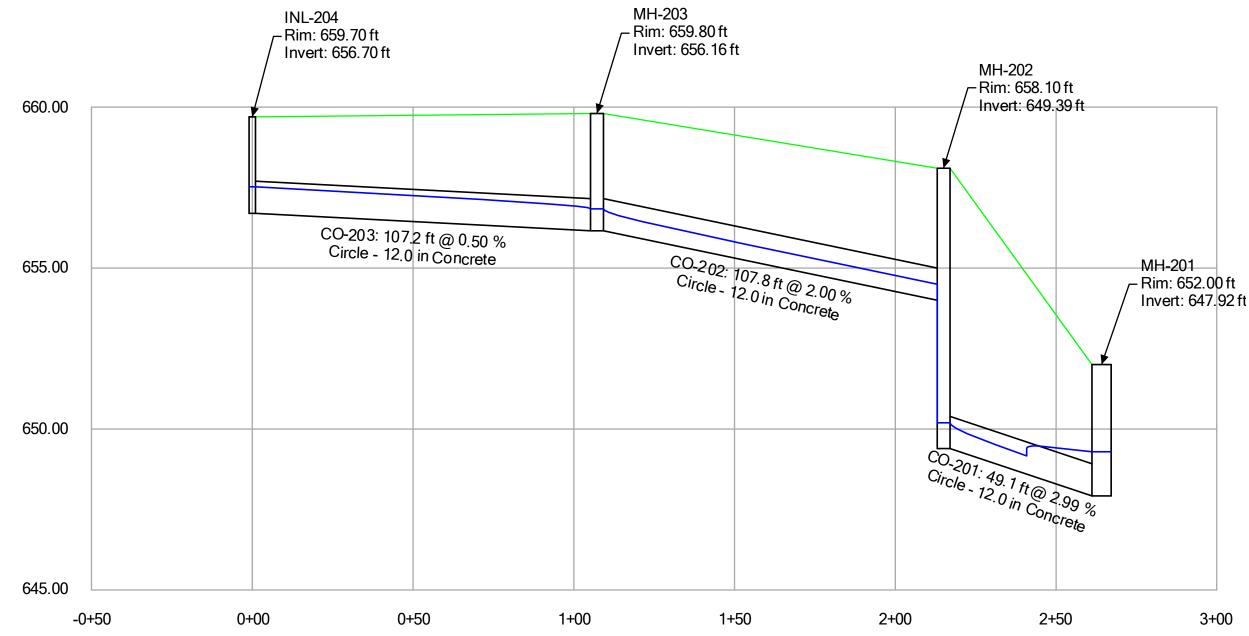
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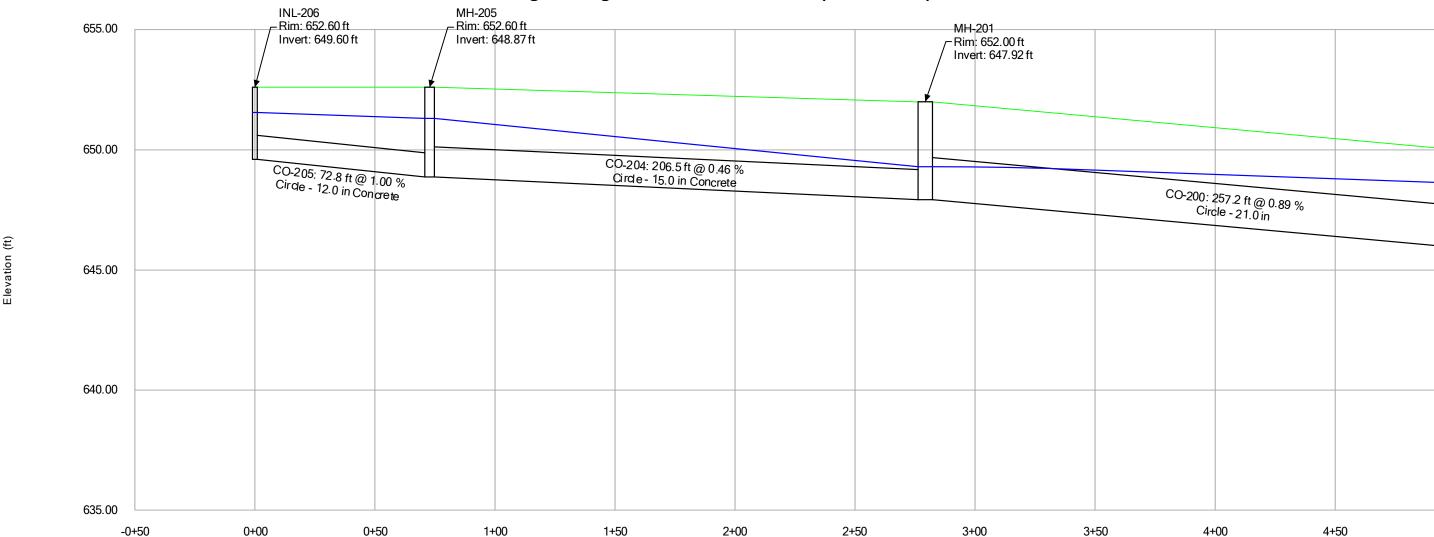
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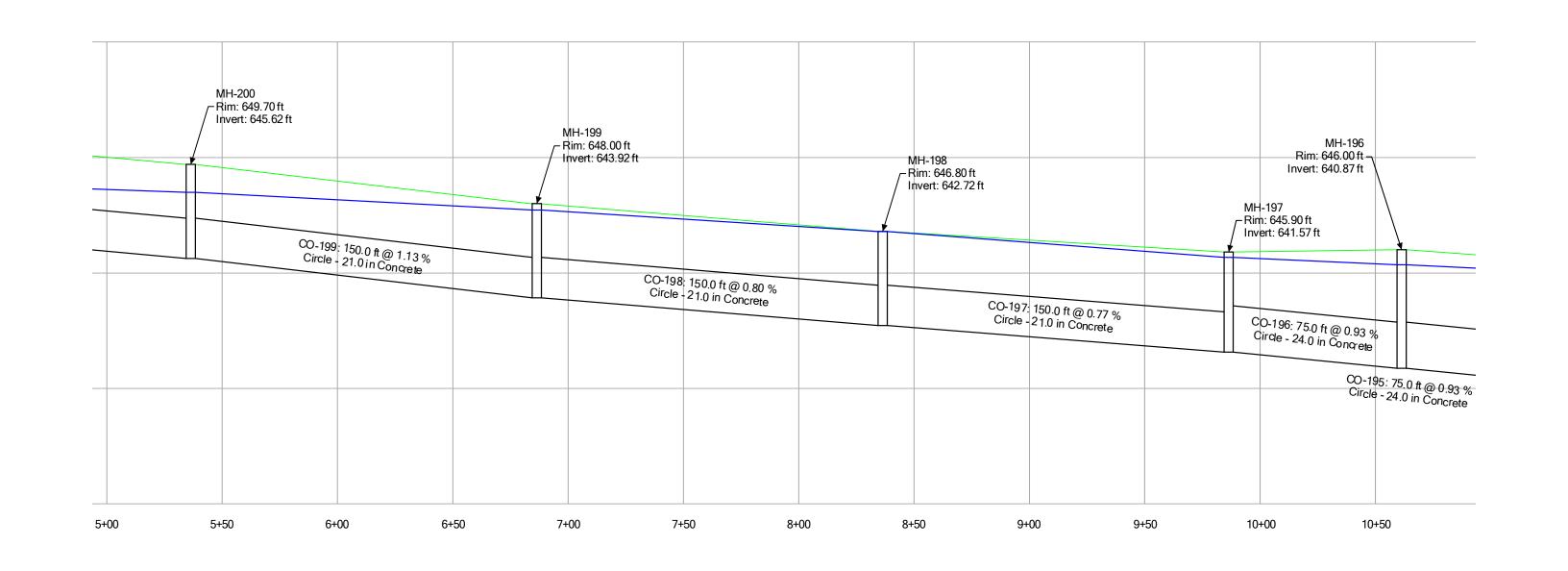


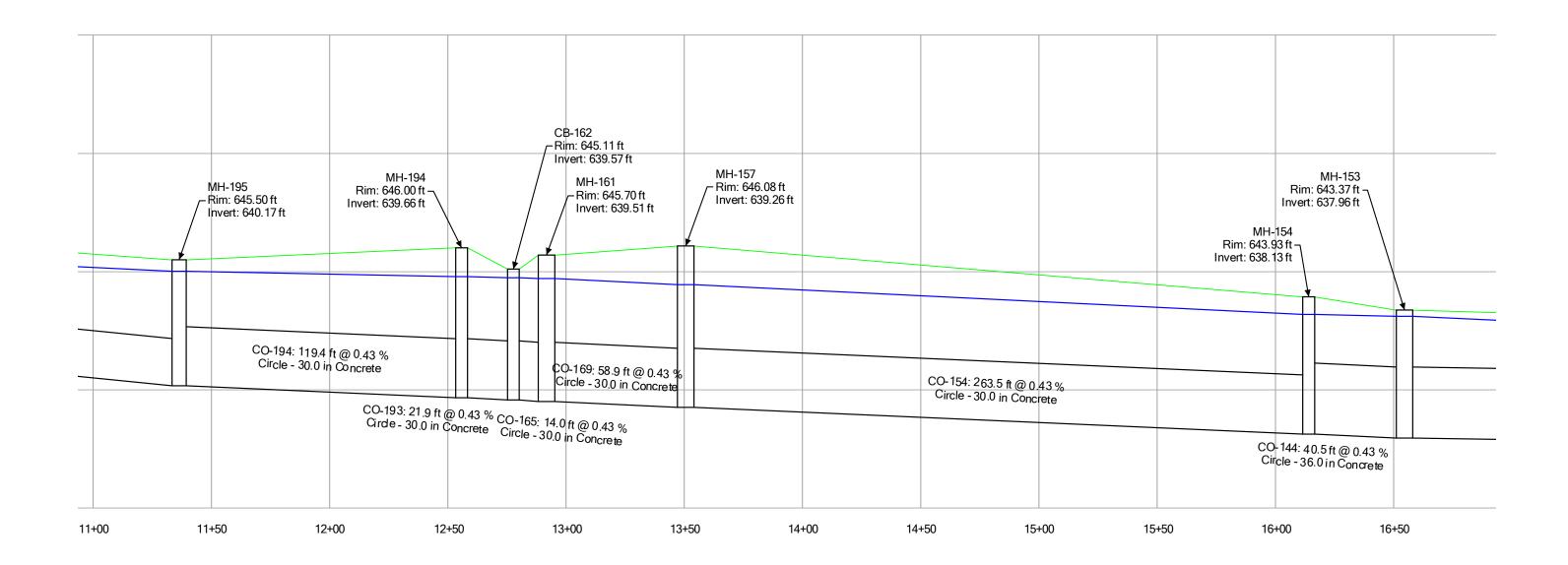
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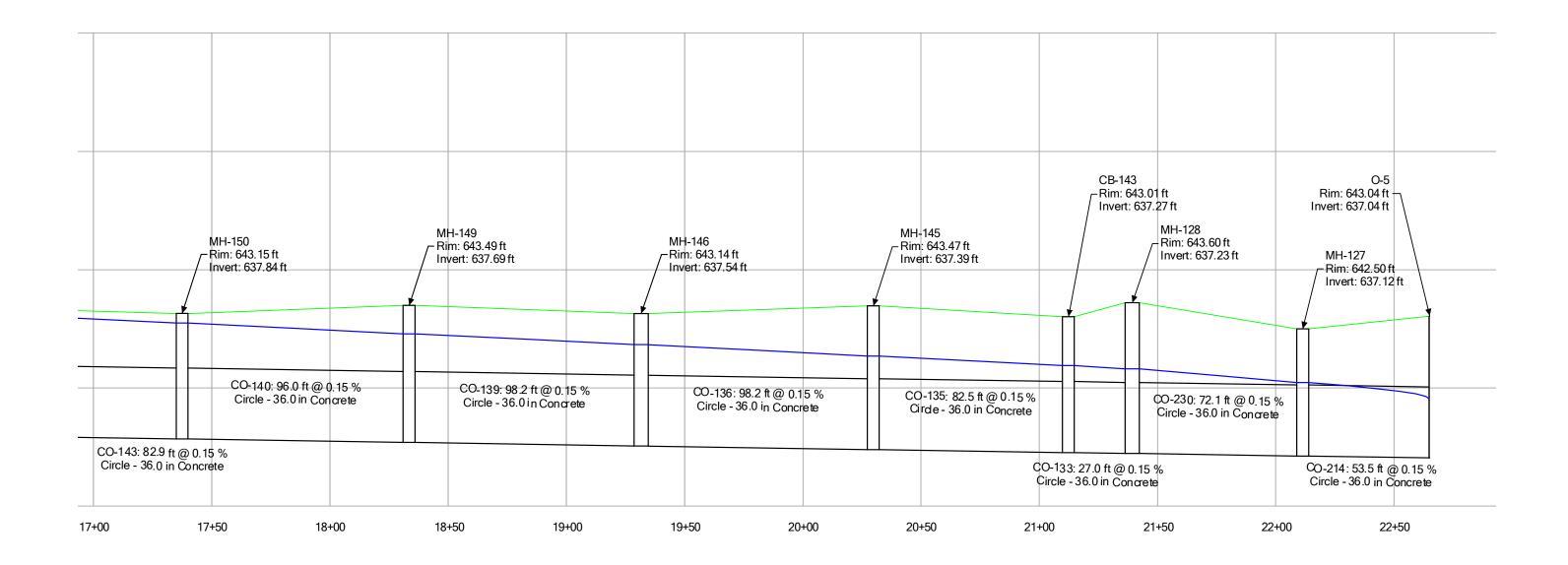


Profile Report
Engineering Profile - INL-206 to O-5 (FINAL.stsw)

