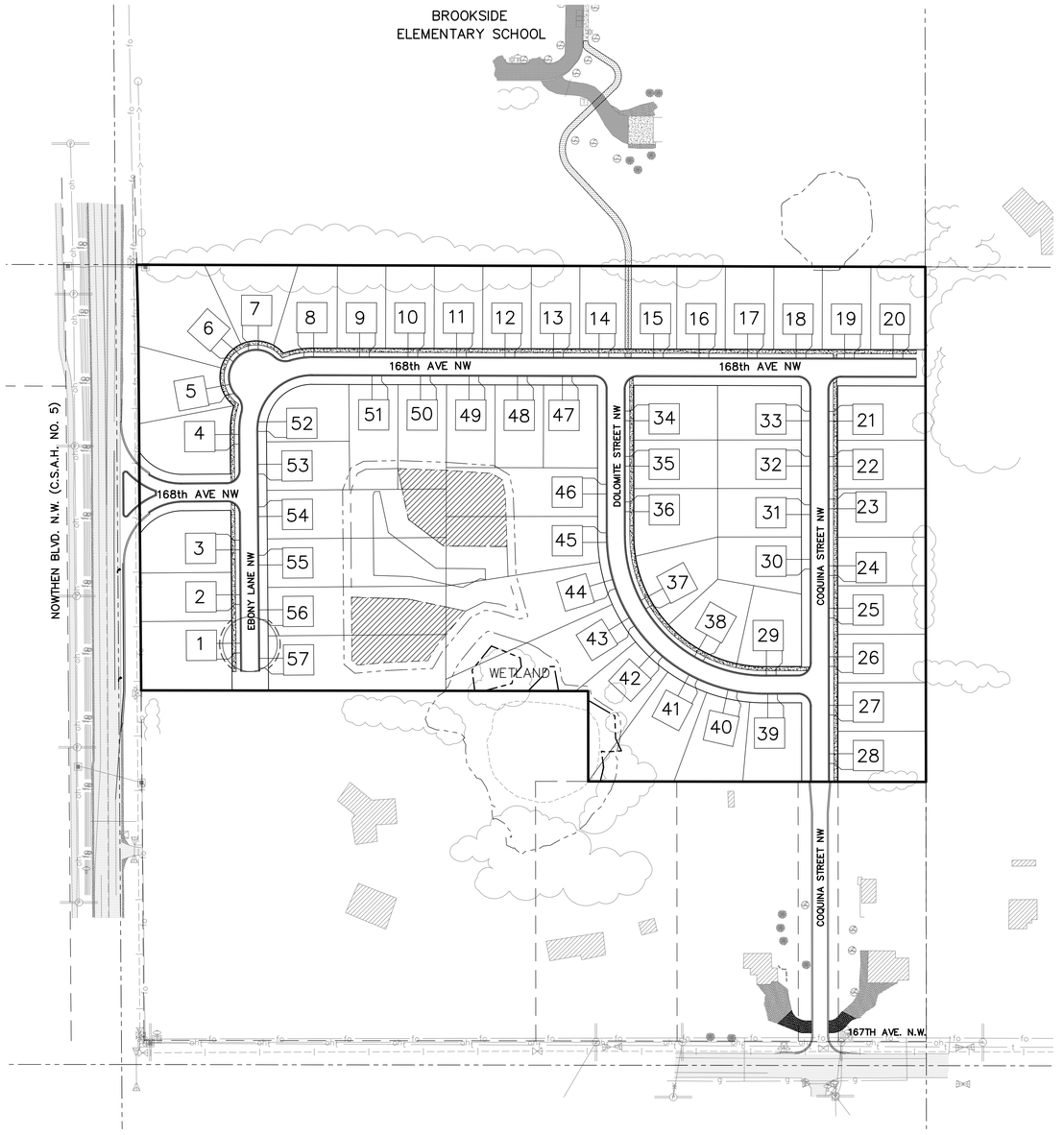
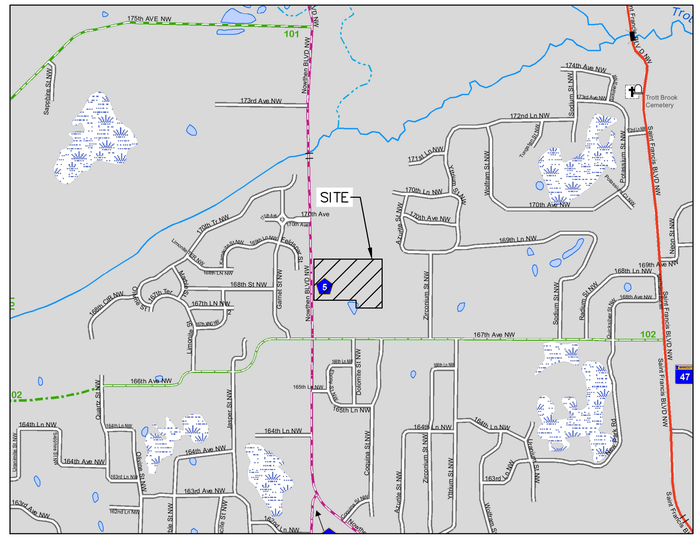
HARMONY FARMS
PRELIMINARY PLAT
RAMSEY, MINNESOTA





LOCATION MAP

SHEET INDEX

0 60 120 240

GRAPHIC SCALE IN FEET

BENCH MARK

TOP NUT OF HYDRANT AT NE QUAD OF INTERSECTION OF NOWTHEN BLVD. N.W. AND 167TH AVE. N.W. EL=890.48

TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W. EL=901.06

00-ENG-123074-SHEET-COVR

811 Know what's below. Call before you dig.

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I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Name Brian N. Molinaro

Reg. No. 47504 Date 7-10-2023

Revisions
1. 2024-02-05 City Comments

Date	12-08-2023
Designed	NAP
Drawn	PDS

COVER

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

1.10 OF 30

LEGEND

UTILITY LINES

EXISTING	PROPOSED	FUTURE	DESCRIPTION
			SANITARY MANHOLE
			SANITARY SEWER (SANITARY & WATERMAIN PLANS)
			SANITARY SEWER (STORM SEWER PLANS)
FM	FM	FM	FORCE MAIN
			HYDRANT
			GATE VALVE
			REDUCER
			CURB STOP
			WATERMAIN (SANITARY & WATERMAIN PLANS)
			WATERMAIN (STORM SEWER PLANS)
			CATCH BASIN
			BEEHIVE
			STORM MANHOLE
			FLARED END SECTION
			CONTROL STRUCTURE
			STORM SEWER (SANITARY & WATERMAIN PLANS)
			STORM SEWER (STORM SEWER PLANS)
			CULVERT
PERF	PERF	PERF	PERFORATED DRAINTILE
DT	DT	DT	SOLID DRAINTILE SERVICE
			CASING
e	e	e	UNDERGROUND ELECTRIC LINE
fo	fo	fo	UNDERGROUND FIBER OPTIC LINE
g	g	g	UNDERGROUND GAS PIPELINE
petro	petro	petro	UNDERGROUND PETROLEUM PIPELINE
t	t	t	UNDERGROUND TELEPHONE LINES
tv	tv	tv	UNDERGROUND TELEVISION LINE
oh	oh	oh	OVERHEAD UTILITY LINES

SITE LINES

EXISTING	PROPOSED	FUTURE	DESCRIPTION
			SURMOUNTABLE CURB & GUTTER
			B-STYLE CURB & GUTTER
			RIBBON CURB & GUTTER
			EDGE OF BITUMINOUS
			YELLOW PAVEMENT STRIPING (SINGLE/DOUBLE)
			WHITE PAVEMENT STRIPING (SINGLE/DOUBLE)
			PHASE LINE
			CENTERLINE
902	902	902	2' CONTOUR LINE
900	900	900	10' CONTOUR LINE
	OUTLET=987.0	OUTLET=987.0	BASIN OUTLET LINE
	HWL=900.2	HWL=900.2	BASIN HIGH WATER LINE
	84.3		PROPOSED SPOT ELEVATION
			EMERGENCY OVERFLOW
			DRAINAGE FLOW ARROW
			DELINEATED / PROPOSED WETLAND LINE
BUFFER	BUFFER	BUFFER	WETLAND BUFFER
			TREE LINE
FEMA	FEMA	FEMA	FEMA FLOODPLAIN BOUNDARY
			RETAINING WALL
X	X	X	FENCE (BARBED WIRE)
#	#	#	FENCE (CHAIN LINK)
[]	[]	[]	FENCE (WOOD)
	C		CONSERVATION AREA SIGN
	W		WETLAND BUFFER SIGN
			TYPE III BARRICADE
			LIGHT POLE
			STREET SIGNS
			PEDESTRIAN RAMP

SURVEY LINES

EXISTING	PROPOSED	FUTURE	DESCRIPTION
			BOUNDARY
			RIGHT OF WAY
			LOT LINE
			EASEMENT
			SET BACK LINE
			SECTION LINE
			RESTRICTED ACCESS

HATCH PATTERNS

	GRAVEL SURFACE		WETLAND
	BITUMINOUS SURFACE		WETLAND UPLAND BUFFER
	CONCRETE SURFACE		WETLAND MITIGATION
	RIP RAP		PERMANENT TURF RESTORATION
	SELECT BACKFILL MATERIAL		PERMANENT WET BASIN SEEDING
	EROSION CONTROL BLANKET MNDOT CATEGORY PER PLAN		UPLAND/NATURAL AREA SEEDING

TOPOGRAPHIC SYMBOLS

- CATCH BASIN
- CATCH BASIN BEEHIVE
- FLARED END SECTION
- GATE VALVE
- HYDRANT
- WATER SERVICE
- WATER WELL
- MONITORING WELL
- CLEANOUT
- HAND HOLE
- MANHOLE OTHER THAN SANITARY OR STORM
- SANITARY OR STORM MANHOLE
- LAWN SPRINKLER VALVE
- LAWN SPRINKLER HEAD
- UTILITY POLE
- TRANSFORMER BOX
- FIBER OPTIC BOX
- ELECTRIC BOX
- NATURAL GAS METER
- LIGHT POLE
- SEMAPHORE
- TELEPHONE BOX
- CABLE BOX
- CAST IRON MONUMENT
- FOUND IRON PIPE
- JUDICIAL LAND MARK
- PK NAIL
- CONTROL POINT
- SPIKE
- FLAG POLE
- TEST HOLE
- MAILBOX
- SIGN
- BOLLARD
- CONSERVATION POST
- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB / BUSH

EROSION & SEDIMENT CONTROL

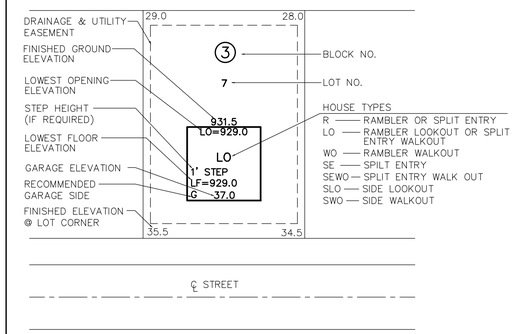
- STANDARD EROSION CONTROL
- HEAVY-DUTY EROSION CONTROL
- SECONDARY EROSION CONTROL FENCE
- EROSION CONTROL AT BACK OF CURB
- TREE FENCE
- TEMPORARY DIVERSION DITCH
- CATCH BASIN INLET PROTECTION
- STRAW BIO ROLLS
- ROCK BERM
- SUMPED RIP RAP PERMANENT ENERGY DISSIPATER
- DISCHARGE LOCATION
- GRAVEL CONSTRUCTION ENTRANCE
- TEMPORARY OUTLET FLOATING SKIMMER
- BASIN ACCESS 8% SLOPE MAX.
- STABILIZED EMERGENCY OVERFLOW
- STEEP SLOPE 3:1 (H:V) (33.3%) OR STEEPER GRADE

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE
B-B	BACK TO BACK
BV	BUTTERFLY VALVE
BOC	BACK OF CURB
BFE	BASE FLOOD ELEVATION
BMP	BEST MANAGEMENT PRACTICE
℄	CENTER LINE
CB	CATCHBASIN
CBMH	CATCHBASIN MANHOLE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CS	CURB STOP
DIP	DUCTILE IRON PIPE
DT	DRAINTILE
EL/ELEV	ELEVATION
EX	EXISTING
FES	FLARED END SECTION
F-F	FACE TO FACE
FM	FORCEMAIN
GB	GRADE BREAK
GND	GROUND
GV	GATE VALVE
HP	HIGH POINT
HYD	HYDRANT
HWL	HIGH WATER LEVEL
INV	INVERT
K	CURVE COEFFICIENT
L	LENGTH
LF	LOWEST FLOOR
LO	LOOKOUT
LO	LOWEST OPENING
LP	LIQUID PETROLEUM
LP	LOW POINT
MH	MANHOLE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
ℙ	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PVT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
R	RAMBLER
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
SSWR	SANITARY SEWER
STA	STATION
STRM	STORM SEWER
SWPPP	STORM WATER POLLUTION PROTECTION PLAN
TNH	TOP NUT HYDRANT
TYP	TYPICAL
WM	WATER MAIN
WO	WALKOUT

LOT INFORMATION

(TYPICAL SECTION NOT TO SCALE)



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Name Brian N. Molinaro Reg. No. 47504 Date

Revisions
1. 2024-02-05 City Comments

Date
Designed
Drawn

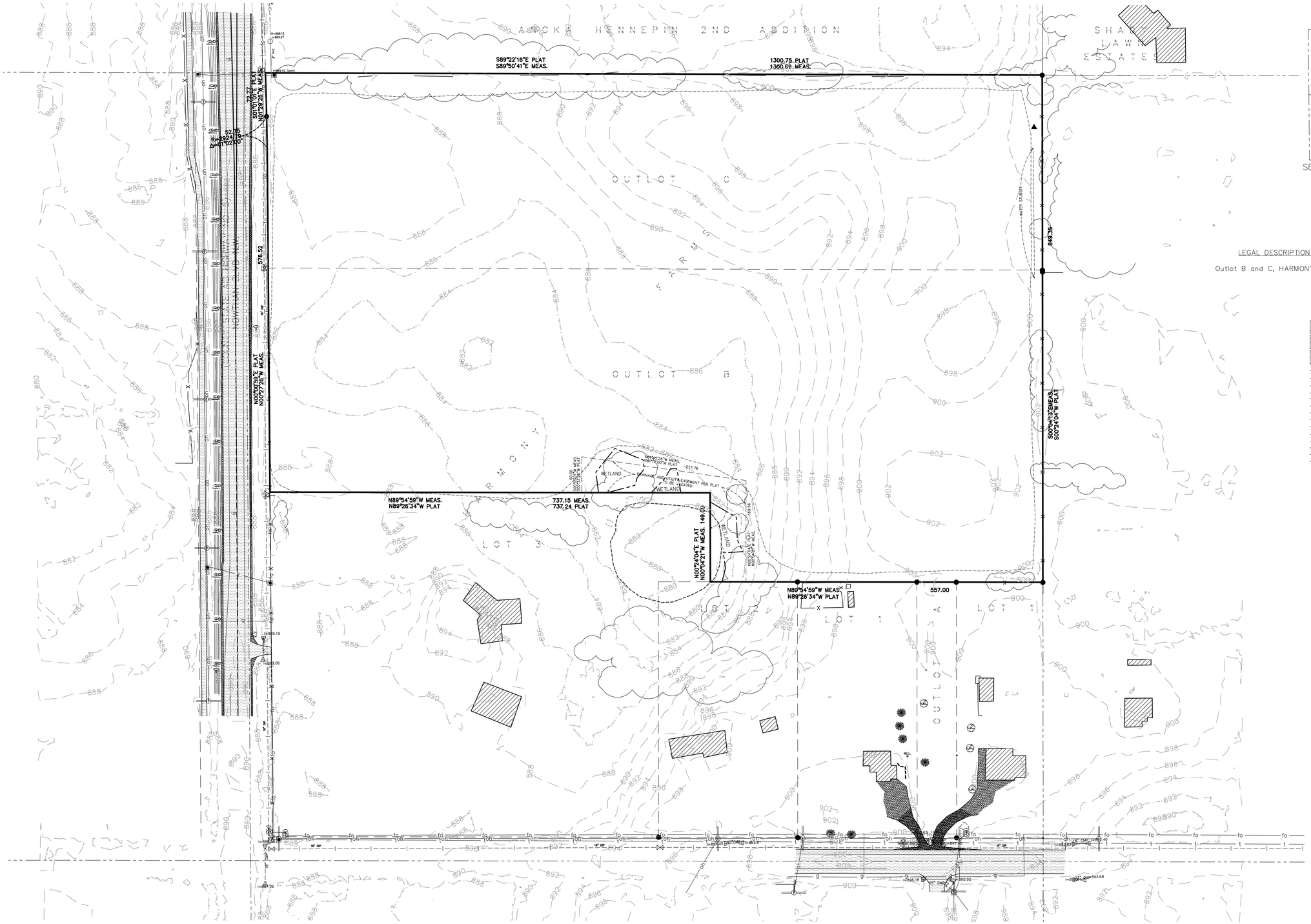
LEGEND

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-LGND

1.20 OF 30



LEGAL DESCRIPTION FOR PRELIMINARY PURPOSES ONLY

Outlot B and C, HARMONY FARMS, Anoka County Minnesota.

LEGEND

- Denotes concrete
- Denotes gravel
- Denotes bituminous
- Denotes tree line
- Denotes storm sewer line
- Denotes sanitary sewer line
- Denotes water line
- oh — Denotes overhead utility lines
- tv — Denotes underground television line
- t — Denotes underground telephone line
- fo — Denotes underground fiber optic line
- e — Denotes underground electric line
- Denotes underground petroleum lines
- g — Denotes underground gas line
- X — Denotes fence (barbed wire)
- # — Denotes fence (chain link)
- [] — Denotes fence (wood)
- Denotes catch basin
- Denotes catch basin beehive
- Denotes flared end section
- Denotes gate valve
- Denotes hydrant
- Denotes manhole other than sanitary or storm
- Denotes sanitary or storm manhole
- Denotes utility pole
- Denotes transformer box
- Denotes fiber optic box
- Denotes electric box
- Denotes telephone box
- Denotes television box
- Denotes cast iron monument
- Denotes found iron pipe
- Denotes spike
- Denotes mailbox
- Denotes sign
- Denotes deciduous tree
- Denotes coniferous tree

N

0 40 80 160

GRAPHIC SCALE IN FEET

BENCH MARK

TOP NUT OF HYDRANT AT NE QUAD OF INTERSECTION OF NOWTHEN BLVD. N.W. AND 167TH AVE. N.W. EL=890.48

TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W. EL=901.06

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Name Brian N. Molinaro
Brian N. Molinaro
Reg. No. 47504 Date 7-10-2023

Revisions
1: 2023-02-05 City Comments

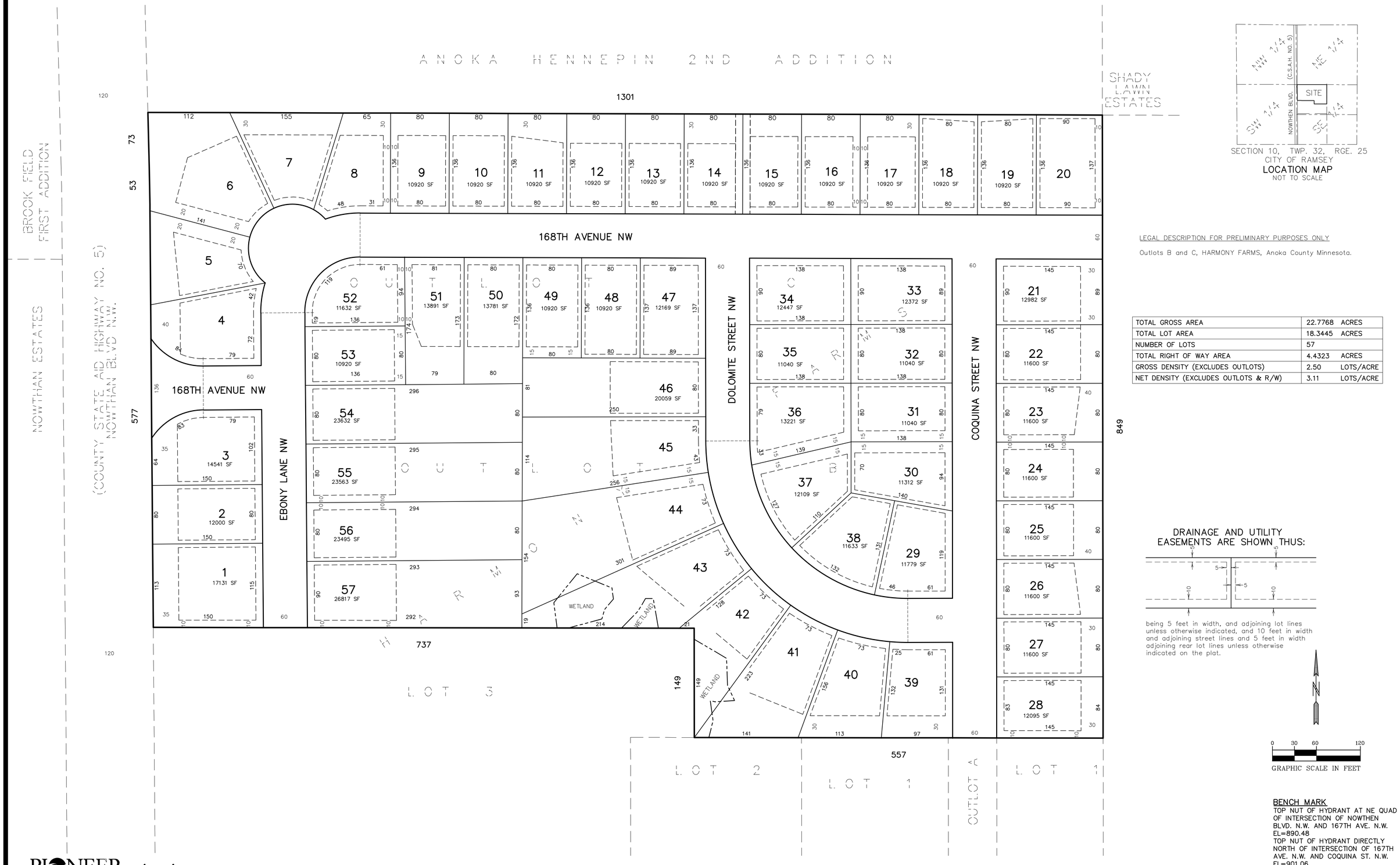
Date	12-08-2023
Designed	NAP
Drawn	PDS

EXISTING CONDITIONS

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

2.11 OF 30



SECTION 10, TWP. 32, RGE. 25
CITY OF RAMSEY
LOCATION MAP
NOT TO SCALE

LEGAL DESCRIPTION FOR PRELIMINARY PURPOSES ONLY

Outlots B and C, HARMONY FARMS, Anoka County Minnesota.