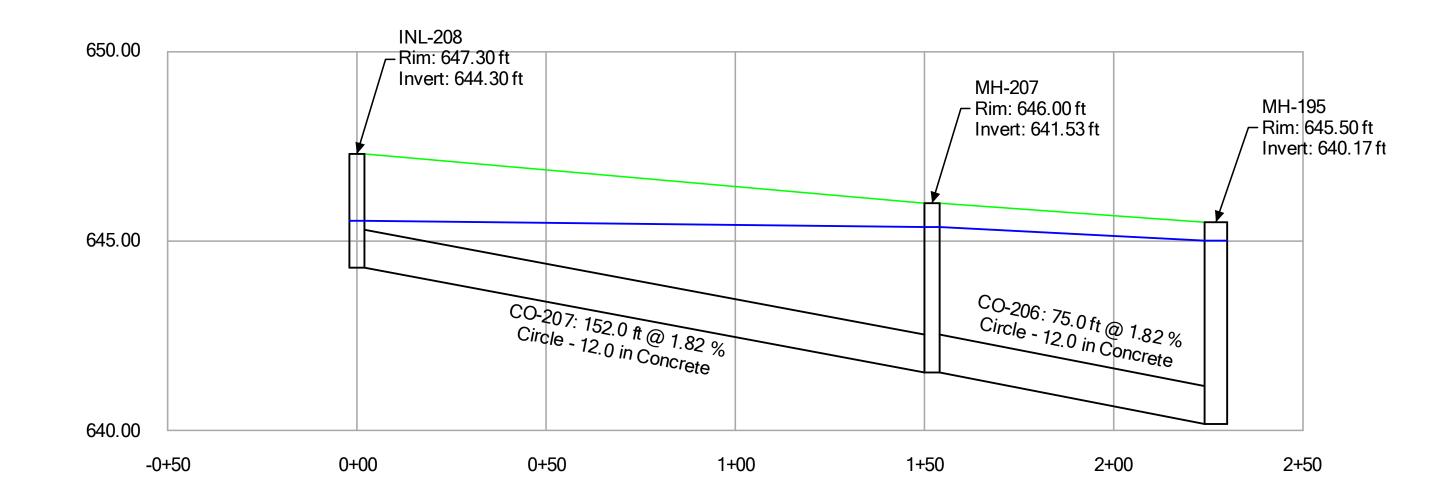




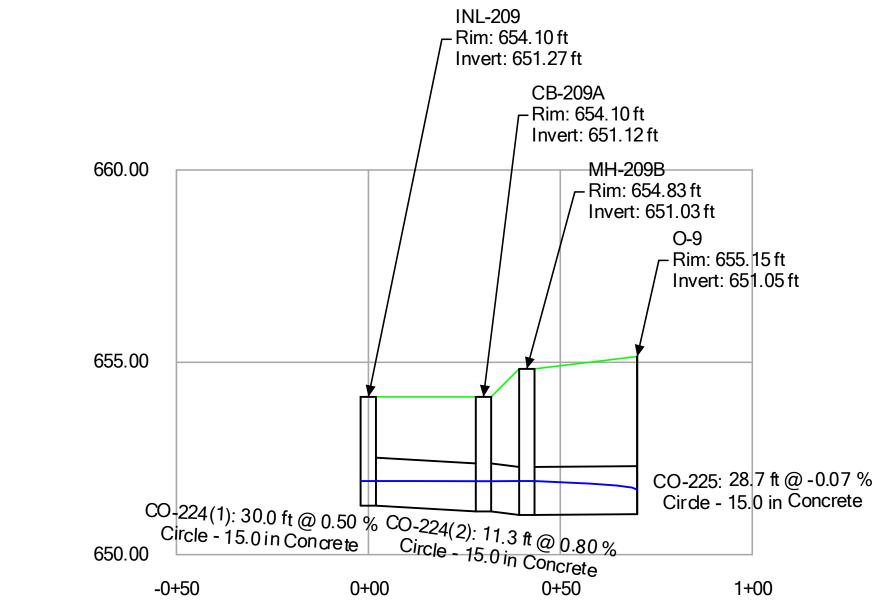




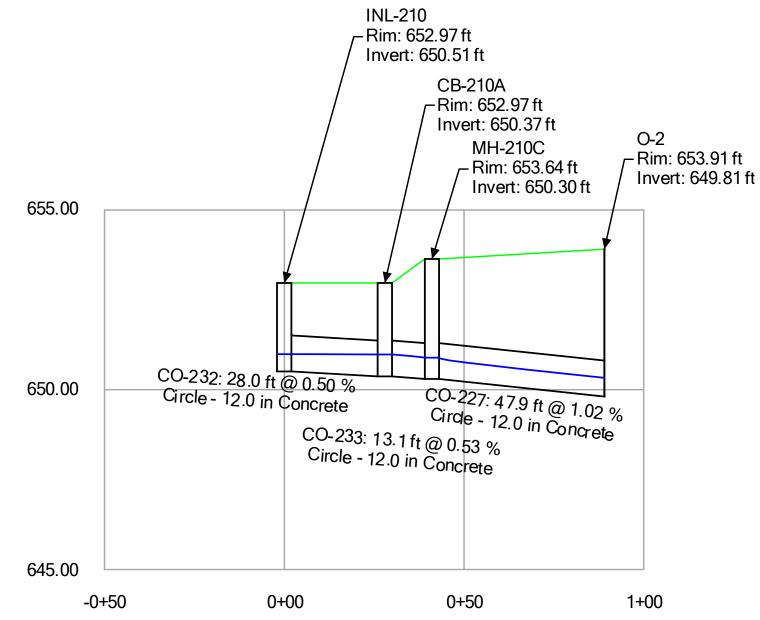
Profile Report Engineering Profile - INL-208 to MH-195 (FINAL.stsw)



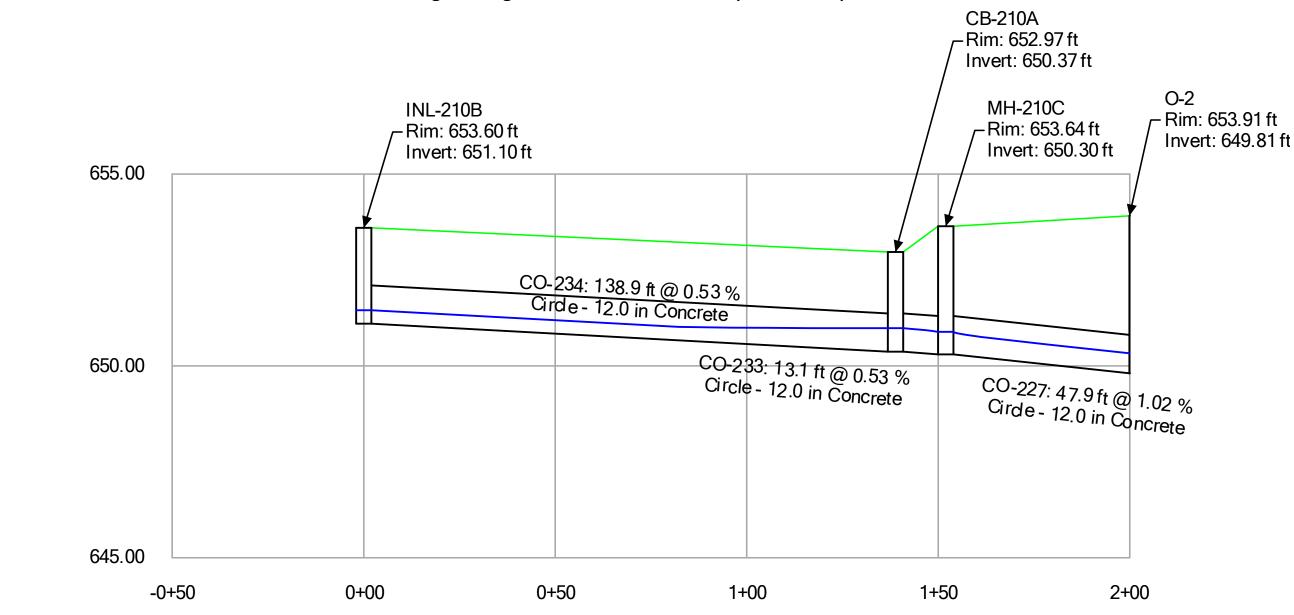
Profile Report Engineering Profile - INL-209 to O-9 (FINAL.stsw)

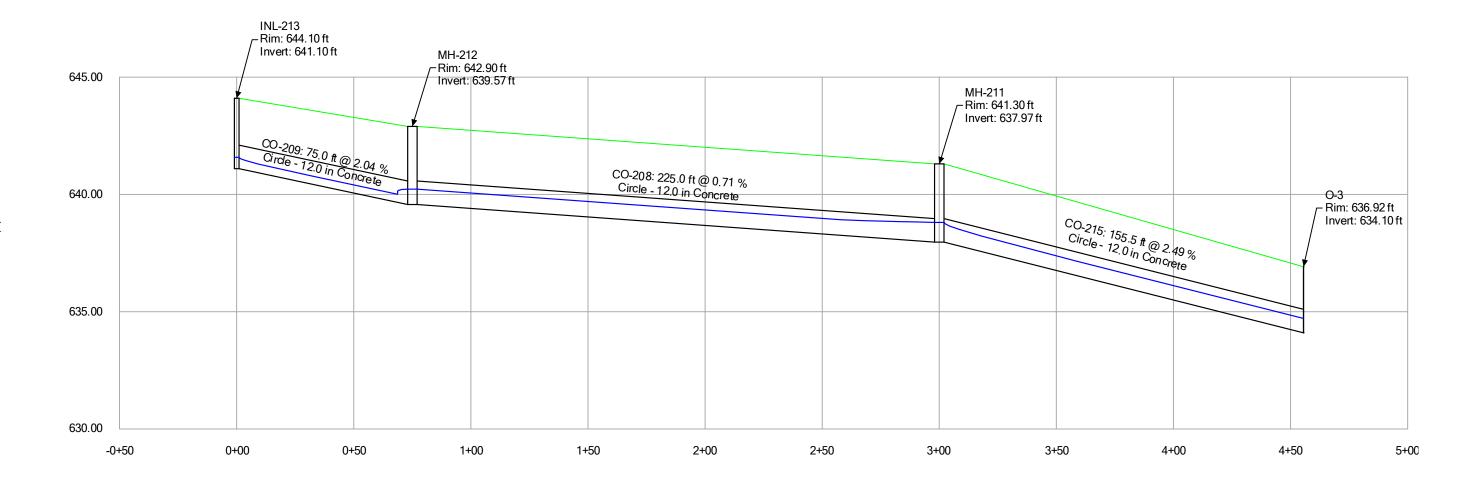


Profile Report
Engineering Profile - INL-210 to O-2 (FINAL.stsw)

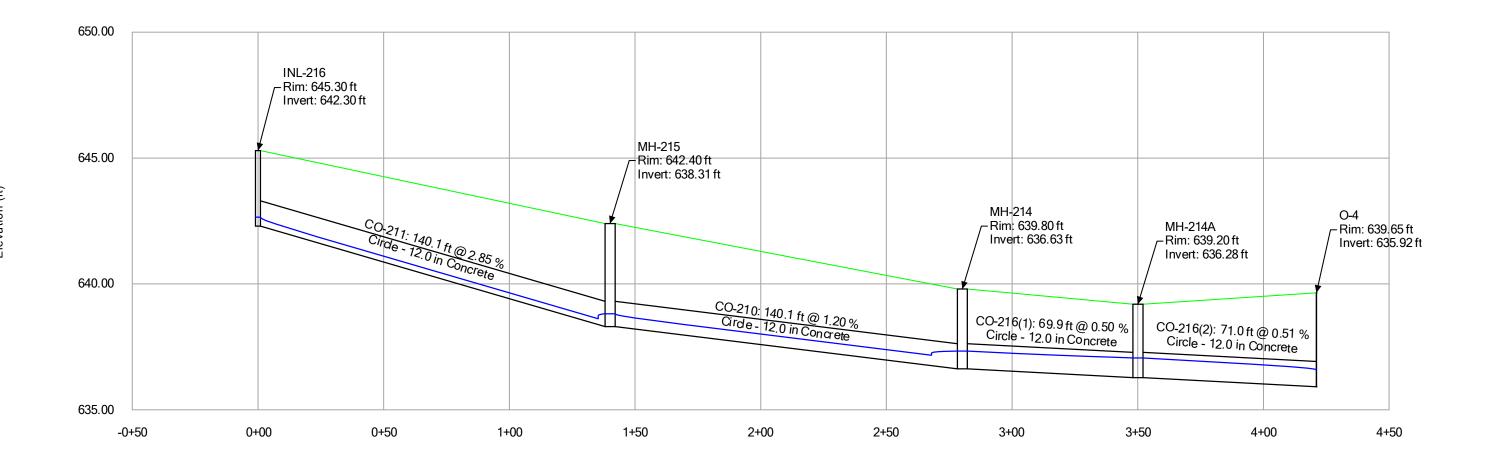


Profile Report
Engineering Profile - INL-210B to O-2 (FINAL.stsw)

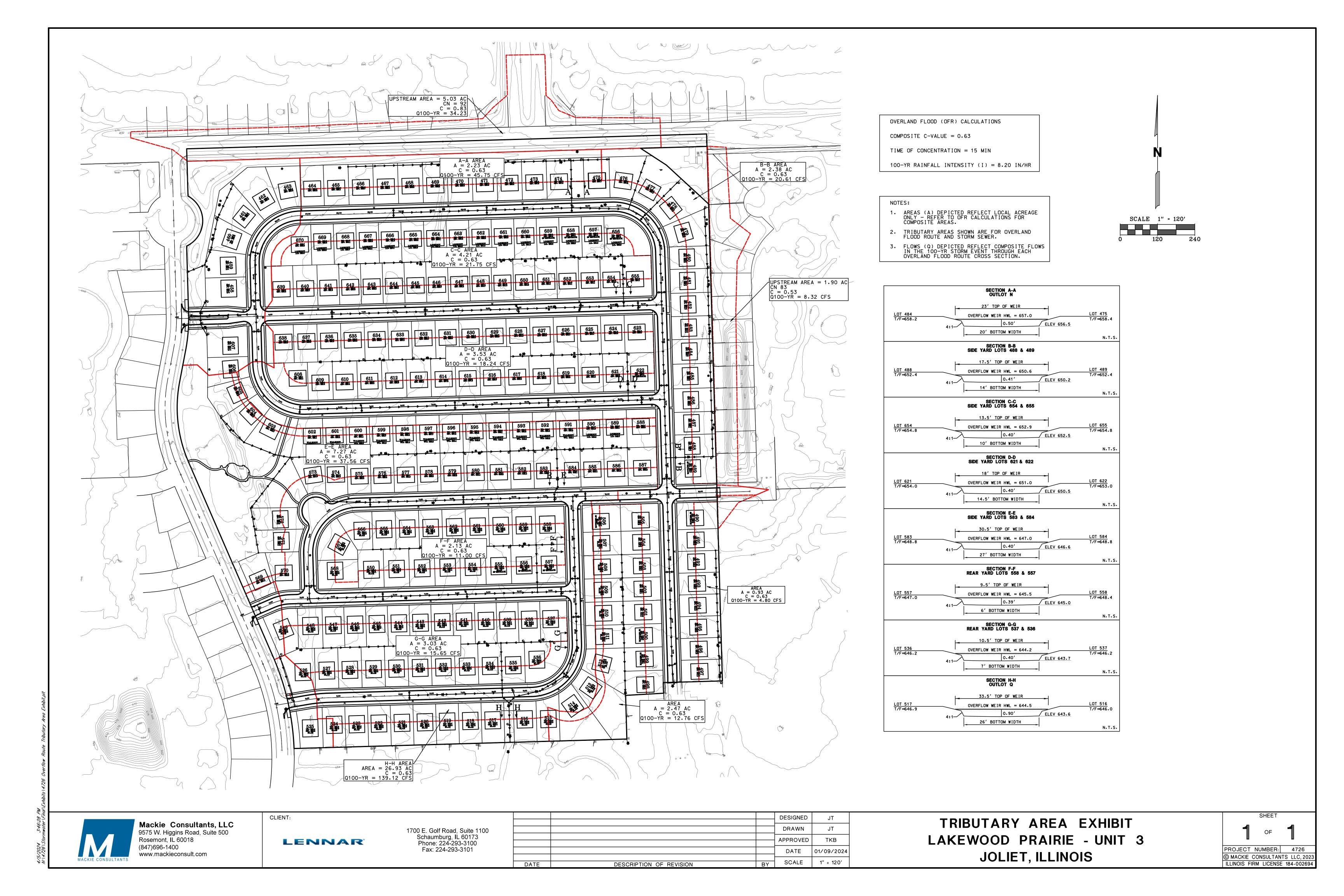




Profile Report Engineering Profile - INL-216 to O-4 (FINAL.stsw)



OVERLAND FLOOD ROUTE TRIBUTARY AREA EXHIBIT



OVERLAND FLOOD ROUTE CALCULATIONS

Overland Flood Route Calculations

Lakewood Prairie Residential Community Joliet, IL

	Local Proposed	Runoff Dat	ta	Time of Conc.	Flow	ADDITIONAL Upstream	Total Offsite Area	Offsite Area	Offsite	Total Flow		Overf	low Route	
Section	Local Area Acres	С	i in/hr	tc min.	Q cfs	Tributary Areas		C Value	Flow cfs	cfs	Lot	Height ft.	Btm. Width ft.	Top Width ft
A-A	2.23	0.63	8.20	15	11.52	Offsite	5.03	0.83	34.23	45.75	OUTLOT N	0.5	19.0	23.0
B-B	2.38	0.63	8.20	15	12.30	Offsite	1.90	0.53	8.32	20.61	488 & 489	0.41	14.0	17.5
C-C	4.21	0.63	8.20	15	21.75	-	-	-	-	21.75	654 & 655	0.4	10.0	13.5
D-D	3.53	0.63	8.20	15	18.24	-	-	-	-	18.24	621 & 622	0.4	14.5	18.0
E-E	7.27	0.63	8.20	15	37.56	-	-	-	-	37.56	583 & 584	0.4	27.0	30.5
F-F	2.13	0.63	8.20	15	11.00	-	-	-	-	11.00	557 & 558	0.39	6.0	9.5
G-G	3.03	0.63	8.20	15	15.65	-	-	-	-	15.65	537 & 536	0.4	7.0	10.5
H-H	26.93	0.63	8.20	15	139.12	-	-	-	-	139.12	OUTLOT Q	0.9	26.0	33.5

Calculation Notes:

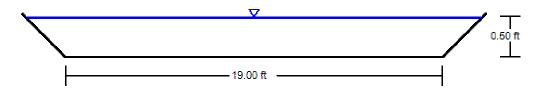
- 1. Local Time of Concentration for all areas assumed to be 15 minutes
- 2. All areas are delineated on the attached exhibit
- 3. Required freeboard is 1.0' from lowest opening elevation to 100 YR HWL

Worksheet for A-A: Outlot N

Project Description		
Friction Method	Manning	
	Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	2.200 %	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	19.00 ft	
Discharge	45.75 cfs	
Results		
Normal Depth	0.50 ft	
Flow Area	10.5 ft ²	
Wetted Perimeter	23.1 ft	
Hydraulic Radius	0.46 ft	
Top Width	23.01 ft	
Critical Depth	0.54 ft	
Critical Slope	1.673 %	
Velocity	4.35 ft/s	
Velocity Head	0.29 ft	
Specific Energy	0.79 ft	
Froude Number	1.133	
Flow Type	Supercritical	
GVF Input Data		
Downstream Depth	0.00 ft	
Length	0.0 ft	
Number Of Steps	0	
GVF Output Data		
Upstream Depth	0.00 ft	
Profile Description	N/A	
Profile Headloss	0.00 ft	
Downstream Velocity	Infinity ft/s	
Upstream Velocity	Infinity ft/s	
Normal Depth	0.50 ft	
Critical Depth	0.54 ft	
Channel Slope	2.200 %	
Critical Slope	1.673 %	

Cross Section for A-A: Outlot N

Project Description		
Friction Method	Manning Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	2.200 %	
Normal Depth	0.50 ft	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	19.00 ft	
Discharge	45.75 cfs	

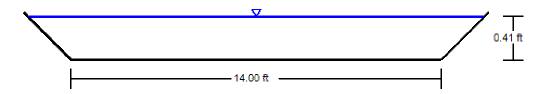


Worksheet for B-B: Lots 488&489

Project Description		
Friction Method	Manning	
	Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	1.600 %	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	14.00 ft	
Discharge	20.61 cfs	
Results		
Normal Depth	0.41 ft	
Flow Area	6.4 ft ²	
Wetted Perimeter	17.4 ft	
Hydraulic Radius	0.37 ft	
Top Width	17.28 ft	
Critical Depth	0.39 ft	
Critical Slope	1.865 %	
Velocity	3.22 ft/s	
Velocity Head	0.16 ft	
Specific Energy	0.57 ft	
Froude Number	0.932	
Flow Type	Subcritical	
GVF Input Data		
Downstream Depth	0.00 ft	
Length	0.0 ft	
Number Of Steps	0	
GVF Output Data		
Upstream Depth	0.00 ft	
Profile Description	N/A	
Profile Headloss	0.00 ft	
Downstream Velocity	Infinity ft/s	
Upstream Velocity	Infinity ft/s	
Normal Depth	0.41 ft	
Critical Depth	0.39 ft	
Channel Slope	1.600 %	
Critical Slope	1.865 %	

Cross Section for B-B: Lots 488&489

Project Description		
Friction Method	Manning Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	1.600 %	
Normal Depth	0.41 ft	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	14.00 ft	
Discharge	20.61 cfs	

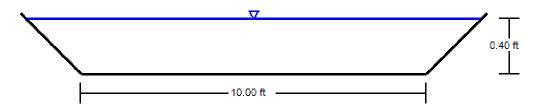


Worksheet for C-C: Lots 654&655

Project Description		
Friction Method	Manning	
	Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	3.700 %	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	10.00 ft	
Discharge	21.75 cfs	
Results		
Normal Depth	0.40 ft	
Flow Area	4.6 ft ²	
Wetted Perimeter	13.3 ft	
Hydraulic Radius	0.35 ft	
Top Width	13.19 ft	
Critical Depth	0.49 ft	
Critical Slope	1.767 %	
Velocity	4.71 ft/s	
Velocity Head	0.34 ft	
Specific Energy	0.74 ft	
Froude Number	1.404	
Flow Type	Supercritical	
GVF Input Data		
Downstream Depth	0.00 ft	
Length	0.0 ft	
Number Of Steps	0	
GVF Output Data		
Upstream Depth	0.00 ft	
Profile Description	N/A	
Profile Headloss	0.00 ft	
Downstream Velocity	Infinity ft/s	
Upstream Velocity	Infinity ft/s	
Normal Depth	0.40 ft	
Critical Depth	0.49 ft	
Channel Slope	3.700 %	
Critical Slope	1.767 %	

Cross Section for C-C: Lots 654&655

Project Description		
Friction Method	Manning Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	3.700 %	
Normal Depth	0.40 ft	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	10.00 ft	
Discharge	21.75 cfs	

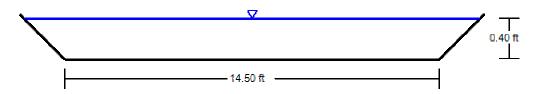


Worksheet for D-D: Lots 621&622

Project Description		
Friction Method Solve For	Manning Formula Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	1.300 %	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	14.50 ft	
Discharge	18.24 cfs	
Results		
Normal Depth	0.40 ft	
Flow Area	6.4 ft ²	
Wetted Perimeter	17.8 ft	
Hydraulic Radius	0.36 ft	
Top Width	17.68 ft	
Critical Depth	0.35 ft	
Critical Slope	1.920 %	
Velocity	2.86 ft/s	
Velocity Head	0.13 ft	
Specific Energy	0.52 ft	
Froude Number	0.838	
Flow Type	Subcritical	
GVF Input Data		
Downstream Depth	0.00 ft	
Length	0.0 ft	
Number Of Steps	0	
GVF Output Data		
Upstream Depth	0.00 ft	
Profile Description	N/A	
Profile Headloss	0.00 ft	
Downstream Velocity	Infinity ft/s	
Upstream Velocity	Infinity ft/s	
Normal Depth	0.40 ft	
Critical Depth	0.35 ft	
Channel Slope	1.300 %	
Critical Slope	1.920 %	

Cross Section for D-D: Lots 621&622

Project Description		
Friction Method	Manning Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	1.300 %	
Normal Depth	0.40 ft	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	14.50 ft	
Discharge	18.24 cfs	

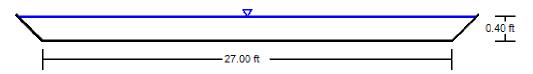


Worksheet for E-E: Lots 583&584

Project Description		
Friction Method	Manning	
	Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	1.600 %	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	27.00 ft	
Discharge	37.56 cfs	
Results		
Normal Depth	0.40 ft	
Flow Area	11.5 ft ²	
Wetted Perimeter	30.3 ft	
Hydraulic Radius	0.38 ft	
Top Width	30.21 ft	
Critical Depth	0.38 ft	
Critical Slope	1.843 %	
Velocity	3.28 ft/s	
Velocity Head	0.17 ft	
Specific Energy	0.57 ft	
Froude Number	0.938	
Flow Type	Subcritical	
GVF Input Data		
Downstream Depth	0.00 ft	
Length	0.0 ft	
Number Of Steps	0	
GVF Output Data		
Upstream Depth	0.00 ft	
Profile Description	N/A	
Profile Headloss	0.00 ft	
Downstream Velocity	Infinity ft/s	
Upstream Velocity	Infinity ft/s	
Normal Depth	0.40 ft	
Critical Depth	0.38 ft	
Channel Slope	1.600 %	
Critical Slope	1.843 %	

Cross Section for E-E: Lots 583&584

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.030
Channel Slope	1.600 %
Normal Depth	0.40 ft
Left Side Slope	25.000 %
Right Side Slope	25.000 %
Bottom Width	27.00 ft
Discharge	37.56 cfs



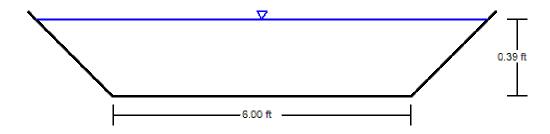
V: 4 \(\sum_{H:1} \)

Worksheet for F-F: Lots 557&558

Project Description		
Friction Method	Manning	
Solve For	Formula Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	2.600 %	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	6.00 ft	
Discharge	11.00 cfs	
Results		
	0.20.6	
Normal Depth Flow Area	0.39 ft 2.9 ft²	
Wetted Perimeter	2.9 ft	
Hydraulic Radius	9.2 ft 0.32 ft	
Top Width	9.12 ft	
Critical Depth	0.43 ft	
Critical Slope	1.891 %	
Velocity	3.73 ft/s	
Velocity Head	0.22 ft	
Specific Energy	0.61 ft	
Froude Number	1.158	
Flow Type	Supercritical	
GVF Input Data		
	0.00 ft	
Downstream Depth Length	0.00 π 0.0 ft	
Number Of Steps	0.0 10	
· · · · · · · · · · · · · · · · · · ·	<u> </u>	
GVF Output Data		
Upstream Depth	0.00 ft	
Profile Description	N/A	
Profile Headloss	0.00 ft	
Downstream Velocity	Infinity ft/s	
Upstream Velocity	Infinity ft/s	
Normal Depth	0.39 ft	
Critical Depth	0.43 ft	
Channel Slope	2.600 %	
Critical Slope	1.891 %	

Cross Section for F-F: Lots 557&558

Project Description		
Friction Method	Manning Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	2.600 %	
Normal Depth	0.39 ft	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	6.00 ft	
Discharge	11.00 cfs	



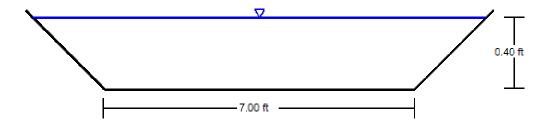
V: 4 \(\sum_{H^{-1}} \)