TOTAL GROSS AREA	22.7768	ACRES
TOTAL LOT AREA	18.3445	ACRES
NUMBER OF LOTS	57	
TOTAL RIGHT OF WAY AREA	4.4323	ACRES
GROSS DENSITY (EXCLUDES OUTLOTS)	2.50	LOTS/ACRE
NET DENSITY (EXCLUDES OUTLOTS & R/W)	3.11	LOTS/ACRE

DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:

being 5 feet in width, and adjoining lot lines unless otherwise indicated, and 10 feet in width and adjoining street lines and 5 feet in width adjoining rear lot lines unless otherwise indicated on the plat.

0 30 60 120
GRAPHIC SCALE IN FEET

BENCH MARK
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EL=890.48
TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W.
EL=901.06

00-SURV-123074-BASE.DWG

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I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Surveyor under the laws of the State of Minnesota
Name Peter J. Hawkinson
Reg. No. 42299 Date 7-10-2023

Revisions
1. 2024-02-05 City Comments

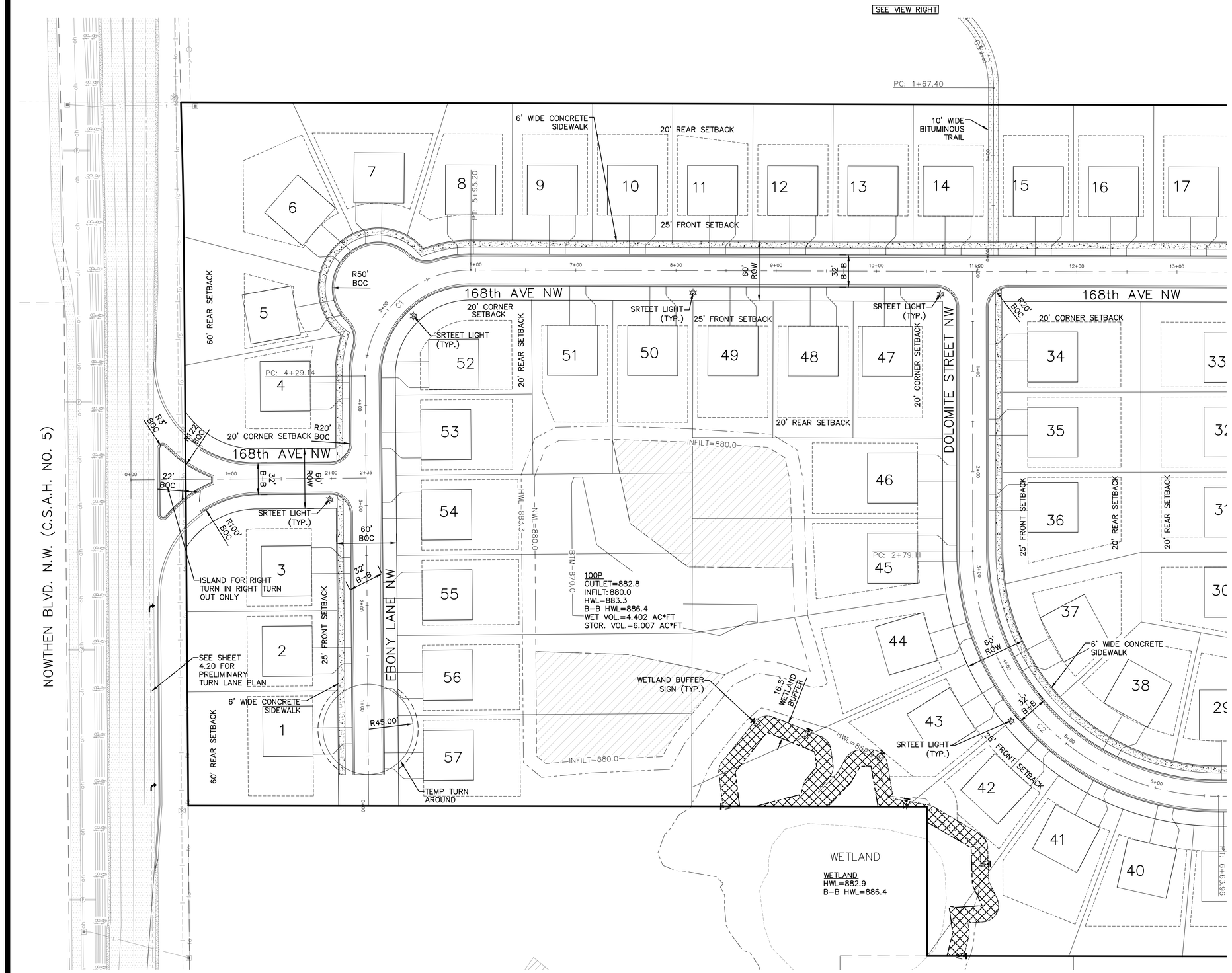
Date 12-08-2023
Designed NAP
Drawn PDS

PRELIMINARY PLAT

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

3.10 OF 30



R-1A MINIMUM STANDARDS:

MINIMUM DENSITY 2.5 UNITS/ACRE
WIDTH AT SETBACK: 80'
WIDTH AT ROW: 45'
AREA: 10,000 SF
MINIMUM DEPTH 100' (130' ON PERIMETER)
FRONT SETBACK: 25'
SIDE SETBACK: 5'
CORNER SIDE SETBACK: 20'
REAR SETBACK: 20'
SETBACK FROM ARTERIAL ROADWAY: 60'
SETBACK FROM WETLAND: 16.5'

CURVE TABLE

	CURVE	DELTA	LENGTH	RADIUS	TANGENT	PC	PT
ROAD CURVES	C1	90°36'45"	166.06	105.00	106.13	4+29.14	5+95.20
	C2	90°00'00"	384.85	245.00	245.00	2+79.11	6+63.96
	C3	43°10'43"	75.36	100.00	39.57	1+67.40	2+42.76
TRAIL CURVES	C4	89°14'34"	77.88	50.00	49.34	3+43.38	4+21.26
	C5	103°09'54"	45.01	25.00	31.52	5+17.10	5+62.11
	C6	57°00'23"	9.95	10.00	5.43	6+07.63	6+17.58

INFILTRATION AREAS

WETLAND BUFFER AREA

WETLAND BUFFER SIGN: CITY TO FURNISH, DEVELOPER TO INSTALL

0 25 50 100
GRAPHIC SCALE IN FEET

BENCH MARK

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00-ENG-123074-SHEET-SITE

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Name Brian N. Molinaro
Reg. No. 47504 Date

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Date
Designed
Drawn

PRELIMINARY SITE PLAN

LENNAR
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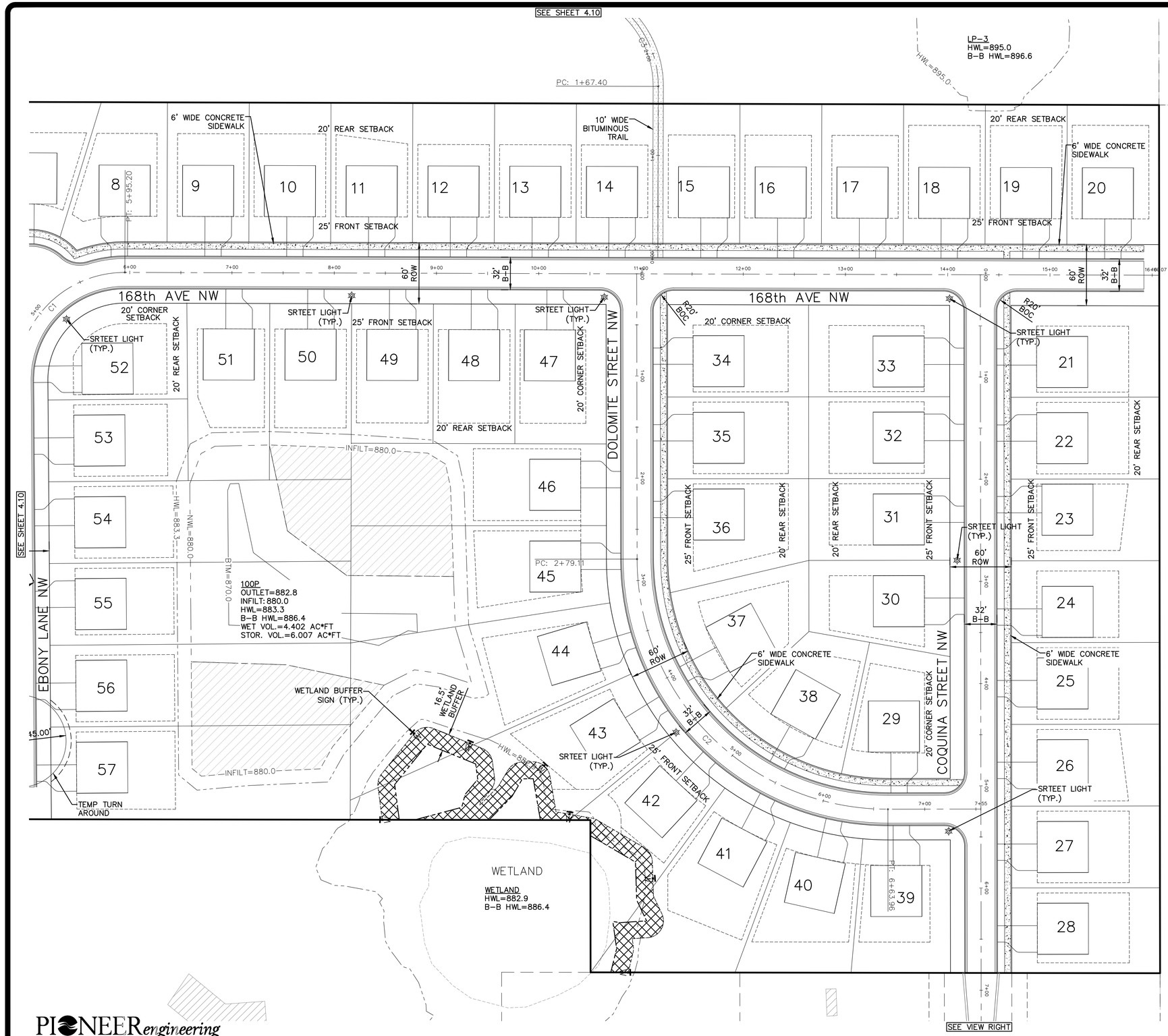
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

4.10 OF 30



R-1A MINIMUM STANDARDS:

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- WIDTH AT ROW: 45'
- AREA: 10,000 SF
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- FRONT SETBACK: 25'
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- CORNER SIDE SETBACK: 20'
- REAR SETBACK: 20'
- SETBACK FROM ARTERIAL ROADWAY: 60'
- SETBACK FROM WETLAND: 16.5'

INFILTRATION AREAS

WETLAND BUFFER AREA

W WETLAND BUFFER SIGN: CITY TO FURNISH, DEVELOPER TO INSTALL

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

BENCH MARK

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Date
Designed
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PRELIMINARY SITE PLAN

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

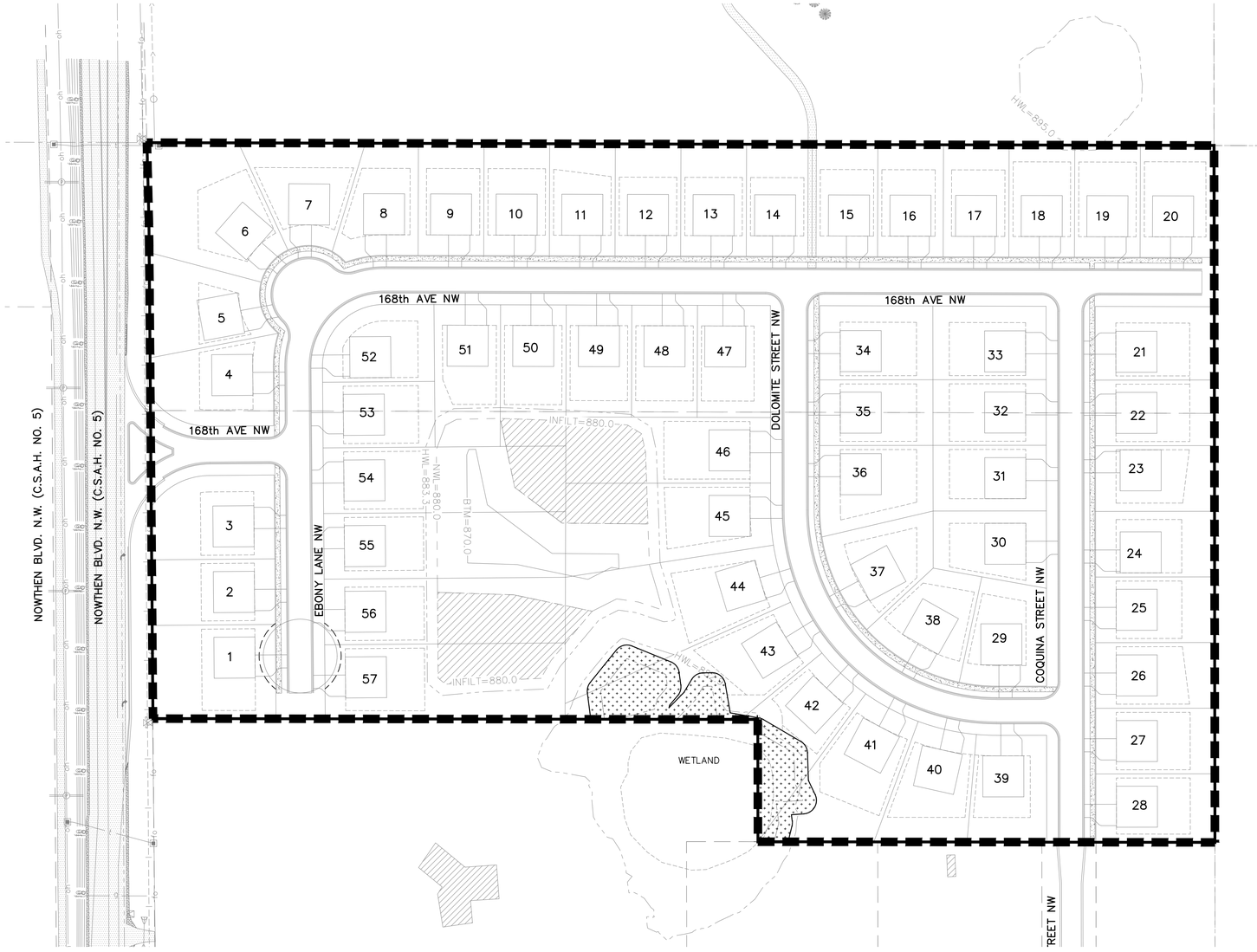
HARMONY FARMS
RAMSEY, MINNESOTA

4.11 OF 30

HARMONY FARMS - LOT BY LOT TABULATION

LOT #	HOUSE TYPE	GARAGE FLOOR ELEVATION	DRIVEWAY GRADE (%)	LOW FLOOR ELEVATION	LOOKOUT ELEVATION	LOWEST OPENING ELEVATION	100-YEAR HWL	B-B 100-YEAR HWL	EMERGENCY OVERFLOW ELEVATION
1	SE	891.2	6.9	888.0	891.7	891.7	NA	NA	886.2
2	SEWO	890.4	6.6	887.2	NA	887.2	NA	NA	886.2
3	SEWO	890.6	6.4	887.4	NA	887.4	NA	NA	886.2
4	SEWO	891.1	4.2	887.9	NA	887.9	NA	NA	886.9
5	SEWO	891.3	7.0	888.1	NA	888.1	NA	NA	886.9
6	SE	891.1	7.9	887.9	887.9	887.9	NA	NA	886.9
7	SE	890.6	6.9	887.4	891.1	891.1	NA	NA	886.4
8	SE	890.6	7.0	887.4	891.1	891.1	NA	NA	886.4
9	SE	890.6	7.5	887.4	891.1	891.1	NA	NA	886.4
10	SE	890.9	6.5	887.7	891.4	891.4	NA	NA	886.4
11	SEWO	892.1	8.1	888.9	NA	888.9	NA	NA	886.4
12	SEWO	893.8	8.4	890.6	NA	890.6	NA	NA	886.4
13	SEWO	896.0	8.5	892.8	NA	892.8	NA	NA	886.4
14	SEWO	897.6	8.3	894.4	NA	894.4	NA	NA	886.4
15	SE	898.9	8.0	895.7	899.4	899.4	NA	NA	894.7
16	SE	900.1	8.6	896.9	900.6	900.6	NA	NA	895.9
17	SE	901.2	8.1	898.0	901.7	901.7	NA	NA	895.9
18	SE	902.2	8.1	899.0	902.7	902.7	895.0	NA	896.5
19	SE	902.7	6.5	899.5	903.2	903.2	895.0	NA	896.5
20	SE	903.7	7.3	900.5	904.2	904.2	895.0	NA	896.5
21	SE	901.8	8.4	898.6	902.3	902.3	NA	NA	895.9
22	SE	900.4	6.3	897.2	900.9	900.9	NA	NA	895.9
23	SE	898.8	8.5	895.6	899.3	899.3	NA	NA	895.9
24	SE	898.8	8.2	895.6	899.3	899.3	NA	NA	895.9
25	SE	900.4	7.9	897.2	900.9	900.9	NA	NA	895.9
26	SE	902.0	7.1	898.8	902.5	902.5	NA	NA	895.9
27	SE	902.7	6.0	899.5	903.2	903.2	NA	NA	895.9
28	SE	903.4	6.7	900.2	903.9	903.9	NA	NA	895.9
29	SEWO	900.9	6.7	897.7	NA	897.7	NA	NA	888.9
30	SEWO	898.9	6.8	895.7	NA	895.7	NA	NA	888.9
31	SEWO	898.9	7.0	895.7	NA	895.7	NA	NA	888.9
32	SEWO	900.5	6.5	897.3	NA	897.3	NA	NA	888.9
33	SEWO	901.4	5.2	898.2	NA	898.2	NA	NA	888.9
34	SE	896.0	7.1	892.8	896.5	896.5	NA	NA	888.9
35	SE	894.4	7.3	891.2	894.9	894.9	NA	NA	888.9
36	SE	893.0	10.0	898.8	893.5	892.5	NA	NA	888.9
37	SE	893.0	9.1	898.8	893.5	892.8	NA	NA	888.9
38	SEWO	897.2	7.1	894.0	NA	894.0	NA	NA	888.9
39	SE	901.0	5.5	897.8	901.5	901.5	882.9	NA	888.9
40	SEWO	899.4	5.7	896.2	NA	896.2	882.9	886.4	*
41	SEWO	897.3	5.5	894.1	NA	894.1	882.9	886.4	*
42	SEWO	895.2	6.4	892.0	NA	892.0	882.9	886.4	*
43	SEWO	893.3	8.0	890.1	NA	890.1	882.9	886.4	*
44	SEWO	891.7	7.2	888.5	NA	888.5	883.3	886.4	*
45	SEWO	891.7	7.0	888.5	NA	888.5	883.3	886.4	*
46	SEWO	892.9	6.0	889.7	NA	889.7	883.3	886.4	*
47	SEWO	896.4	6.4	893.2	NA	893.2	883.3	886.4	*
48	SEWO	894.2	5.8	891.0	NA	891.0	883.3	886.4	*
49	SEWO	892.3	5.8	889.1	NA	889.1	883.3	886.4	*
50	SEWO	891.6	8.3	888.4	NA	888.4	883.3	886.4	*
51	SEWO	891.6	7.9	888.4	NA	888.4	883.3	886.4	*
52	SE	891.6	4.2	888.4	892.1	892.1	883.3	886.4	*
53	SEWO	891.8	4.4	888.6	NA	888.6	883.3	886.4	*
54	SEWO	891.7	4.5	888.5	NA	888.5	883.3	886.4	*
55	SEWO	891.6	8.0	888.4	NA	888.4	883.3	886.4	*
56	SEWO	891.6	7.8	888.4	NA	888.4	883.3	886.4	*
57	SEWO	891.6	6.1	888.4	NA	888.4	883.3	886.4	*

* SUBJECT TO B-B 100 YEAR HWL RULE



GROSS RESIDENTIAL AREA

WETLANDS, WATER BODIES, AND NON-STORMWATER PONDS (INLCUDING 16.5' BUFFER)

SITE DATA:

GROSS AREA: ±22.8 ACRES
WETLAND: ±0.24 ACRES
NET AREA: ±22.56 ACRES

ZONING: R-1
PROPOSED ZONING: R-1(80)
2040 COMP PLAN: LDR (3-4 UNITS/ACRE)

PROPOSED LOTS: 57
NET DENSITY: ±2.52 UNITS/ACRE

N

0 40 80 160
GRAPHIC SCALE IN FEET

BENCH MARK
TOP NUT OF HYDRANT AT NE QUAD OF INTERSECTION OF NOWTHEN BLVD. N.W. AND 167TH AVE. N.W. EL=890.48
TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W. EL=901.06