Worksheet for G-G: Lots 536&537

Project Description		
Friction Method	Manning	
	Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	3.500 %	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	7.00 ft	
Discharge	15.65 cfs	
Results		
Normal Depth	0.40 ft	
Flow Area	3.5 ft ²	
Wetted Perimeter	10.3 ft	
Hydraulic Radius	0.34 ft	
Top Width	10.23 ft	
Critical Depth	0.49 ft	
Critical Slope	1.806 %	
Velocity	4.49 ft/s	
Velocity Head	0.31 ft	
Specific Energy	0.72 ft	
Froude Number	1.357	
Flow Type	Supercritical	
GVF Input Data		
Downstream Depth	0.00 ft	
Length	0.0 ft	
Number Of Steps	0	
GVF Output Data		
Upstream Depth	0.00 ft	
Profile Description	N/A	
Profile Headloss	0.00 ft	
Downstream Velocity	Infinity ft/s	
Upstream Velocity	Infinity ft/s	
Normal Depth	0.40 ft	
Critical Depth	0.49 ft	
Channel Slope	3.500 %	
Critical Slope	1.806 %	

Cross Section for G-G: Lots 536&537

Project Description		
Friction Method	Manning Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	3.500 %	
Normal Depth	0.40 ft	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	7.00 ft	
Discharge	15.65 cfs	



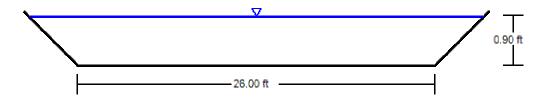
V: 4 \(\sum_{H: 1} \)

Worksheet for H-H: Outlot Q

Project Description		
Friction Method	Manning	
	Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	1.500 %	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	26.00 ft	
Discharge	139.12 cfs	
Results		
Normal Depth	0.90 ft	
Flow Area	26.7 ft ²	
Wetted Perimeter	33.4 ft	
Hydraulic Radius	0.80 ft	
Top Width	33.21 ft	
Critical Depth	0.92 ft	
Critical Slope	1.417 %	
Velocity	5.22 ft/s	
Velocity Head	0.42 ft	
Specific Energy	1.32 ft	
Froude Number	1.027	
Flow Type	Supercritical	
GVF Input Data		
Downstream Depth	0.00 ft	
Length	0.0 ft	
Number Of Steps	0	
GVF Output Data		
Upstream Depth	0.00 ft	
Profile Description	N/A	
Profile Headloss	0.00 ft	
Downstream Velocity	Infinity ft/s	
Upstream Velocity	Infinity ft/s	
Normal Depth	0.90 ft	
Critical Depth	0.92 ft	
Channel Slope	1.500 %	
Critical Slope	1.417 %	

Cross Section for H-H: Outlot Q

Project Description		
Friction Method	Manning Formula	
Solve For	Normal Depth	
Input Data		
Roughness Coefficient	0.030	
Channel Slope	1.500 %	
Normal Depth	0.90 ft	
Left Side Slope	25.000 %	
Right Side Slope	25.000 %	
Bottom Width	26.00 ft	
Discharge	139.12 cfs	



TAB 4 - MAINTENANCE AND MONITORING

STORMWATER MANAGEMENT SYSTEM MAINTENANCE PLAN FOR NEW FACILITIES

FOR

LAKEWOOD PRAIRIE UNIT 3 – SINGLE FAMILY COMMUNITY JOLIET, ILLINOIS

Prepared By:



Mackie Consultants, LLC 9575 W. Higgins Road, Suite 500 Rosemont, IL 60018 (847)696-1400 www.mackieconsult.com

Dated: April 12, 2024

Subject: Lakewood Prairie Residential Community – Proposed Single Family Community

IN ASSOCIATION WITH THE PROPOSED RESIDENTIAL PROJECT, THE LAKEWOOD PRAIRIE RESIDENTIAL COMMUNITY UNIT 3 HEREBY MAKES THE FOLLOWING DECLARATIONS OF MAINTENANCE RESPONSIBILITIES.

Responsibilities

Adequate provisions for maintenance of the stormwater system are an essential aspect of long-term drainage performance. Responsibility for the overall maintenance shall rest with the Lakewood Prairie Residential Community Homeowners Association.

Purpose and Objective:

Storm sewers, swales and native vegetation/buffer areas comprise a development's stormwater management system. When land is altered to build developments, the natural system of trees and plants is replaced with impervious surfaces like sidewalks, streets, decks, roofs, driveways, or lawns over highly compacted soils. As a result more rain water / storm water flows off the land at a faster rate and less rain water is absorbed into the soil. This can lead to streambank erosion, downstream flooding and increased concentrations of pollutants. The storm water management system was designed to help slow the rate of runoff from the development and improve the quality of the storm water leaving the site. The stormwater management basin is already built and will be continue to be maintained by the Homeowner's Association of Lakewood Prairie Unit 1.

Interpretation as to Requirements Under This Maintenance Plan:

This site is located within the limits of Kendall County; however, the requirement for this Maintenance Plan is generated by the Will County Stormwater Management Ordinance, as it has been adopted by the City of Joliet. Therefore, the interpretation of the maintenance requirements set forth in this Maintenance Plan shall be interpreted on the basis of the intent and requirements of said Ordinance.

Inspection Frequency:

Inspection experience will determine the required cleaning frequencies for the components of the stormwater management system. At a minimum, the attached checklist items should be inspected annually. Detention ponds (including the outlet control structure and restrictors) should be inspected on a monthly basis during wet weather conditions from March to November.

Maintenance Considerations:

Whenever possible, maintenance activities should be performed during the inspection. These activities should be supplemented by repair / replacement as required. A Registered Professional Engineer (PE) shall be hired for design resolution of specific items as indicated on the checklist below.

Cost Considerations:

Frequent maintenance program work execution will lead to less frequent and less costly long-term maintenance and repair. The attached checklist items may need to be amended based on experience recorded over the initial period of occupancy of the subdivision.

Record Keeping:

Separate and distinct records shall be maintained by the responsible party for all tasks performed that are associated with this plan. The records shall include the dates of maintenance visits, who performed the inspection, and a description of the work performed.

Post-Construction Stormwater Management System Inspection Checklist

The following checklist describes the suggested routine inspection items and recommended measures to be taken to ensure that the Stormwater Management System functions as designed. When hiring a PE is the recommended measure, the PE shall inspect, evaluate and recommend corrective actions. The General section outlines items that should be taken into consideration during inspection and maintenance activities. While performing an overall inspection of your system, please check for the following items.

General -

- Litter and debris shall be controlled.
- Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations.
- Riprap areas shall be repaired with the addition of new riprap, as necessary, of adequate size and shape.
- Roads and pavement areas shall be swept or vacuumed on a periodic basis.
- Access path to storm water management facilities should be free from obstructions (woodpiles, sheds, vegetation).
- Fences, gates and posts shall be maintained.
- Signs shall be maintained.

Initial Vegetation Establishment –

Areas to be planted with native species shall conform to the following requirements:

- Temporary seeding may be placed immediately after grading to prevent erosion if conditions are not conducive for native species seeding. Permanent native species shall be planted during the first available growing season at the appropriate time and conditions for such plantings.
- Plantings shall aim to meet the following performance:
 - o First full growing season: 90% of cover crop established. No bare area greater than two (2) square feet. At least 25% of vegetation cover/coverage shall be native, non-invasive species. Appropriate invasive species control practices should be utilized.
 - Second full growing season: Full vegetative cover. At least 50% of vegetation cover/coverage shall be native, non-invasive species. Appropriate invasive species control practices should be utilized.
 - Third full growing season: At least 75% of vegetation cover/coverage shall be native, non-invasive species. Non-native species shall constitute no more than 25% relative aerial coverage of the planted area. Appropriate invasive species control practices should be utilized.

During the plant establishment period—up to three (3) years after installation—monthly site visits during the growing season (April-October) should be undertaken to identify and carry on maintenance requirements. Note that an annual monitoring report should be provided to the Administrator by January 31st of each year.

Berms	
	Settlement. If settlement is observed, consult a PE. Breaks or failures. If failure observed, notify the City immediately and consult a PE. Erosion. Repair as needed. Signs of leakage, seepage or wet spots. If observed, consult a PE.
	Unwanted growth or vegetation. Remove as needed.
Storm	Sewers
	System is free draining into collection channels or catch basins. If concerned, clean or repair. Catch basins. Remove sediment when more than 50% of basin sump is filled. Siltation in Culvert. Culverts shall be checked for siltation deposit, clean out as necessary.
Swales	5
	All ditches or pipes connecting ponds in series should be checked for debris that may block flow. Repair and replace temporary and/or permanent check-dams as necessary.
	Verify systems (both drainage ditches and sideyard swales) are maintaining originally constructed design slope and cross-sectional area. If fill or sediment contributes to elevation changes in swale, re-grading and re-shaping shall be performed. Licensed surveyors shall be hired to lay-out and check grades. No landscaping, earthen fill, gardens, or other obstructions (including sheds and other structures) shall be allowed in the swales that would impede design drainage flow patterns.
Vegeta	ated Areas
	Need for planting, reseeding or sodding of native areas. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
	Need for planting, reseeding or sodding of turf areas. Supplement alternative native vegetation if a significant portion has not established (75% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
	Invasive vegetation (refer to the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, or hire an environmental or landscape specialist). Remove as necessary.

WETLAND DELINEATION REPORT

PREPARED FOR:



Study Area:

66-Acre Lakewood Prairie Farm – Unit 3
SE corner intersection of W. Theodore Road and Barberry Way
Joliet, Kendall County, Illinois
Latitude 41.547358 - Longitude -88.267940

October 23, 2023



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WETLAND DELINEATION REPORT

EXECUTIVE SUMMARY

In response to the request of Lennar Homes – Midwest Division, Midwest Ecological, Inc. (MEI) has performed and completed a Wetland Delineation for the approximate 66-acre farm. The study area is located within Section 1, Township 35 North, Range 8 East of the Third Principal Meridian within Joliet, Kendall County, Illinois. Utilizing the methods and criteria established by the U.S. Army Corps of Engineers (USACE) in their Corps of Engineers Wetlands Delineation Manual (1987), Midwest Regional Supplement (2008), United States Department of Agriculture/Natural Resource Conservation Service, in their Wetland Mapping Conventions – NRCS, Illinois (1998) a wetland investigation of the property was performed. Based on the onsite investigation using the information obtained from the field samples Midwest Ecological, Inc. (MEI) identified one (1) drainage ditch and one (1) farmed wetland totaling **0.61-acres** in size.

Site	On-site Acreage			Anticipated Regulatory Agency	ADID (Y/N)	
Drainage Ditch #1	0.09 acres	1.00	2.65	IWKC	N	
Farmer Wetland #1	0.52 acres	*	*	IWKC	N	

It should be noted that under the current guidelines, any disturbance of a wetland area requires a permit through the US Army Corps of Engineers (USACE), Kendall County or the City of Joliet. However, mitigation may or may not be required, depending on the overall impact (> 0.10) to the wetland, Waters of the United States (WOUS) or Isolated Wetland of Kendall County (IWKC). This jurisdiction of the identified wetland is at the discretion of the USACE.

PURPOSE OF VISIT

The purpose of the site visit is to determine if any Wetlands (various types), Open water pockets, Creeks or Rivers exist on-site and to determine their approximate size, location, quality and jurisdiction. Wetlands encountered were delineated using standard methods sanctioned by the United States Army Corps of Engineers in their Corps of Engineers Wetlands Delineation Manual (1987), Regional Supplement (2008) and Wetland Mapping Conventions – NRCS, Illinois (1998).

DEFINITION OF A WETLAND

The U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protections Agency (USEPA) define wetlands as:

"areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions..." (33 CFR 328.3[b], 1977).

Although not defined by regulation, "normal circumstances" are interpreted by both the USACE and the Natural Resources Conservation Service to be "the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed" (7 CFR 12.31[b][2][i]).

METHODOLOGY

Prior to visiting the site, Midwest Ecological, Inc. (MEI) performed a review of the National Wetland Inventory map, Kendall County Soil Survey map and aerial photograph in order to determine existing site conditions. Site visits were then conducted by an Environmental Wetland Specialist from MEI on September 22, 2023. The USACE Wetland Delineation Manual, dated January 1987, identifies the mandatory technical criteria for wetland identification. The three essential characteristics of a wetland are: 1) hydrophytic vegetation; 2) hydric soils; and 3) wetland hydrology. These characteristics are described below:

<u>Hydrophytic Vegetation:</u> The hydrophytic vegetation criterion is based on a separation of plants into five basic groups:

- 1) Obligate wetland plants (OBL) almost always occur (estimated probability >99%) in wetlands under natural conditions;
- 2) Facultative wetland plants (FACW) usually occur in wetlands (estimated probability 67-99%), but occasionally are found in non-wetlands;
- 3) Facultative plants (FAC) are equally likely to occur in wetland or non-wetlands (estimated probability 34-66%);
- 4) Facultative upland plants (FACU) usually occur in non-wetlands (estimated probability 67-99%), but occasionally are found in wetlands (estimated probability 1-33%); and
- 5) Obligate upland plants (UPL) almost always occur (estimated probability >99%) in non-wetlands under natural conditions.

Within each data point, vegetation is sampled in plots of varying size based on the type of vegetation being sampled. The following plot sizes are recommended by the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual for the Midwest Region:

Trees - 30-ft radius
Saplings/Shrubs - 15-ft radius
Herbaceous Plants - 1 m2 plot
Woody vines - 30-ft radius

If greater than 50% of the plants present in each stratum or layer of the plant community are FAC, FACW, or OBL the subject area is considered a wetland in terms of vegetation (Dominance Test). If the vegetation does not meet the requirements of the Dominance Test, the Prevalence Index (PI) should be utilized.

The PI evaluates the coverage, on a weighted basis of coverage over all strata, of the vegetation within the plot. The PI ranges between 1.0 and 5.0, with a 3.0 or less indicating hydrophytic vegetation is present. If the PI is greater than 3.0, the dominance test is failed, but there are still hydric soil and wetland hydrology presence, the observation of morphological adaptations by vegetation can be used to indicate that the hydrophytic vegetation criteria is met.

Morphological adaptations are changes in the structure of vegetation in response to conditions outside the normal character of the plant. These adaptations include adventitious roots, multistemmed trunks, shallow root systems developed at or near the surface, and buttressing in tree species. To meet this indicator, more than 50% of the individuals of FACU species must exhibit the morphological adaptations. Care must be given that the adaptations observed are due wetter conditions that the species is used to as opposed to other factors such as shallow roots present because of erosion of the surface.