00-ENG-123074-SHEET-SITE-DATA

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1. 2024-02-05 City Comments

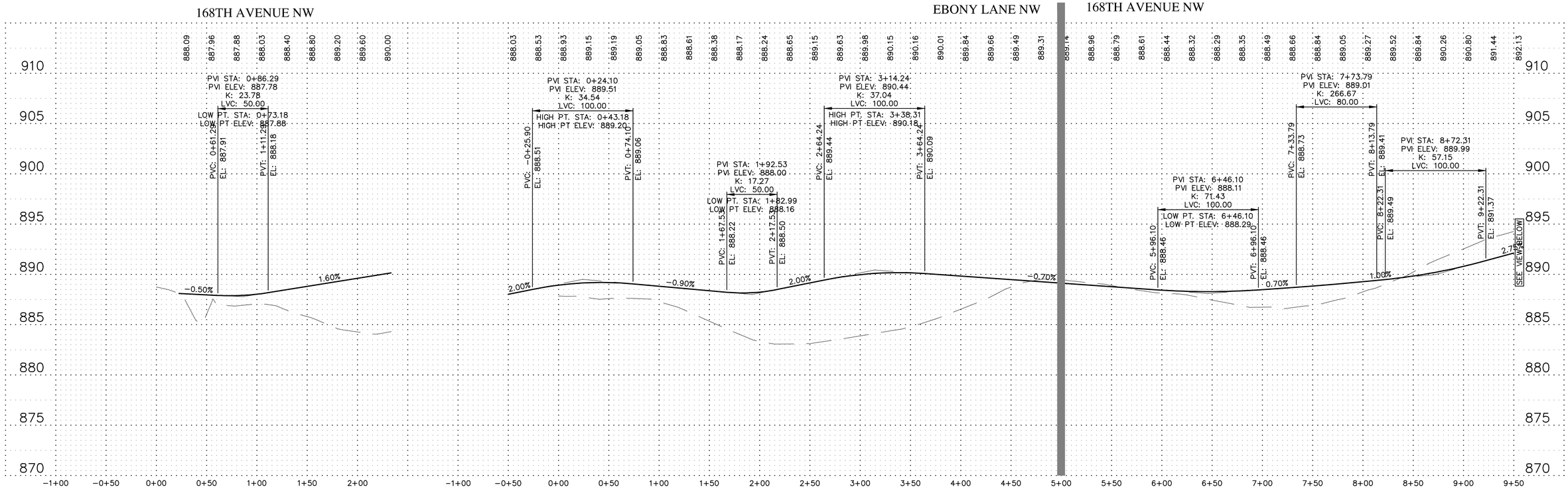
Date
Designed
Drawn

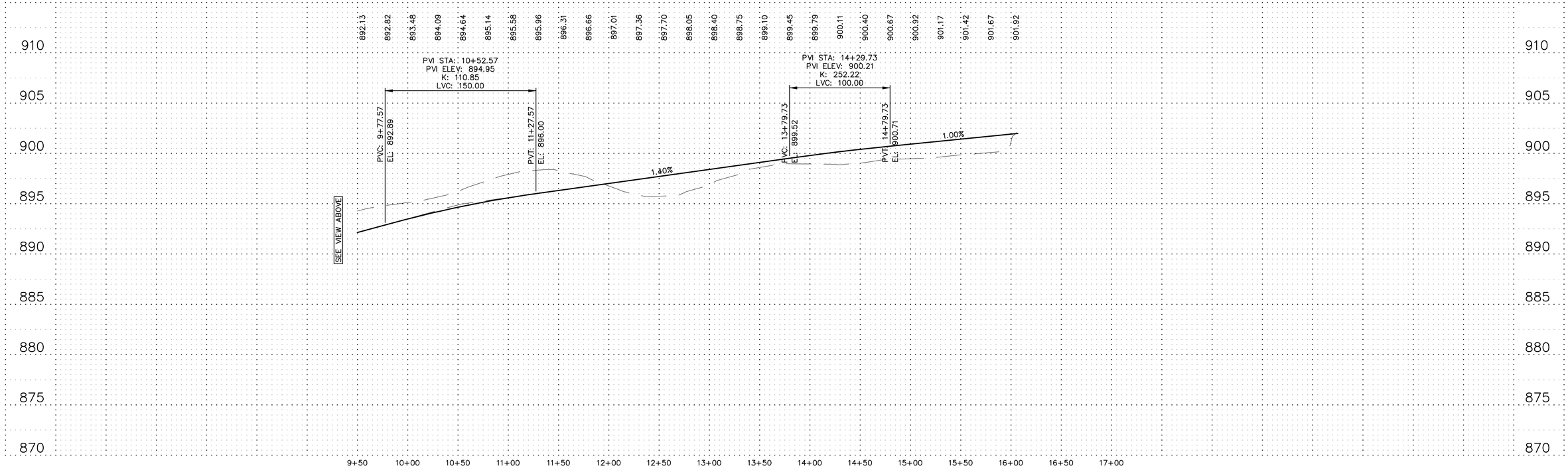
SITE DATA AND LOT TABULATION

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

4.20 OF 30





00-ENG-123074-SHEET-SITE-ROAD-PROF

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PRELIMINARY STREET PROFILES

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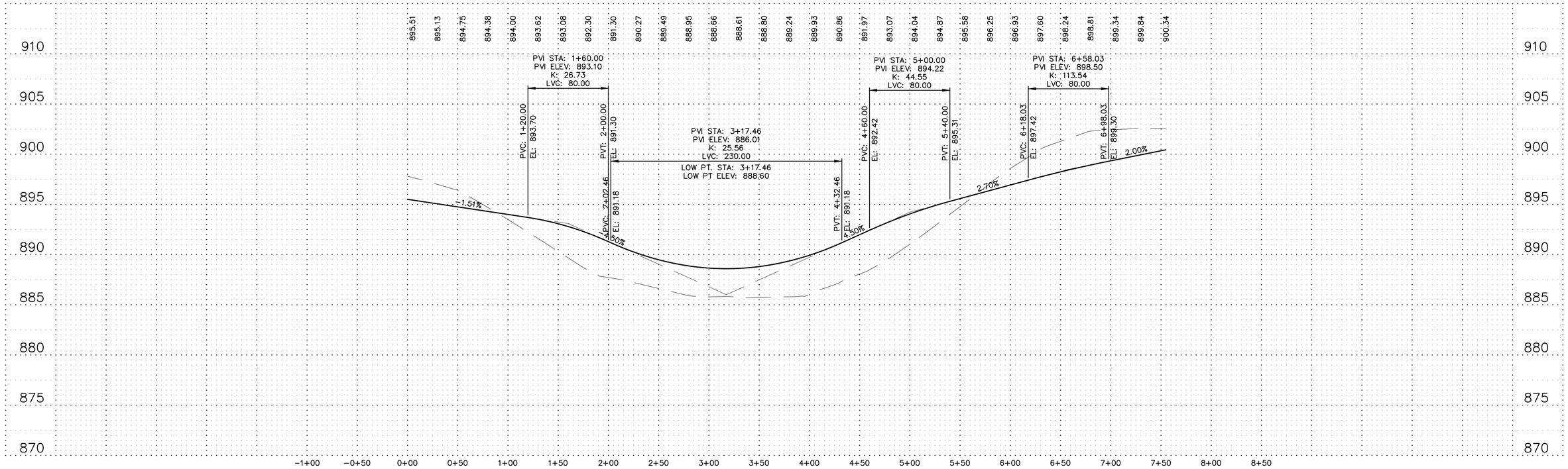
PLYMOUTH, MINNESOTA 55446

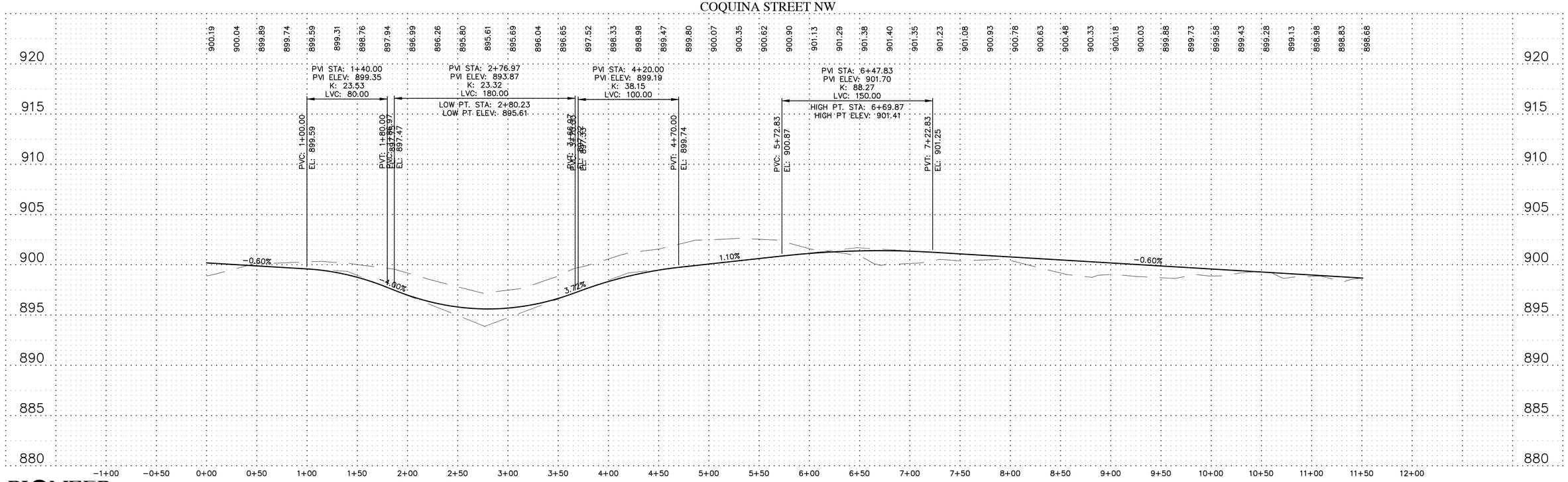
HARMONY FARMS
RAMSEY, MINNESOTA

4.40 OF 30

DOLOMITE STREET NW



COQUINA STREET NW



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PRELIMINARY STREET PROFILES

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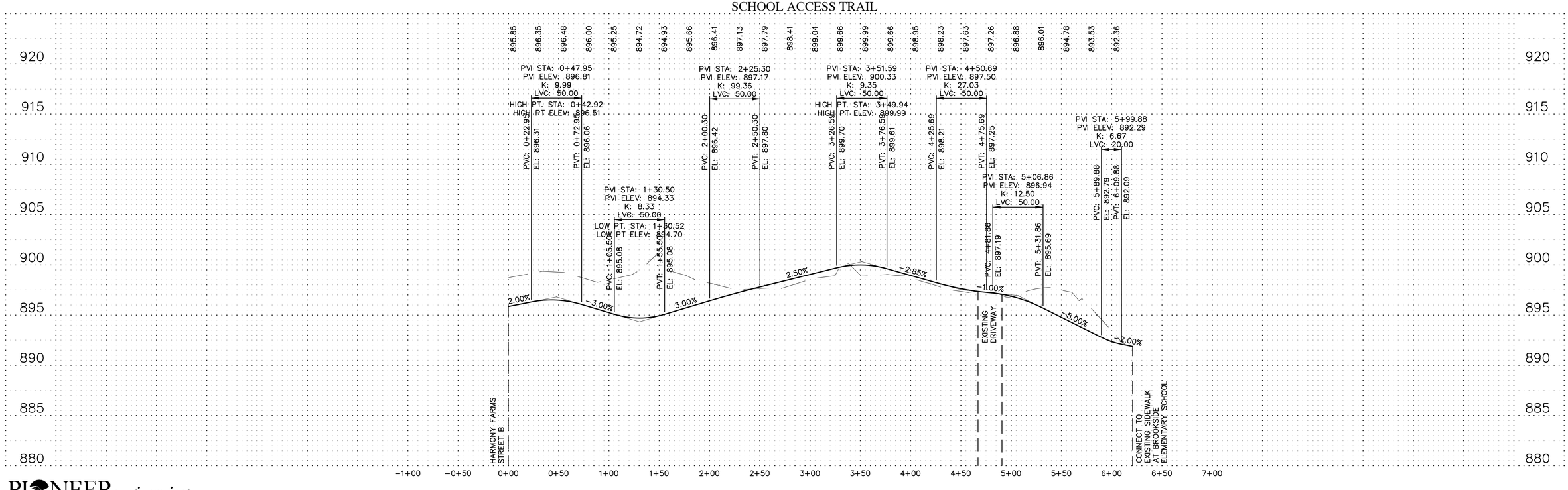
HARMONY FARMS
RAMSEY, MINNESOTA

4.41 OF 30

SCHOOL ACCESS TRAIL



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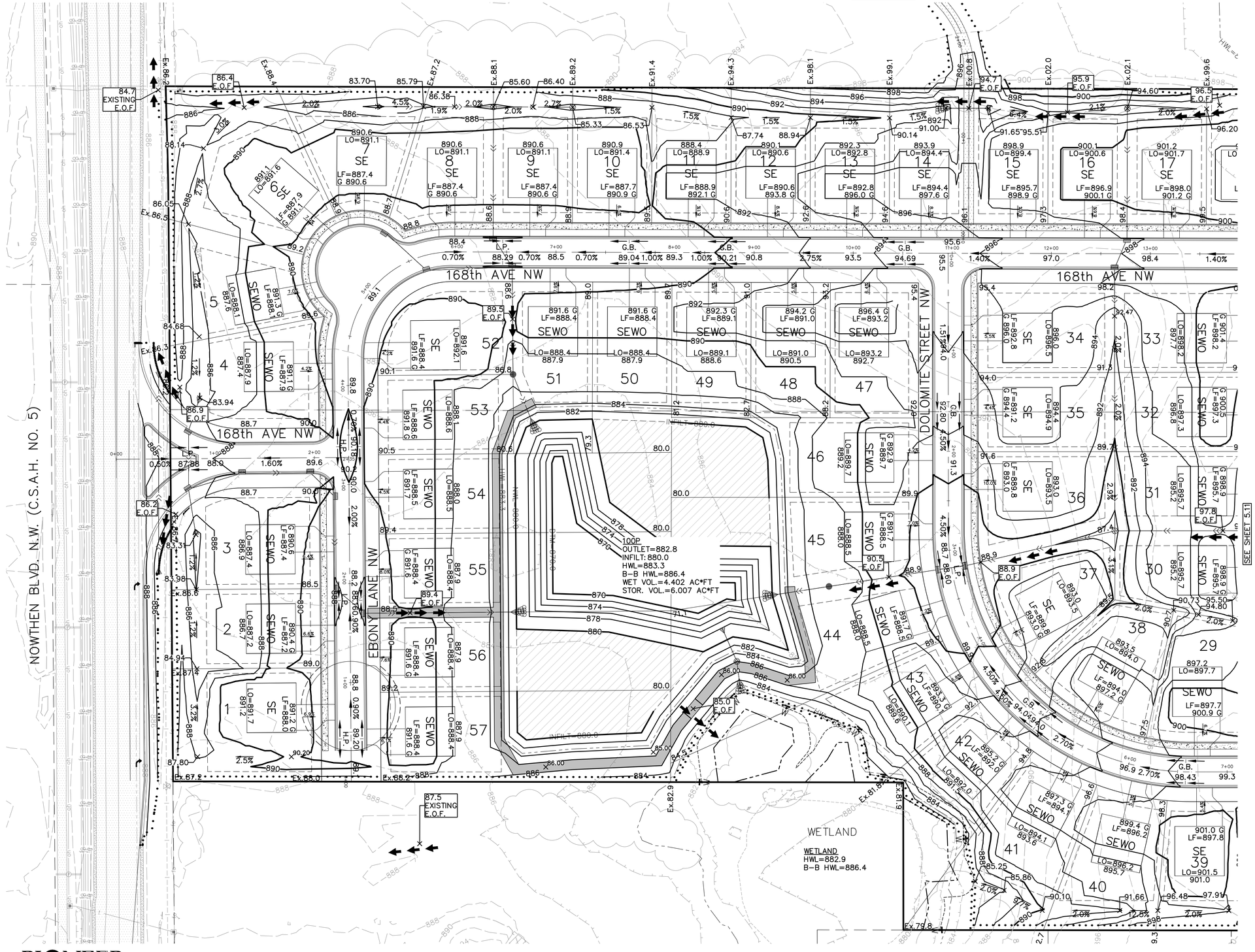
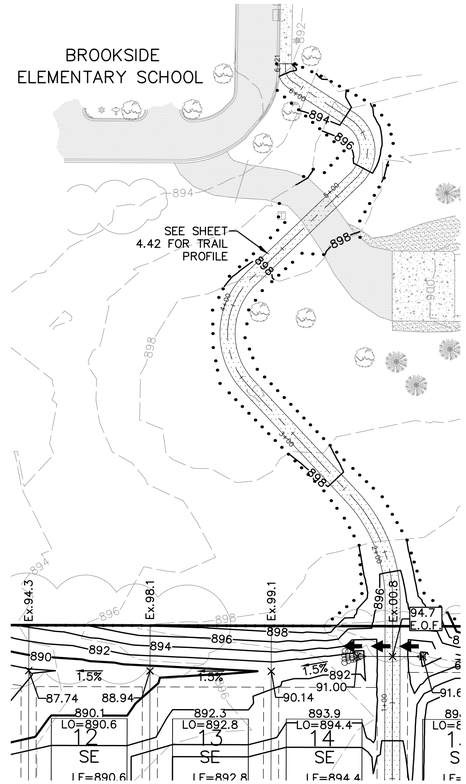
HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-SITE-ROAD-PROF

4.42 OF 30





STORMWATER SETBACKS

LOW OPENING ELEVATIONS –
HIGHEST OF :

MINIMUM 3 FEET ABOVE HIGHEST ANTICIPATED GROUNDWATER TABLE.

2 FEET ABOVE THE DESIGNATED OR DESIGNED 100–YEAR FLOOD ELEVATION OR

1 FOOT ABOVE THE EMERGENCY OVERFLOW.

BASIN ACCESS 8% SLOPE MAX.

INFILTRATION AREAS

0 25 50 100

GRAPHIC SCALE IN FEET

BENCH MARK

TOP NUT OF HYDRANT AT NE QUAD OF INTERSECTION OF NOWTHEN BLVD. N.W. AND 167TH AVE. N.W.
EL=890.48
TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W.
EL=901.06

00-ENG-123074-SHEET-GRAD

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PRELIMINARY GRADING PLAN

LENNAR
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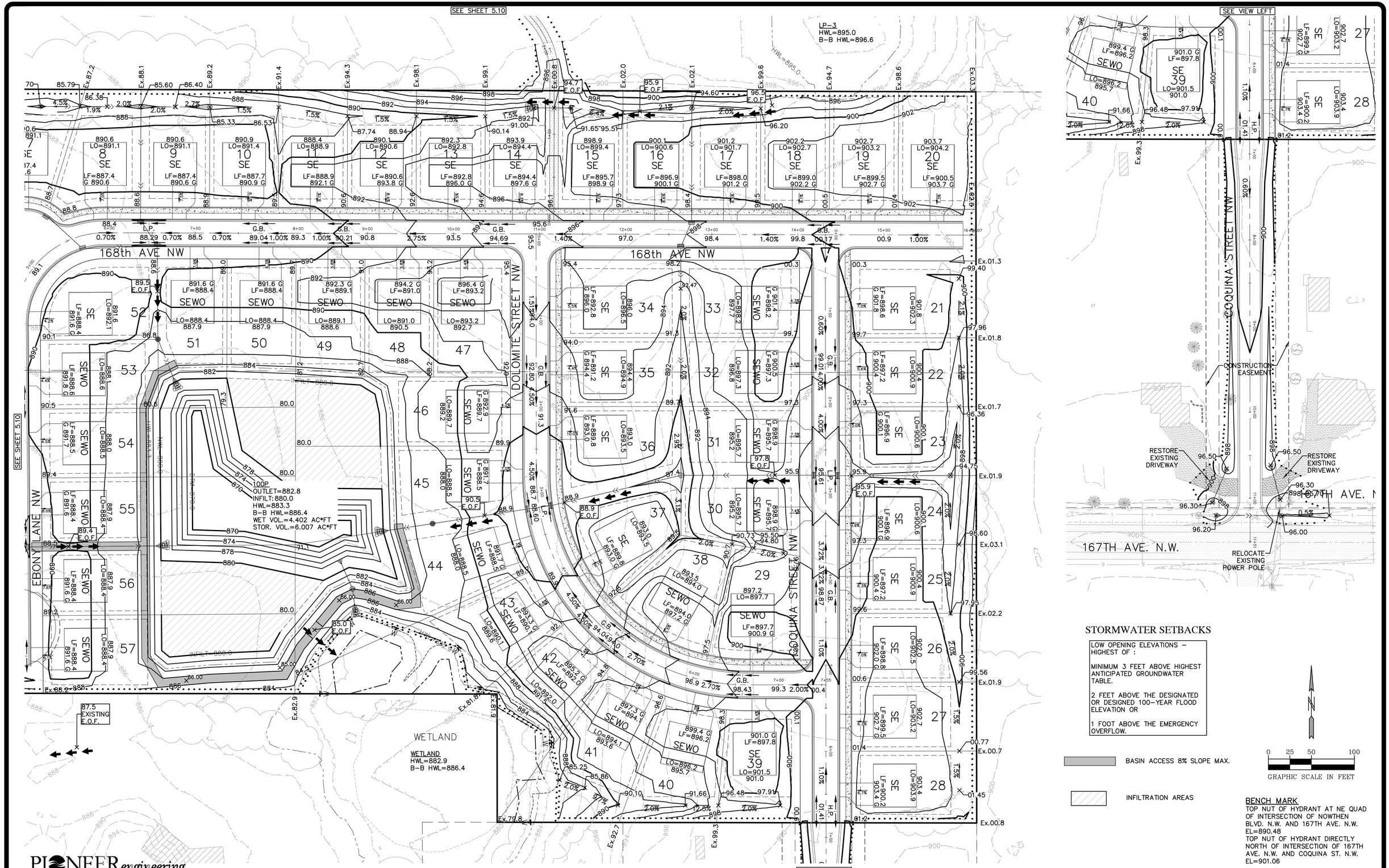
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