<u>Hydric Soils</u>: Hydric soils are defined in the manual as "soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part." Hydric soil indicators are distinctive characteristics that persist in the soil during both wet and dry periods and are used to identify hydric soils in the field. Field indicators include color, mottling, gleying, and sulfidic odor. A specific set of indicators has been developed by the USDA Natural Resource Conservation Service (Field Indicators of Hydric Soils in the United States) which provides a detailed description of how to identify the indicators in during a site visit. A soil meets the definition of a hydric soil if it exhibits at least one of these indicators.

<u>Wetland Hydrology</u>: Indicators of hydric soil and hydrophytic vegetation typically reflect the middle and long-term conditions of a site, but not the short-term conditions. The wetland hydrology criterion is often the most difficult to determine because of climatological variation. Typically, the presence of water for a week or more during the growing season creates anaerobic conditions indicative of wetland hydrology. Anaerobic conditions lead to the prevalence of wetland plants. The 2010 USACE Regional Supplement for the Midwest Region provides specific indicators in four different groups for wetland hydrology: Observation of Surface Water or Saturated Soils, Evidence of Recent Inundation, Evidence of Current or Recent Soil Saturation, and Evidence from Other Site Conditions or Data. If a site exhibits 1 primary indicator or 2 secondary indicators, then it meets the hydrology criteria for a wetland.

Typical Farmed Wetland Signatures:

- Ponding, flooding or saturation of sufficient duration to meet hydrology criteria;
- drowned out crops;
- Different vegetation tonal patterns:
- Greener areas in dry years;
- Differential planting dates;
- Crop stress;

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MEI used historical data from weather stations within the study area and the long-term precipitation averages obtained from the USACE and NRCS Wetlands Determination Tables. Aerial imagery was reviewed from at least five years of normal precipitation and compared to the Joliet "WETS Station IL 4530". The aerial imagery for 2009 was analyzed for wetland signatures. A wetland signature is shown on an aerial from saturation, inundation or crop damage in a normal year.

Depressions that were noted in the field were evaluated under the Wetland Delineation Manual and Regional Supplement.

REFERENCE MATERIALS

The following materials were reviewed and utilized to assist in the field reconnaissance and completion of this report. See Appendix A for the Reference Materials noted below.

Location

The Lakewood Prairie Unit 3 farm is located at the SE corner intersection of W. Theodore Road and Barberry Way. Geographically the site is located within Section 1, Township 35 North, Range 8 East of the Third Principal Meridian within Joliet, Kendall County, Illinois (Latitude 41.547358 - Longitude -88.267940).

National Wetland Inventory Map

The National Wetland Inventory Map was reviewed to determine the location of wetland areas on the subject site. It should be noted that these maps are only large-scale guides, actual wetland locations and types may vary. Ultimate qualification occurs during field reconnaissance.

Per our review of the NWI map, the study area contains the following wetland classification.

R4SBC: Riverine, Intermittent, Streambed, Seasonally Flooded

Kendall County Soil Survey Map

<u>The Soil Survey of Kendall County, Illinois</u> was investigated to determine the location of hydric soils on the subject site. Mapped hydric soils can indicate wetland areas. The following soils were found to be present on the subject site during our investigation.

148C2 – Proctor silt loam, 5-10% slopes (well drained)

152A – Drummer silty clay loam, 0-2% slopes (poorly drained, hydric)

356A – Elpaso silty clay loam, 0-2% slopes (poorly drained, hydric)

442A – Mundelein silt loam, 0-2% slopes (moderately well drained)

443B – Barrington silt loam, 2-4% slopes (moderately well drained)

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541A – Graymont silt loam, 0-2% slopes (moderately well drained)

541B – Graymont silt loam, 2-5% slopes (moderately well drained)

United States Geological Survey Map

<u>The United States Geological Survey Map</u> as illustrated on the Aux Sable Creek Quadrangle USGS Map. The USGS Map was reviewed to determine the historical local drainage patterns. Upon review of the drainage patterns, the site drains west towards the Aux Sable Creek.

Flood Insurance Rate Map

The Flood Insurance Rate Maps (FEMA), for Kendall County, Illinois, Community Panel No. 17093C0145 H effective dates January 8, 2014, was reviewed to determine the location of regulatory floodplains and floodways within the subject site. Mapped floodplains can be indicative of wetland hydrology.

Based on the FEMA Map, the study area and adjacent areas do not contain a flood plain zone.

WETLAND FIELD DELINEATION

An on-site wetland delineation of the property was conducted on September 22, 2023. Wetland boundaries were determined using the USACE guidelines and the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) guidelines, as stated previously. The routine method of wetland delineation was used, incorporating information on vegetation, hydrology and soils. The full width of the property was traversed and when a suspected wetland was encountered, the plant species present were determined by making several random passes through the area. If wetland plant species were found to be comprised of 50% or more of plant cover (i.e., wetland vegetation was dominant), the suspected wetland was further examined for the necessary field indicators of hydric soil and hydrology. The wetland boundaries were then defined, and all observed plant species were recorded.

The plant taxonomic nomenclature and the Natural Area Index (NAI) used in this report follow's the Chicago Region FQA Index (2017). A more detailed survey would be necessary for a more complete plant list and while more species might be obtained from additional surveys, this would not change the areas delineated as wetlands.

Study Area: The 66-acre farm is under a revolving agricultural program. The site does not contain any structures. A dry farmers ditch is found on the north property line. The farmers ditch appears to be a previous draintile excavation completed in 2006. The ditch was completely dry, but it is suspected to have intermittent flow. A 12" concrete pipe was noted within the ditch at the north end along Theodore Road.

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Upland Erosional Rills: A few minor erosional rills are located within the farm. The rills were created by overland drainage from higher elevations of the farm from the neighboring development to the west. The rills are an eroded feature that conveys surface flow to the interior of the farm where it infiltrates into the ground. It is suspected that a network of draintiles is present within the farm. The erosional rills are not considered wetlands, farmed wetlands or waters.

Drainage Ditch 1: Drainage Ditch 1 is an agricultural swale located along the north property line. The farmers ditch appears to be a previous draintile excavation completed in 2006. At the time of our investigation, the ditch was completely dry, but it is suspected to have intermittent flow. A 12" concrete pipe was noted within the ditch at the north end along Theodore Road. The shoreline of the ditch contained side-casting.

The ditch bottom was devoid of herbaceous vegetation however the slopes are dominated by upland shrubs. The delineated ditch is determined to be **0.09 acres**.

Study Information

Site: Lakewood Prairie Unit 3 Farm

Locale: Drainage Ditch #1 Robert Vanni

By:

Conservatism-Based Metrics

Additional Metrics

Mean C (native species)	1.00	Species Richness (all)	12.00
Mean C (all species)	0.58	Species Richness (native)	7.00
Mean C (native trees)	0.00	% Non-native	0.42
Mean C (native shrubs)	0.00	Wet Indicator (all)	0.83
Mean C (native herbaceous)	1.25	Wet Indicator (native)	0.57
FQAI (native species)	2.65	% hydrophyte (Midwest)	0.42
FQAI (all species)	2.02	% native perennial	0.58
Adjusted FQAI	7.64	% native annual	0.00
% C value 0	0.67	% annual	0.00
% C Value 1-3	0.33	% perennial	0.92
% C value 4-6	0.00		
% C value 7-10	0.00		

Species Acronym	Species Name (NWPL/Mohlenbrock)	Common Name	C Value	Midwest WET indicator	WET indicator (numeric)	Habit	Duration	Nativity
ASCSYR	Asclepias syriaca	Common Milkweed	0	FACU	1	Forb	Perennial	Native
BROINE	Bromus inermis	Smooth Brome	0	FACU	1	Grass	Perennial	Adventive
CONSEP	Calystegia sepium	Hedge False Bindweed	1	FAC	0	Forb	Perennial	Native
CIRARV	Cirsium arvense	Canadian Thistle	0	FACU	1	Forb	Perennial	Adventive
DAUCAR	Daucus carota	Queen Anne's Lace	0	UPL	2	Forb	Biennial	Adventive
LONMAA	Lonicera maackii	Amur Honeysuckle	0	UPL	2	Shrub	Perennial	Adventive
MORALB	Morus alba	White Mulberry	0	FAC	0	Tree	Perennial	Adventive
POPDEL	Populus deltoides	Eastern Cottonwood	0	FAC	0	Tree	Perennial	Native
RUBOCC	Rubus occidentalis	Black Raspberry	0	UPL	2	Shrub	Perennial	Native
SOLALT	Solidago altissima	Tall Goldenrod	1	FACU	1	Forb	Perennial	Native
ASTSIM	Symphyotrichum lanceolatum	White Panicled American-Aster	3	FAC	0	Forb	Perennial	Native
RHURAD	Toxicodendron radicans	Eastern Poison-Ivy	2	FAC	0	Vine	Perennial	Native

Drainage Ditch #1 Jurisdictional Determination Opinion: It is MEI's opinion that Drainage ditch #1 is a non-water of the United States. There was no evidence of persistent hydrology and based on the man-altered condition and intermittent/ephemeral nature of hydrology, Drainage ditch #1 does not qualify as regulated waters or wetland.

FARMED WETLAND DETERMINATION PROCEDURES

As of January 2005, the Natural Resource Conservation Service (NRCS) and U.S. Army Corps of Engineers (USACE) have withdrawn from the January 1994, Memorandum of Agreement Between the Departments of Agriculture, Interior, and Army and EPA Concerning the Delineation of Wetlands under Section 404 of the Clean Water Act and Subtitle B of the Food Security Act (MOA), and the January 1995, Illinois Interagency Implementation of the National Wetland MOA. Therefore, NRCS no longer makes certified wetland determinations on agricultural lands where the land use is changing to a non-agricultural use.

However, in the Chicago District, the USACE requires a review of crop compliance slides in accordance with the National Food Security Act Manual (NFSAM) methodology for agricultural lands.

MEI used the precipitation data from the Joliet National Weather Service "WETS Station IL 4530" Station in order to determine the appropriate Farm Service Agency (FSA) crop compliance slides to review. The slides were examined on August 16, 2023, using NRCS spectral response criteria and category definitions for wetland determinations.

One wet year (2009) was selected as the base aerial photograph to identify consistently wet areas present on the site in which wetland signatures could be distinguished. Five normal precipitation years (1998, 2002, 2007, 2008, 2012) were examined to determine how many years the wetland signatures identified in the base wet year persist during the normal precipitation years. If the signature occurred in at least 50% of the years of normal rainfall, this area was determined to be a farmed wetland.

The results of the crop compliance slide examination are provided in Table 2. Potential farmed wetland areas that were examined by MEI are shown in **Table 2**.

Table 1. S	Table 1. Summary of Existing Data Sources						
Exhibit	Title of Data Source	Wetland(s) and/or Hydric Soils Indicated	Comments				
1	U.S. Geological Survey (USGS) topographic map and National Wetland Inventory Map	Yes	USGS & NWI identify a riverine classification of R4SBC.				
2	NRCS Swampbuster wetland inventory	No	Not completed by the NRCS office				
3	Kendall County Soils Survey	Yes	Hydric Soils: Drummer silty clay loam (152A) and Elpaso silty clay loam (356A).				
4	Precipitation Records for Joliet, IL	Yes	Years classified for dry, normal, and wet (summary in Table 2)				

NRCS wetland spectral response criteria and category definitions used in the interpretation of Farm Service Agency Slides (FSA) See Table 2
--

Wetland Spectral Signatures for FSA Manuel Evaluations:

- Ponding, flooding or saturation of sufficient duration to meet hydrology criteria;
- drowned out crops;
- Different vegetation tonal patterns:
- Greener areas in dry years;
- Differential planting dates;
- Crop stress;
- Differential cropping in same parcel in irregular polygons;

All of the slides were examined and all potential wetland areas (PWA) were indicated on an aerial photograph included in this package. Each potential wetland area was evaluated year by year using the criteria in NRCS criteria, included, and the results are summarized in Table 2.

	Table 2. Prec	ipitation & Slide Analysis			
Lakewood F	rairie - Unit 3 - Joliet - Kendall Cou				
Year	Precipitation Evaluation for Brandon Road IL4530 Joliet Illinois	FSA Slide # observed	Spectral Signature of Potential Wetland Areas (P.W.A.)		
			PWA 1		
2009 Indicator Year	Wet	2009.jpg	x		
1998	Normal	1998.jpg	*		
2002	Normal	2002.jpg	Х		
2007	Normal	2007.jpg	*		
2008	Normal	2008.jpg	Х		
2012	Normal	2012.jpg	X		
Percentage Observed Out of five Normal Years			60%		
Certified Farmed Wetland			Yes		
Farmed Wetland Acreages			0.52-a cres		
_	Anticipated Jurisdictional Agency		IWKC		

Based on the slide review, Midwest Ecological Inc. identified one (1) farmed wetland within the study area totaling 0.52-acres.

CONCLUSIONS

The site was evaluated using U.S. Army Corps of Engineers and USDA guidelines for identifying wetlands. After evaluation of all data obtained, Midwest Ecological, Inc. (MEI) identified one (1) drainage ditch and one (1) farmed wetland totaling **0.61-acres** in size.

FEDERAL REGULATIONS

Jurisdictional Waters of the United States will be regulated under Section 404 of the Clean Water Act and the Section 401 Water Quality Certification requirements. Under Section 404, the United States Army Corps of Engineers regulates the discharge of dredged or fill material into jurisdictional Waters of the United States (WOUS).

Letter of No-Objection (LONO): The project may require a letter of No-Objection (LONO)/No Permit Required (NPR) from the Chicago District Army Corps of Engineers to facilitate development. If the proposed project avoids impact to the jurisdictional WOUS/Wetland areas then a LONO/NPR can be petitioned.

Nationwide Permit 29 (NWP29): Residential Developments Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of a single residence, a multiple unit residential development, or a residential subdivision. This NWP authorizes the construction of building foundations and building pads and attendant features that are necessary for the use of the residence or residential development. Attendant features may include but are not limited to roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development).

Subdivisions: For residential subdivisions, the aggregate total loss of waters of United States authorized by this NWP cannot exceed 1/2-acre. This includes any loss of waters of the United States associated with development of individual subdivision lots.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (Authorities: Sections 10 and 404).

Activities that do not fall into one of the above categories, by definition, have more than minimal impacts and are therefore subject to the Individual Permit review process.