5.10 OF 30



STORMWATER SETBACKS

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INFILTRATION AREAS

GRAPHIC SCALE IN FEET
0 25 50 100

BENCH MARK

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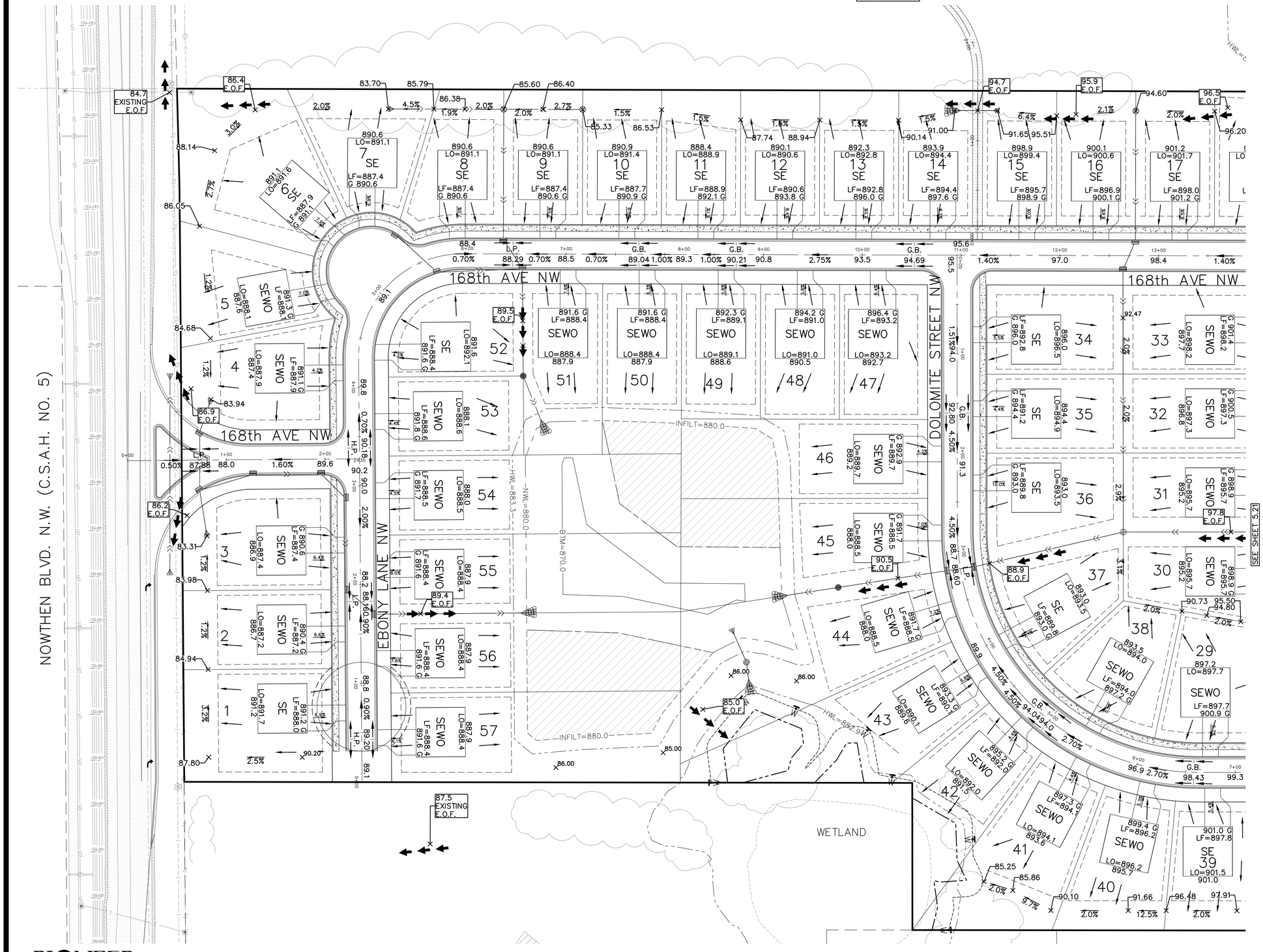
HARMONY FARMS
RAMSEY, MINNESOTA

5.11 OF 30



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INFILTRATION AREAS

0 25 50 100

GRAPHIC SCALE IN FEET

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00-ENG-123074-SHEET-DEVELOP

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PRELIMINARY DEVELOPMENT PLAN

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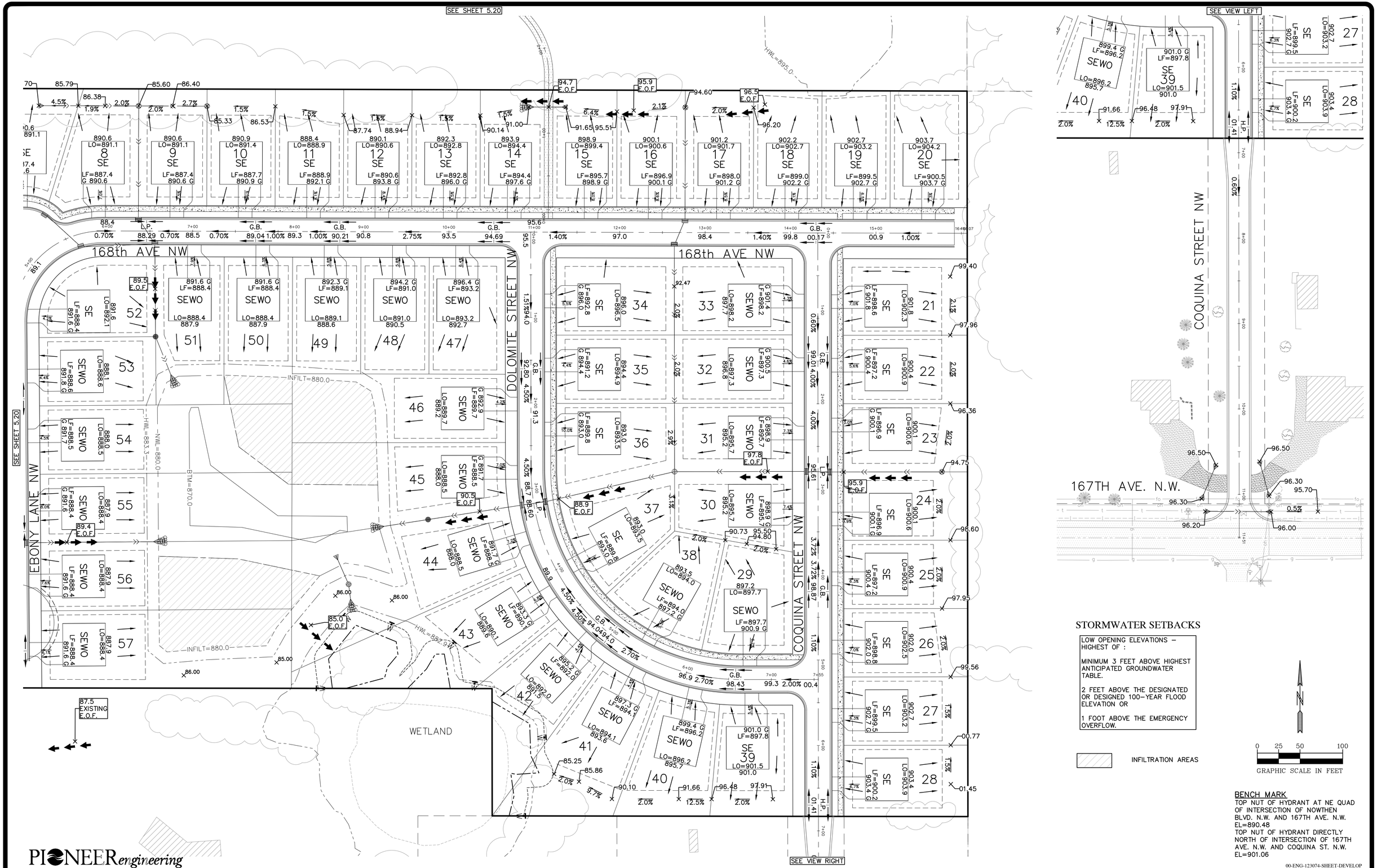
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

5.20 OF 30



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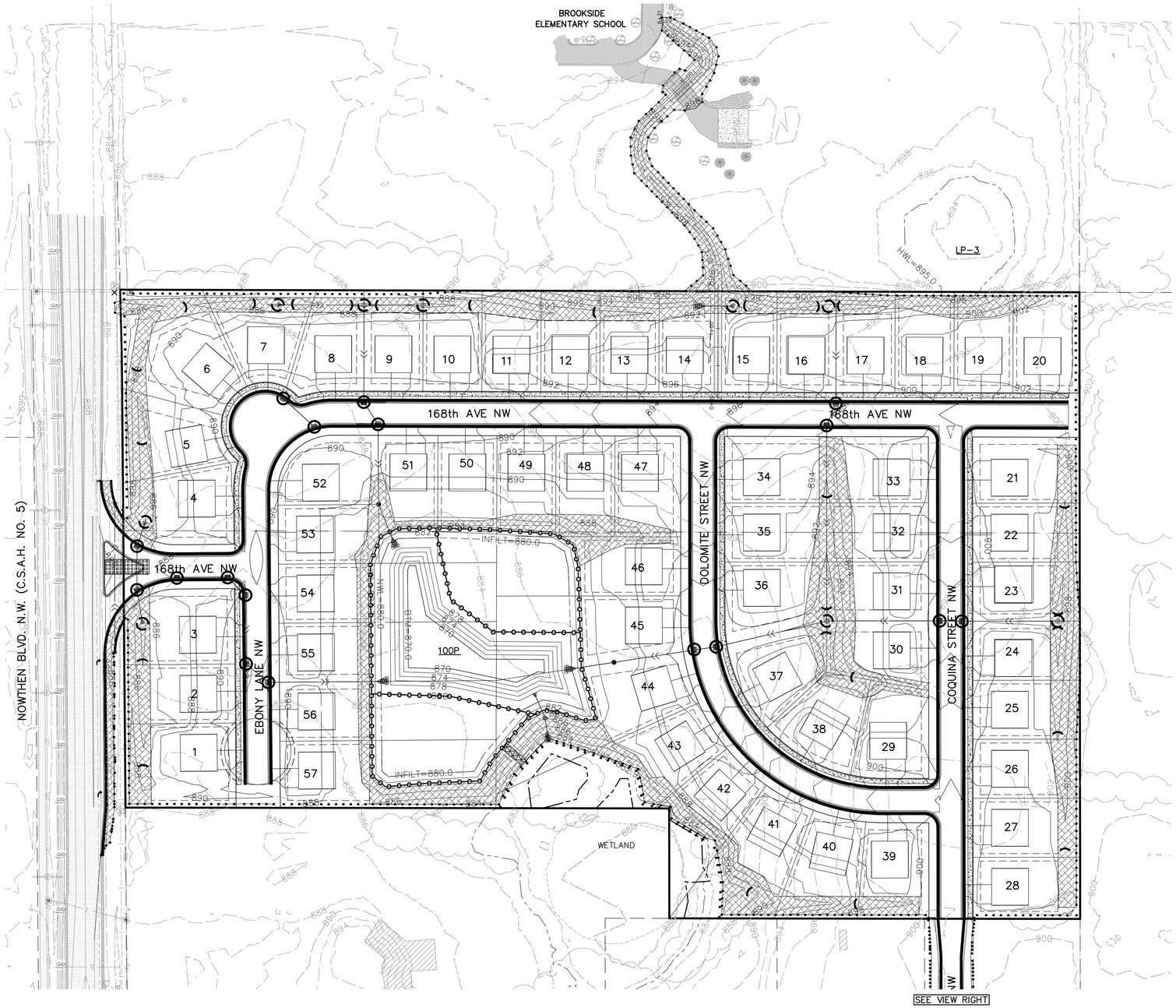
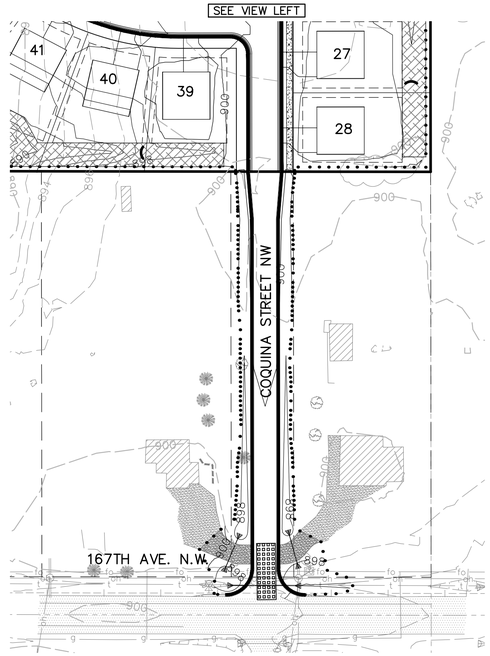
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