Should you have any questions, please do not hesitate to contact our office. Sincerely,

Midwest Ecological, Inc. (MEI)

Robert L. Vanni

Senior Environmental Resource Specialist

APPENDIX A

Exhibits

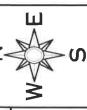


Wetland Aerial Photograph

Client: Ms. Jessica Cobb, Lennar Homes

1700 East Golf Road, Ste. 1100

Schaumburg, Illinois 60173





Mackie Consultants, LLC 9575 W. Higgins Road, Suite 500 Rosemont, IL 60018 (847)696-1400 www.mackieconsult.com

LENNAR

1700 E. Golf Road, Suite 1100 Schaumburg, IL 60173 Phone: 224-293-3100 Fax: 224-293-3101

			DESIGNED	
			DRAWN	LZ
			APPROVED	МТ
			DATE	10/24/
DATE	DESCRIPTION OF REVISION	BY	SCALE	1" = 1

LAKEWOOD PRAIRIE - UNIT 3 JOLIET, ILLINOIS

PROJECT NUMBER: 4276

© MACKIE CONSULTANTS LLC, 2023

ILLINOIS FIRM LICENSE 184-002694



1700 East Golf Road, Ste. 1100

Schaumburg, Illinois 60173





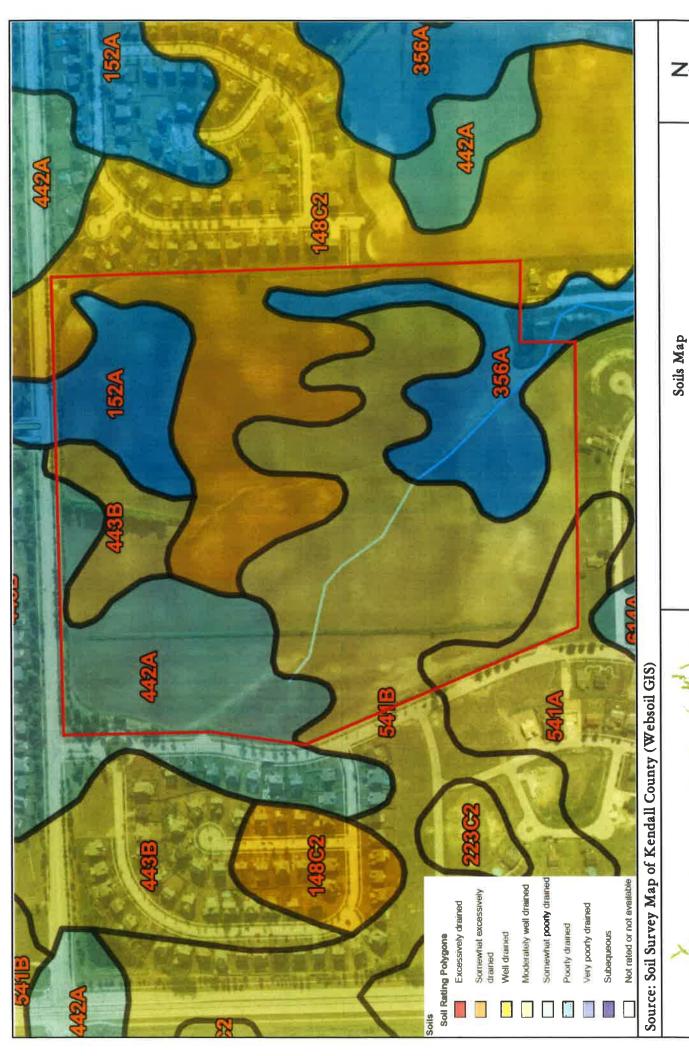
NWI Map

nt: Ms. Jessica Cobb, Lennar Homes

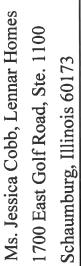
1700 East Golf Road, Ste. 1100

Schaumburg, Illinois 60173

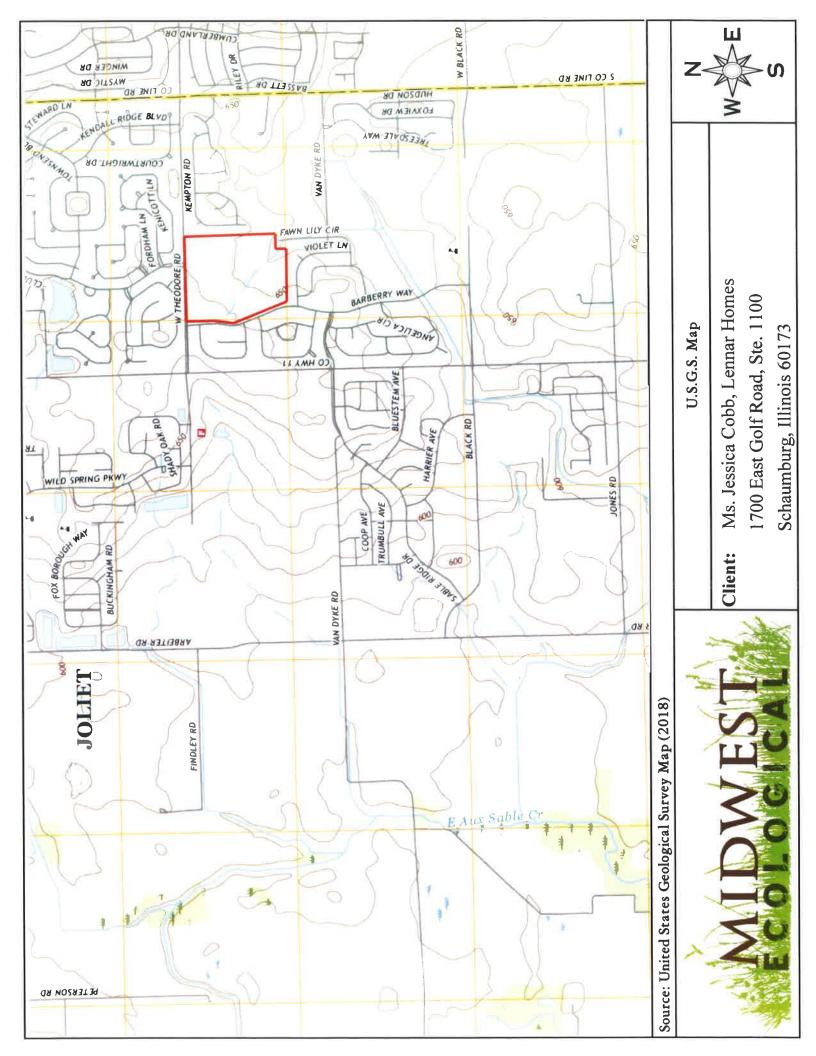




Client: Ms. Jessica Cobb, Lenn

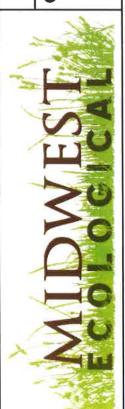








Source: Flood Insurance Rate Map (17093C0145 H)



FEMA

Client: Ms. Jessica Cobb, Lennar Homes

1700 East Golf Road, Ste. 1100

Schaumburg, Illinois 60173



APPENDIX B

FSA Farmed Wetland Slide Review



Client: Ms. Jessica Cobb, Lennar Homes

1700 East Golf Road, Ste. 1100





Client: Ms. Jessica Cobb, Lennar Homes

1700 East Golf Road, Ste. 1100





Client: Ms. Jessica Cobb, Lennar Homes

1700 East Golf Road, Ste. 1100

Schaumburg, Illinois 60173 P





Client: Ms. Jessica Cobb, Lennar Homes

1700 East Golf Road, Ste. 1100





Client: Ms. Jessica Cobb, Lennar Homes

1700 East Golf Road, Ste. 1100





Client: Ms. Jessica Cobb, Lennar Homes

1700 East Golf Road, Ste. 1100



APPENDIX C

Photographs



Drainage Ditch #1: A small farmers ditch is noted on the north property line.



The ditch was dry but it is suspected to have intermittent flow.



The ditch was historically excavated in 2006.



Data Point 1 (DP1) confirms an upland soil condition.



Data Point 2 (DP2) confirms an wetland soil condition.



Erosional Rill #1 is an upland drainage conveyance.



Erosional Rill #2 is an upland drainage conveyance.





The entire Lakewood Prairie Unit 3 farm is under a revolving agricultural usage.

APPENDIX D

Data Sheets

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Lakewood Prairie Unit 3 Farm		City/Cou	nty: Joliet/K	endall	Sampling Date:	9-22-2023
Applicant/Owner: Lennar Homes			15	State IL	Sampling Point:	DP1
Investigator(s): Robert Vanni		Section, T	ownship, Ra	nge: S 1, T 35, R 8		
Landform (hillside, terrace, etc.):			Local relief (d	concave, convex, none):		
Slope (%): 0 Lat: 41.548963		Long: -	88.270075		Datum:	
Soil Map Unit Name: Mundelein silt loam (442A)					fication:	
Are climatic / hydrologic conditions on the site typica	I for this time of	year?	Yes	No X (If no, exp	olain in Remarks.)	
Are Vegetation , Soil , or Hydrology	significantly di	sturbed? A	Are "Normal (Circumstances" present?	Yes X No	0
Are Vegetation, Soil, or Hydrology	_			plain any answers in Re		===>
SUMMARY OF FINDINGS – Attach site	_		ng point lo	cations, transects	, important fea	ntures, etc.
Hydric Soil Present? Yes	No X No X No X	1	e Sampled A n a Wetland		No_X	
Remarks: The data point was taken in a contained depression	n within the agric	ultural field.				
VEGETATION – Use scientific names of p	lants.					
Tree Stratum (Plot size:)		Dominant Species?	Indicator Status	Dominance Test wo	rksheet:	
1.				Number of Dominant Are OBL, FACW, or F		0 (A)
3				Total Number of Dom Across All Strata:	inant Species	1 (B)
5		Total Cover	-	Percent of Dominant Are OBL, FACW, or F		0.0% (A/B)
1	_			Prevalence Index wo	 orksheet:	
2.			-	Total % Cover of	f: Multiply	y by:
3.				OBL species 0	x 1 =	0
4					x 2 =	0
5) x 3 =	0
		Total Cover			x 4 =	0
Herb Stratum (Plot size: 5	400	V	LIDI	· —		500 (D)
1. Zea mays 2.	100	Yes	UPL	Column Totals: 10 Prevalence Index	`` ′	500 (B)
2. 3.				Prevalence index	- B/A - 3.00	
			=	Hydrophytic Vegeta	tion Indicators:	
5.				1	r Hydrophytic Vege	tation
6.				2 - Dominance To	est is >50%	
7.				3 - Prevalence In	dex is ≤3.0 ¹	
8				I —	l Adaptations ¹ (Prov	
9	_8		:		ks or on a separate	
10				Problematic Hydi	rophytic Vegetation	¹ (Explain)
Woody Vine Stratum (Plot size:		Total Cover		¹ Indicators of hydric s be present, unless dis		
1.c	_n			Hydrophytic		
2.				Vegetation		
	=	Total Cover		Present? Yes	No_X	
Remarks: (Include photo numbers here or on a se	•					

SOIL							Sampling F	Point: DP1	
Profile Des	cription: (Describe t	o the dep	th needed to doc	ument the indic	ator or c	onfirm the absence of i	ndicators.)		
Depth	Matrix		Redo	x Features					
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc2	Texture	Rema	arks	
0-8	10YR 2/1	100				Loamy/Clayey			
8-16	10YR 5/3	100				Loamy/Clayey			
	3444)) 	-				
		-		-					
	-								
1						2, ,, ,		A	
	Concentration, D=Depl	etion, RM:	=Reduced Matrix, N	MS=Masked San	d Grains		PL=Pore Lining, Moreon Problematic H		-
	Indicators:		Candy Cla	wood Matrix (CA)			rairie Redox (A16)	•	
Histosol			Sandy Re	eyed Matrix (S4)		_	nganese Masses	-	1
	pipedon (A2)		Stripped N				rent Material (F21)	. ,	l
_	istic (A3)		Dark Surfa				nallow Dark Surfac		
	en Sulfide (A4) d Layers (A5)			icky Mineral (F1)			Explain in Remarks		
-	uck (A10)			eyed Matrix (F2)			-xpiairi ii romani	5,	
_	d Below Dark Surface	(Δ11)		Matrix (F3)					
	ark Surface (A12)	, (/ \ ' /)		rk Surface (F6)		³ Indicators o	of hydrophytic veg	etation and	1
	Mucky Mineral (S1)			Dark Surface (F7	·)		hydrology must b		- 1
	ucky Peat or Peat (S3	3)		pressions (F8)	,		disturbed or proble		
	Layer (if observed):			·					\neg
Type:	Layor (iii obdorrou)								
Depth (i	inches):					Hydric Soil Present?	Yes	No	x
Remarks:			_				25		
1	oint was taken within t	he plowed	field.						
''''									
	_								
HYDROL	OGY								
Wetland H	ydrology Indicators:								
Primary Ind	licators (minimum of c	ne is requ					Indicators (minimu		<u>ıired)</u>
I —	Water (A1)			ined Leaves (B9)		Soil Cracks (B6)		
I —	ater Table (A2)			auna (B13)			ge Patterns (B10)	(00)	
l —	ion (A3)			atic Plants (B14)	4.		ason Water Table	(C2)	
I —	Marks (B1)			Sulfide Odor (C			h Burrows (C8)	ial Imagany (C	·0)
I —	ent Deposits (B2)			Rhizospheres on		· · · —	ion Visible on Aeri d or Stressed Plan		9)
1 —	eposits (B3)			of Reduced Iron on Reduction in ⁻			orphic Position (D2		
I — -	lat or Crust (B4) posits (B5)			k Surface (C7)	illed 50i	` -	eutral Test (D5)	.,	
	tion Visible on Aerial I	magery (B		Well Data (D9)			34.4 35. (23)		
1	ly Vegetated Concave			plain in Remarks	;)				
Field Obse									
	ater Present? Ye	se.	No X	Depth (inches):					
Water Tabl			No X	Depth (inches):		•			
Saturation			No X	Depth (inches):		Wetland Hydrology	Present? Yes	No	X
II .	apillary fringe)			((
	ecorded Data (stream	gauge, m	nonitoring well, aeri	al photos, previo	us inspe	ctions), if available:			
Remarks:	idrology was not obse	nved within	n the data point						
vveliand ny	drology was not obse	a ved willill	i die data politi.						

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Lakewood Prairie Unit 3 Farm	City/County:	Joliet/Kenda	II	Sam	pling Date:	9-22-	2023
Applicant/Owner: Lennar Homes			State: I	L Sam	pling Point:		P2
Investigator(s): Robert Vanni	Section, Towr	nship, Range:	S 1, T 35, F	₹8			
Landform (hillside, terrace, etc.):	Loca	al relief (conca	ive, convex, r	none):			
Slope (%): 0 Lat: 41.548968	1.5	266281			:		
Soil Map Unit Name: Drummer silty clay loam (152A)				classification			
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes	s N	o X (Ifr	no, explain in	Remarks.)		
Are Vegetation X , Soil , or Hydrology significantly dist							
Are Vegetation , Soil , or Hydrology naturally proble		eeded, explain					-
SUMMARY OF FINDINGS – Attach site map showing		point locat	ons, trans	sects, imp	ortant fe	atures	i, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	1	mpled Area Wetland?	Yes	X No	·		
Remarks: The data point was taken within a farmed wetland.							
VEGETATION – Use scientific names of plants.							
		dicator Status De	ominance Te	st workshee	et:		
2.			umber of Don e OBL, FACV		s That	0	_(A)
3			otal Number o cross All Strat		Species	1	(B)
5=T	otal Cover		ercent of Dom e OBL, FACV	•	s That —	0.0%	_(A/B)
Sapling/Shrub Stratum (Plot size:)		Pi	evalence Inc	dex workshe	et:		
1,			Total % Co		Multip	ly by:	
3,			BL species	0	x 1 =	0	=
4.		F/	ACW species	0	x 2 =	0	5
5.		F/	AC species	0	x 3 =	0	25
=T	otal Cover	F	ACU species	0	x 4 =	0	
Herb Stratum (Plot size: 5		U	PL species	100	x 5 =	500	_
1. Zea mays 100	Yes	UPL C	olumn Totals:		(A)	500	_(B)
2			Prevalence I	Index = B/A	= 5.0	00	-
3.		 		'4-4' I			
5.		— H	ydrophytic V	egetation in est for Hydro		atatian	
			_	nce Test is >		etation	
7			_	nce Index is			
8.			_	logical Adapt		ovide su	pporting
9.				Remarks or o			
10.			Problemati	c Hydrophyti	c Vegetatio	n¹ (Expl	ain)
	otal Cover		— ndicators of h e present, unl				must
1			ydrophytic				
2.			egetation				
=T	otal Cover		resent?	Yes	No	_	
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation was not observed within the sample.							

SOIL Sampling Point: DP2

Depth (inches)	Matrix		Redo	x Featur	es			
1	Color (moist)	%	Color (moist)	%	Type	Loc ²	Texture	Remarks
0-10	10YR 2/1	100					Loamy/Clayey	
10-16	10YR 2/1	90	10YR 4/1	10	С	M	Loamy/Clayey	Faint redox concentrations
				-				-:
							×	
			-	_	7		,	
		•					2	
1Type: C=C(oncentration, D=Depl	etion RM:	=Reduced Matrix N		ed San		² l ocati	ion: PL=Pore Lining, M=Matrix.
Hydric Soil I		Ction, raivi	-reduced Matrix, I	VIO-IVIAS	ked Oark	u Oranis		tors for Problematic Hydric Soils ³ :
Histosol			Sandy Gle	ved Mat	rix (S4)			past Prairie Redox (A16)
	Histic Epipedon (A2) Sandy Redox (S5)			Iron-Manganese Masses (F12)				
Black His						ed Parent Material (F21)		
— Hydroge	n Sulfide (A4)		Dark Surfa	ce (S7)	•			ery Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	, ,	eral (F1)			ther (Explain in Remarks)
X 2 cm Mu	ick (A10)		Loamy Gle	eyed Mat	rix (F2)			•
Depleted	Below Dark Surface	(A11)	Depleted N	Matrix (F	3)			
Thick Da	ark Surface (A12)		X Redox Dai	rk Surfac	e (F6)		³ Indicators of hydrophytic vegetation and	
Sandy M	lucky Mineral (S1)		Depleted [Dark Sur	face (F7)	We	etland hydrology must be present,
5 cm Mu	icky Peat or Peat (S3	5)	Redox De	pression	s (F8)		ur	lless disturbed or problematic.
Restrictive I	Layer (if observed):							
Type:								
Depth (in	nches):						Hydric Soil Pres	ent? Yes_X_ No
Remarks:								
HYDROLO	OGY							
	OGY drology Indicators:							
Wetland Hy		ne is requ	ired; check all that	apply)			Secon	ndary Indicators (minimum of two required
Wetland Hyd	drology Indicators:	one is requ	ired; check all that Water-Sta		ives (B9)		ndary Indicators (minimum of two required
Wetland Hyd Primary Indic	drology Indicators: cators (minimum of c	ne is requ		ined Lea)	X_St	urface Soil Cracks (B6) rainage Patterns (B10)
Wetland Hyd Primary India Surface High Wa Saturatio	drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3)	ne is requ	Water-Sta Aquatic Fa True Aqua	ined Lea auna (B1 atic Plant	3) s (B14)		X Si	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2)
Wetland Hyd Primary India Surface High Wa Saturatio Water M	drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plant Sulfide (3) s (B14) Odor (C1)	X St Dt	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph	3) s (B14) Odor (C1 eres on) Living R	X St	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Redu	3) s (B14) Odor (C1 eres on ced Iron	Living R (C4)	X Si	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) cosits (B3) at or Crust (B4)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on ced Iron stion in T	Living R (C4)	X St	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface	3) s (B14) Odor (C1 eres on ced Iron ction in T	Living R (C4)	X St	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial In	magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or	ined Lea auna (B1 sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on ced Iron ction in T e (C7) ca (D9)	Living R (C4) illed Soi	X St	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial In	magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or	ined Lea auna (B1 sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on ced Iron ction in T e (C7) ca (D9)	Living R (C4) illed Soi	X St	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2)
Wetland Hyderimary India Surface High Wa Saturation Water M Sedimen Drift Dep Algal Ma Iron Dep Inundation Sparsely	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial In y Vegetated Concave	magery (B Surface (Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck T) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat blain in F	3) s (B14) Ddor (C1 eres on ced Iron stion in T e (C7) a (D9) Remarks	Living R (C4) illed Soi	X St	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2)
Wetland Hyderimary India Surface High Wa Saturation Water M Sediment Drift Dep Algal Ma Iron Dep Inundation Sparsely Field Obsert	drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present?	magery (B Surface (Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface Well Dat blain in F	3) s (B14) Ddor (C1 eres on ced Iron stion in T e (C7) a (D9) Remarks	Living R (C4) illed Soi	X St	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2)
Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Water Table	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Ye	magery (B Surface (Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck T) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduct on Reduct Surface Well Dat Depth (i Depth (i	3) s (B14) Odor (C1 eres on ced Iron cition in T e (C7) a (D9) Remarks nches):	Living R (C4) illed Soi	X Si Di Di Ci Ci Si Si Si Si Ci Si Ti Fi Ti Ti Ti Ti Ti T	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2) AC-Neutral Test (D5)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P	drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) darks (B1) ont Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Present? Ye Present? Ye	magery (B Surface (Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface Well Dat blain in F	3) s (B14) Odor (C1 eres on ced Iron cition in T e (C7) a (D9) Remarks nches):	Living R (C4) illed Soi	X Si Di Di Ci Ci Si Si Si Si Ci Si Ti Fi Ti Ti Ti Ti Ti T	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Present? Ye pillary fringe)	magery (B s Surface (es es ss	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dar blain in F Depth (i Depth (i	3) s (B14) Ddor (C1 eres on ced Iron ction in T e (C7) aa (D9) Remarks nches): nches):	Living R (C4) iilled Soi	oots (C3) X Si Si Si Si Wetland Hydro	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2) AC-Neutral Test (D5)
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Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial In y Vegetated Concave rvations: ter Present? Present? Ye pillary fringe)	magery (B s Surface (es es ss	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dar blain in F Depth (i Depth (i	3) s (B14) Ddor (C1 eres on ced Iron ction in T e (C7) aa (D9) Remarks nches): nches):	Living R (C4) iilled Soi	oots (C3) X Si Si Si Si Wetland Hydro	urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2) AC-Neutral Test (D5)
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APPENDIX E

Habitat Evaluation Score Sheet

OBSERVER: Rob Vanni

<u>DATE:</u> September 22, 2023 LOCATION: Drainage Ditch #1

WILDLIFE HABITAT/USE EVALUATION SCORE SHEET

To assess the existing and/or potential wildlife habitat use of the subject wetland, the applicant must first complete this score sheet. The attached documentation provides examples of each scoring parameter.

A separate sheet must be completed for each wetland being considered.

Applicants must document their basis for scoring decisions with field surveys, current photographs, aerial photographs, and other appropriate information.

A. Utilization by Wildlife

Wildlife Use	Score
Significant	3
Evident	2
Low	1
Occasional	0.5
Non-Existent	0

SUB-TOTAL SCORE = 1.0

Response: Wildlife usage was not observed at the time of our investigation.

B. Interspersion of Vegetative Cover

Interspersion	Score
High	3
Medium	2
Low	1

SUB-TOTAL SCORE = 1.0

C. Vegetative Cover to Open Water

Cover	Score
>95% Cover	0.5
76% - 95% Cover, Peripheral	1.5
76% - 95% Cover, Various	2.5
26% - 75% Cover, Peripheral	2.0
26% - 75% Cover, Patches	3.0
5% - 25% Cover, Peripheral	1.0
<5% Cover	0.5

SUB-TOTAL SCORE = 0.5

Response: The ditch bottom was dry and devoid of herbaceous vegetation.

TOTAL SCORE $(A+B+C) = \underline{2.5}$

Total score \geq 5.00 apply Ludwig Wildlife Methodology.

Total score < 5.00 no further wildlife analysis is necessary.

Wildlife habitat use evaluation of any particular wetland should consider both the actual wildlife uses and an analysis of the habitat values related to wildlife. Habitat evaluation provides consideration of conditions for species of wildlife that may not be currently using a wetland, but preferred habitat for feeding, nesting, rearing of young, or cover is present.

Wildlife habitat/use, ideally, should be analyzed over an entire year and for some wetlands, several years' conditions should be documented. However, obvious time constraints do not allow this. Therefore, if the evaluator does not have personal knowledge of the wetland during other seasons/years and does not have training in wildlife, a degreed wildlife biologist or ecologist should be requested to complete this section of the evaluation.

A. Utilization by Wildlife

Complete the table on the evaluation form for each wildlife group for the uses listed across the top of the table using the following point system. Consider all seasons of the year in this evaluation.

Use by wildlife group within each habitat is $\underline{\text{significant}}$ in that loss or reduction of the habitat would have an adverse effect (i.e., loss of individuals) on the population of the species or overall wildlife population in the general area (township). $\underline{\text{SCORE}} = 3$

Use by wildlife group within each habitat is <u>evident</u> or probable and loss or reduction of the habitat would have an adverse effect (i.e., loss of individuals) on the local wildlife population (surrounding sections). SCORE = 2

Use by wildlife group within each habitat is <u>incidental</u> or low in that loss or reduction of the habitat would have a negligible effect (i.e., loss of individuals) on the local wildlife population. $\mathbf{SCORE} = \mathbf{1}$

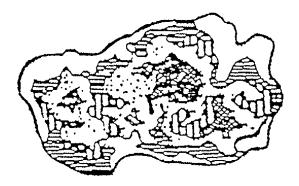
Use by wildlife group within each habitat is nonexistent at any time during any year. NOTE: Use 0.5 to signify occasional use. $\underline{SCORE} = \underline{0}$

B. Interspersion of Vegetative Cover

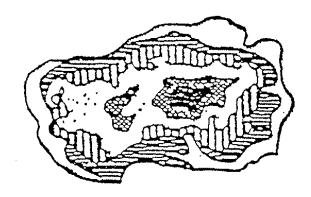
From recent aerial photographs of the wetland, determine which of the following criteria best describes the vegetative forms of the site. Determine from conditions at the peak of the growing season.

	COMMUNITY TYPE 1
	COMMUNITY TYPE 2
	COMMUNITY TYPE 3
	COMMUNITY TYPE 4
E	COMMUNITY TYPE 5
	COMMUNITY TYPE 6

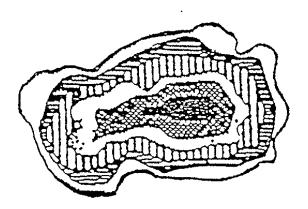
High interspersion of vegetation. Edge is abundant and consists of several species. Life form zones of vegetation are broken into segments of variable size and shape. Subforms of vegetation are small and scattered. $\underline{SCORE} = \underline{3}$



Moderate interspersion of vegetation. Edge is moderate in length and diversity with some irregularity in the distribution of subform stands, but vegetation life forms remain largely intact. $\underline{SCORE} = \underline{2}$



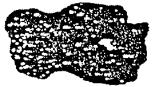
Low interspersion of vegetation. Length and types of edge are at a minimum. The wetland consists of concentric life forms and subforms. Subform stands are large and continuous. $\underline{SCORE} = \underline{1}$



C. Vegetative Cover to Open Water

From a recent aerial photograph of the wetland, determine which of the following criteria best describes the vegetation/open water characteristics of the wetland. NOTE: Wetland cover types: white areas indicate water (with or without surface plants); black areas indicate emergents, shrubs, or trees.

Cover occupies more than 95% of wetland $\underline{SCORE} = 0.5$



Cover occupies 76 - 95% of wetland occurring in peripheral band $\underline{SCORE} = 1.5$



Cover occupies 76 - 95% of wetland with scattered open water **SCORE = 2.5**



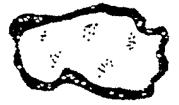
Cover occupies 26 - 75% of wetland occurring in peripheral band **SCORE = 2.0**



Cover occupies 26 - 75% of wetland occurring in dense patches or diffuse in open stands **SCORE = 3.0**



Cover occupies 5 - 25% of wetland occurring in peripheral band or diffuse in open stands **SCORE = 1.0**



Cover occupies less than 5% of wetland $\underline{SCORE} = 0.5$



CASE NO	
DATE FILED:	

CITY PLAN COMMISSION JOLIET, ILLINOIS

PETITION FOR A PLANNED UNIT DEVELOPMENT (Check One)

	Preliminary Final
	rmai
NAME OF PUD: Lakewood F	<u>Prairie</u>
NAME OF PETITIONER: CalAtlar	tic Group, LLC (d/b/a Lennar Corporation)
HOME ADDRESS: N/A	
CITY, STATE, ZIP: N/A	
HOME PHONE: N/A	
CELL#: N/A	E-MAIL:
BUSINESS ADDRESS: 1700 E.	Golf Road, Suite 1100
CITY, STATE, ZIP: Schaumbu	ırg, IL 60173
BUSINESS PHONE: 219-257-2	2603
INTEREST OF PETITIONER: Contr	act purchaser
NAME OF LOCAL AGENT: See A	Attorney Info Below.
address: N/A	PHONE:
	Company, as Trustee under the provisions of a certain September 18, 2010 and known as Trust Number 800238433
HOME ADDRESS: N/A	
CITY, STATE, ZIP: N/A	
HOME PHONE: N/A	
cell#: N/A	E-MAIL:
BUSINESS ADDRESS: 10 S. LaS	alle St. Suite 2750 PHONE: (312) 223-4110
CITY, STATE, ZIP: Chicago, I	
BUSINESS PHONE: (312) 223	-4110

ENGINEER: Madeline Larmon - Mackie C	Consultants, LLC
ADDRESS: 9575 W Higgins Rd #500	PHONE: 847-696-1400
LAND SURVEYOR: Same as Engineer.	
ADDRESS: N/A	PHONE:
ATTORNEY: N/A	
ADDRESS: N/A	PHONE:
LEGAL DESCRIPTION OF PROPERTY: See attached.	
COMMON ADDRESS:	
PERMANENT INDEX NUMBER (Tax No.): Vacant land located east of Barberry Way, son	th of the existing duplexes within the Lakewood Prairie Subdivision
size: Approximately 70 acres	
NO. OF LOTS: 1	
PRESENT USE: Vacant/Agricultural EXISTING ZON	
USES OF SURROUNDING PROPERTIES: North: Theodore	
	Two Family Residential)
	e-Family Residential)
West: R-1B (Single	e-Family Residential)
Name of Park District: Joliet Park District	
Date Contacted Park District: N/A	
Is any open space/park site being offered as part of a preliminary PUD?	lo.
If yes, what amount? N/A	
(Acknowledgment by Park District Official) N/A	
Has the Zoning Board of Appeals granted any variance, exception, or spec	
Yes No X If yes, list the Case number and name:	
Is any variance from the Subdivision Regulations being requested? Yes _	X No
If yes, describe: See attached Petition.	

Attach ten (10) copies of the plat to this petition.

List all contiguous holdings in the same ownership (as defined in the Subdivision Regulations) by permanent index numbers: None.
Attached hereto is an affidavit of ownership indicating the dates the respective holdings of land were acquired, together with the book and page of each conveyance to the present owner as recorded in the Will County Recorder of Deeds office. This affidavit shall indicate the legal owner of the property, the contract owner of the property, and the date the contract of sale was executed.
In the event the property is held in trust: A list of all individual beneficial owners of the trust must be attached.
In the event of corporate ownership: A list of all directors, officers, and stockholders of each corporation owning more than five percent (5%) of any shares of stock must be attached.
STATE OF ILLINOIS) ss COUNTY OF DUPAGE)
I, Eric Prechtel, Rosanova & Whitaker Ltd., hereby depose and say that all of the above statements and the statements contained in the papers submitted herewith are true. I agree to be present in person or by representation when this is heard by the Plan Commission. Date: How we have the presentation when this is heard by the Plan Commission. Petitioner's Name
Subscribed and sworn to before me this 22 day of April , 20 24 March 08 7077
Notary Public My Commission Expires:



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MCKENNA THOMA
OFFICIAL SEAL
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My Commission Expire
Litarch U8, 2027

Date: 117 2024

City of Joliet James N. Torri Planning Director 150 W. Jefferson Street Joliet, IL 60432

Re: Owner's Authorization and Consent to allow CalAtlantic Group, LLC, a Delaware limited liability company d/b/a Lennar Corporation to

Apply to the City of Joliet

Dear Mr. Torri,

Chicago Title Land Trust Company, as Trustee under the provisions of a certain Trust Agreement dated September 18, 2010 and known as Trust Number 8002384337, (the "Owner") is the Owner of approximately 70 acres of vacant property located east of Barberry Way, south of Theodore Road within the Lakewood Prairie Subdivision in Joliet, Illinois (the "Property"). Please accept this correspondence as the Owner's consent to permit CalAtlantic Group, LLC, a Delaware limited liability company d/b/a Lennar Corporation, ("Lennar") to apply to the City of Joliet for subdivision of the Property and other relief necessary for Lennar's intended development of the Property.

Please do not hesitate to contact me should you have any questions or concerns.

This instrument is executed by the undersigned Land Trustee, not personally but solely as Trustee in the exercise of the power and authority conferred upon and vested in it as such Trustee. It is expressly understood and agreed that all the warranties, indemnities, representations, covenants, undertakings and agreements herein made on the part of the Trustee are undertaken by a shall at any time be asserted or enforceable against the Trustee on account of any warranty, indemnity, representation, covenant, undertaking or agreement of the Trustee in this instrument.

Signature:

Name:

Conscrete

Con

CITY OF JOLIET OWNERSHIP DISCLOSURE FORM

The City of Joliet requires that applicants for zoning relief, subdivision approval, building permits and business licenses disclose the identity of all persons having an ownership interest in the business and the real property associated with the application. A copy of this form must be completed and submitted with other application materials. Failure to properly complete and submit this form may result in the denial of the application.

I. INFORMATION ABOUT THE APPLICATION

This form is submitted as part of an application for the following (check all that apply):
Rezoning, Special Use Permit, Variation, or Other Zoning Relief (Complete Sections II and III)
Preliminary Plat, Final Plat, or Record Plat of Subdivision (Complete Sections II and III)
Building Permit (Complete Sections II and III)
☐ Business License (Complete All Sections)
II. INFORMATION ABOUT THE PROPERTY
The address and PIN(s) of the real property associated with this application are:
Vacant property located at the southeast corner of Barberry Way and Theodore Road
PIN(s): 09-01-100-005
III. PROPERTY OWNERSHIP
Select the type of owner of the real property associated with this application and fill in the appropriate contact information below:
Individual: State the names, addresses, and phone #'s of the individual owner(s)
Corporation: State the names, addresses, and phone #'s of all persons holding 3% or more of the stock of the corporation and the percentage of shares held by such stockholders
Limited Liability Company: State the names, addresses, and phone #'s of all members of the company along with the percentage of ownership held by each member.
∑ Land Trust: State the names, addresses, and phone #'s of the trustee(s) and all beneficiaries
Partnership: State the names, addresses, and phone #'s of all partners
Other type of organization: State the names, addresses, and phone #'s of all persons having a legal or equitable ownership interest in the organization or the right to direct the affairs of the organization
SHANNON PIRRON 22.5% WADE LIGHT 22.5% KAREN TRUST 22.5% BRENDA TRUST 22.5% JOHN LUZYNSKI 2.5% DEBORAH LUZYNSKI 2.5% PACIFIC PREMIER TRUST CUSTODIAN FBO OF JOHN LUCZYNSKI IRA 2.5% PACIFIC PREMIER TRUST CUSTODIAN FOR DEBORAH LUZYNSKI 2.5%
C/O Wade Light 847- 304- 4898
E-MAIL: FAX:

IV. BUSINESS OWNERSHIP

If the owner of the business is different than the owner of the real property associated with the application, then the following information must be provided:

Select the type of business owner associated with this application and fill in the contact information below:

Select the type of business owner as	ssociated with this application and fill in the contact information below.				
] Individual:	State the names, addresses, and phone #'s of the individual owner(s)				
Corporation:	State the names, addresses, and phone #'s of all persons holding 3% or more of the stock of the corporation and the percentage of shares held by such stockholders				
☐ Limited Liability Company:	State the names, addresses, and phone #'s of all members of the company along with the percentage of ownership held by each member				
Partnership:	State the names, addresses, and phone #'s of all partners				
Other type of organization:	State the names, addresses, and phone #'s of all persons having a legal or equitable ownership interest in the organization				
1					
E-MAIL:	FAX:				
not an individual, then the i property or business associ example, if the real property and the beneficiary of the land the limited liability company liability company is a partners	neficiary or partner disclosed in Section III or Section IV is individuals holding the legal or equitable title to the real ciated with the application must also be disclosed. For associated with an application is owned by a land trust, and trust is a limited liability company, then the members of must be disclosed. If one of the members of the limited ship, then the identity of the partners must be disclosed. If oration, then all persons owning 3% or more of the issued				
	(8)				
SIGNED: STORES TRUS	ND TRUST COMPANY A NO. SEAL VICE PRESIDENT 1-8-24 CHICAGO, ILLINGS				
Name, Title, and Telephone Numbers of Person Completing and Submitting This Form: GREGORY 8. KANNET OFFICER 847-258-4857					
A Committee of the Comm					

CITY OF JOLIET OWNERSHIP DISCLOSURE FORM

The City of Joliet requires that applicants for zoning relief, subdivision approval, building permits and business licenses disclose the identity of all persons having an ownership interest in the business and the real property associated with the application. A copy of this form must be completed and submitted with other application materials. Failure to properly complete and submit this form may result in the denial of the application.

I. <u>INFORMATION ABOUT THE APPLICATION</u>

This form is submitted as part of an	application for the following (check all that apply):
☐ Rezoning, Special Use F	Permit, Variation, or Other Zoning Relief (Complete Sections II and III)
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☐ Business License (Compl	ete All Sections)
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Vacant property located at the	e southeast corner of Barberry Way and Theodore Road
PIN(s): 09-01-100-005	
III.	PROPERTY OWNERSHIP
Outside the form of a second discount	
contact information below:	al property associated with this application and fill in the appropriate
☐ Individual:	State the names, addresses, and phone #'s of the individual owner(s)
☐ Corporation:	State the names, addresses, and phone #'s of all persons holding 3% or more of the stock of the corporation and the percentage of shares held by such stockholders
	State the names, addresses, and phone #'s of all members of the company along with the percentage of ownership held by each member
☐ Land Trust:	State the names, addresses, and phone #'s of the trustee(s) and all beneficiaries
☐ Partnership:	State the names, addresses, and phone #'s of all partners
☐ Other type of organization:	State the names, addresses, and phone #'s of all persons having a legal or equitable ownership interest in the organization or the right to direct the affairs of the organization
CalAtlantic Group, L	LC - Petitioner
1700 East Gold Roa	d Suite 1100, Schaumburg, IL 60173
Contact: Todd Kleve	en
ph: 219-257-2603	
E-MAII Todd.Kleven@le	ennar.com _{EAV} .

IV. BUSINESS OWNERSHIP

If the owner of the business is different than the owner of the real property associated with the application, then the following information must be provided:

Select the type of business owner associated with this application and fill in the contact information below:

Individual: State the names, addresses, and phone #'s of the individual

owner(s)

Corporation: State the names, addresses, and phone #'s of all persons holding

3% or more of the stock of the corporation and the percentage of

shares held by such stockholders

Limited Liability Company: State the names, addresses, and phone #'s of all members of the

company along with the percentage of ownership held by each

member

Partnership: State the names, addresses, and phone #'s of all partners

Other type of organization: State the names, addresses, and phone #'s of all persons having a

legal or equitable ownership interest in the organization

Lennar Corporation (see attached shareholders) 5505 Blue Lagoon Drive, Miami, FL 33216

Contact: Todd Kleven

ph: 219-257-2603

E-MAIL Todd.Kleven@lennar.com FAX

NOTE:

If a stockholder, member, beneficiary or partner disclosed in Section III or Section IV is not an individual, then the individuals holding the legal or equitable title to the real property or business associated with the application must also be disclosed. For example, if the real property associated with an application is owned by a land trust, and the beneficiary of the land trust is a limited liability company, then the members of the limited liability company must be disclosed. If one of the members of the limited liability company is a partnership, then the identity of the partners must be disclosed. If one of the partners is a corporation, then all persons owning 3% or more of the issued stock must be disclosed.

SIGNED:	DocuSigned by: T, K ₁ _ B0A7DD8DF9CE420
1 / [/2024

DATE: 1/5/2024

Name, Title, and Telephone Numbers of Person Completing and Submitting This Form:

Todd Kleven, Director of Land Acquisition

Ph: 219-257-2603

PRINT

Security Ownership of Principal Stockholders

The following table shows stock ownership information as of February 15, 2023, with respect to each of our stockholders who is known by us to be a beneficial owner of more than 5% of either class of our outstanding common stock. To the best of our knowledge, and except as otherwise indicated, the persons named in this table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them.

Name	Title of Class	Amount and Nature of Beneficial Ownership	Percent Of Class(1)
Stuart Miller 5505 Blue Lagoon Drive Miami, FL 33126	Class B Common Stock	21,861,445 ⁽²⁾	61.2%
GAMCO Investors, Inc. One Corporate Center Rye, NY 10580-1435	Class B Common Stock	2,665,074(3)	7.5%
The Vanguard Group 100 Vanguard Blvd. Malvern, PA 19355	Class A Common Stock	28,212,757 ⁽⁴⁾	11.2%
Capital World Investors 333 South Hope Street, 55th Floor Los Angeles, CA 90071	Class A Common Stock	25,779,919 ⁽⁵⁾	10.2%
BlackRock, Inc. 55 East 52nd Street New York, NY 10055	Class A Common Stock	20,105,068 ⁽⁸⁾	8.0%
Wellington Management Group, LLP 280 Congress Street Boston, MA 02210	Class A Common Stock	14,837,758(7)	5.9%
Aristotle Capital Management, LLC 11100 Santa Monica Blvd., Suite 1700 Los Angeles, CA 90025	Class A Common Stock	13,699,782(8)	5.4%