5.21 OF 30





LEGEND

- ROCK CONSTRUCTION ENTRANCE INSTALL BEFORE START OF GRADING
- PERIMETER SILT FENCE. TO BE INSTALLED AND INSPECTED BY THE CITY BEFORE THE START OF GRADING.
- SECONDARY SILT FENCE. TO BE INSTALLED 48 HOURS AFTER COMPLETION OF GRADING.
- EROSION CONTROL AT BACK OF CURB. TO BE INSTALLED AFTER COMPLETION OF CURB CONSTRUCTION.
- SUMPED RIP RAP PERMANENT ENERGY DISSIPATER, INSTALL WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.
- STABILIZED EMERGENCY OVERFLOW
- MNDOT CAT 20 EROSION CONTROL BLANKET. INSTALL IMMEDIATELY AFTER GRADING COMPLETION.
- CATCH BASIN INLET PROTECTION TO BE INSTALLED AND INSPECTED BY THE CITY BEFORE THE START OF GRADING.
- CATCH BASIN INLET PROTECTION TO BE INSTALLED AFTER 1ST LIFT OF BITUMINOUS.
- CATCH BASIN INLET PROTECTION TO BE INSTALLED WITH CATCH BASIN GRATE.
- STRAW BIO ROLLS. INSTALL WITHIN 7 DAYS OF GRADING COMPLETION OR BEFORE 1ST RAINFALL EVENT WHICHEVER IS FIRST
- ROCK DITCH CHECK. INSTALL WITHIN 7 DAYS OF GRADING COMPLETION OR BEFORE 1ST RAINFALL EVENT WHICHEVER IS FIRST

N

0 40 80 160

GRAPHIC SCALE IN FEET

BENCH MARK

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00-ENG-123074-SHEET-EROS

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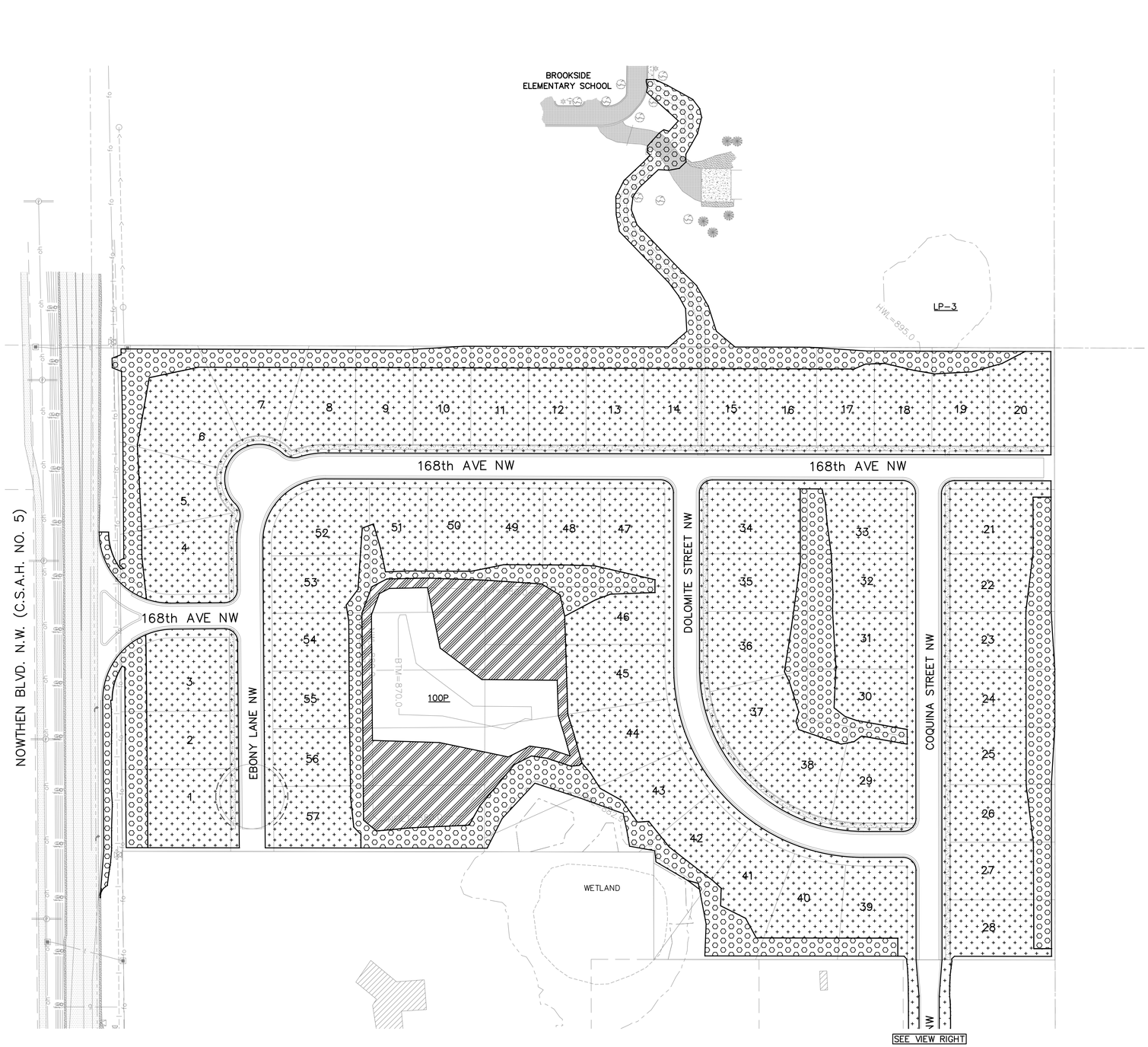
PRELIMINARY EROSION CONTROL PLAN

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

5.30 OF 30



PERMANENT SEEDING AREAS SHALL BE DONE IN ACCORDANCE WITH MNDOT 2575 & 3876 CONSISTING OF:
- MINNESOTA STATE SEED MIXTURE 35-241 AT 36.5 POUNDS PER ACRE.
- MULCH SHALL BE MNDOT TYPE 3 @ 2 TONS PER ACRE OR APPROVED EQUAL AND DISK ANCHORED IN PLACE OR APPROVED EQUAL, INSTALLED TO MINIMUM 90% COVERAGE OF THE SURFACE AREA DISTURBED.
- TYPE 4 FERTILIZER, 18-1-8 @ 120 POUNDS PER ACRE.

TEMPORARY SEED SHALL BE DONE IN ACCORDANCE TO MNDOT 2575 & 3876; CONSISTING OF:
- MINNESOTA STATE SEED MIXTURE 22-111 @ 30.5 POUNDS PER ACRE.
- MULCH SHALL BE MNDOT TYPE 3 @ 2 TONS PER ACRE OR APPROVED EQUAL AND DISK ANCHORED IN PLACE OR APPROVED EQUAL, INSTALLED TO MINIMUM 90% COVERAGE OF THE SURFACE AREA DISTURBED.
- TYPE 1 FERTILIZER, 10-10-20 @ 200 POUNDS PER ACRE.

NATIVE AREA SEEDING SHALL BE DONE IN ACCORDANCE WITH MNDOT 2575 CONSISTING OF:
- MINNESOTA STATE SEED MIXTURE 35-221 (DRY PRAIRIE GENERAL) @ 36.5 POUNDS PER ACRE.
- MULCH SHALL BE MNDOT TYPE 3 @ 2 TONS PER ACRE OR APPROVED EQUAL AND DISK ANCHORED IN PLACE OR APPROVED EQUAL, INSTALLED TO MINIMUM 90% COVERAGE OF THE SURFACE AREA DISTURBED.
- TYPE 4 NATURAL-BASED FERTILIZER, 18-1-8 @ 120 POUNDS PER ACRE.

INFILTRATION BASINS AND POND ABOVE NWL SEEDING SHALL BE DONE IN ACCORDANCE TO MNDOT 2575; CONSISTING OF:
- MINNESOTA STATE SEED MIXTURE 33-262 (DRY SWALE / POND) @ 44.0 POUNDS PER ACRE.
- MULCH SHALL BE MNDOT TYPE 3 @ 2 TONS PER ACRE OR APPROVED EQUAL AND DISK ANCHORED IN PLACE OR APPROVED EQUAL, INSTALLED TO MINIMUM 90% COVERAGE OF THE SURFACE AREA DISTURBED.
- TYPE 4 FERTILIZER, 18-1-8 @ 120 POUNDS PER ACRE.

N

0 40 80 160
GRAPHIC SCALE IN FEET

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00-ENG-123074-SHEET-SEED

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PRELIMINARY SEEDING PLAN

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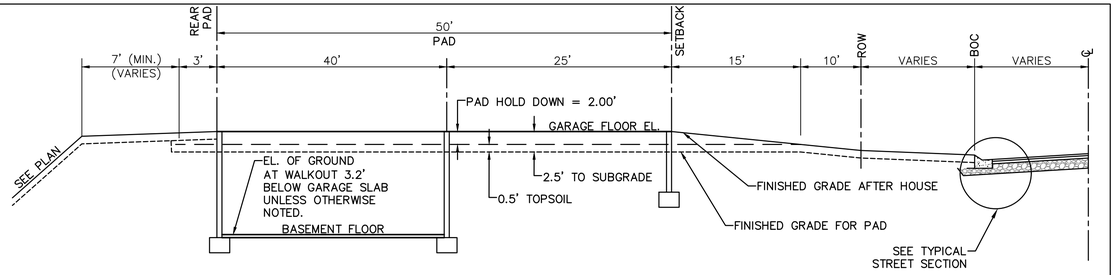
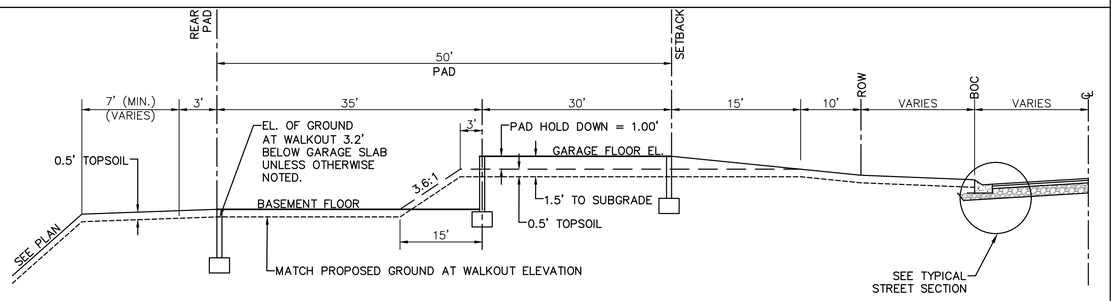
HARMONY FARMS
RAMSEY, MINNESOTA

5.40 OF 30



SPLIT ENTRY
(TYPICAL SECTION NOT TO SCALE)



SPLIT ENTRY WALKOUT
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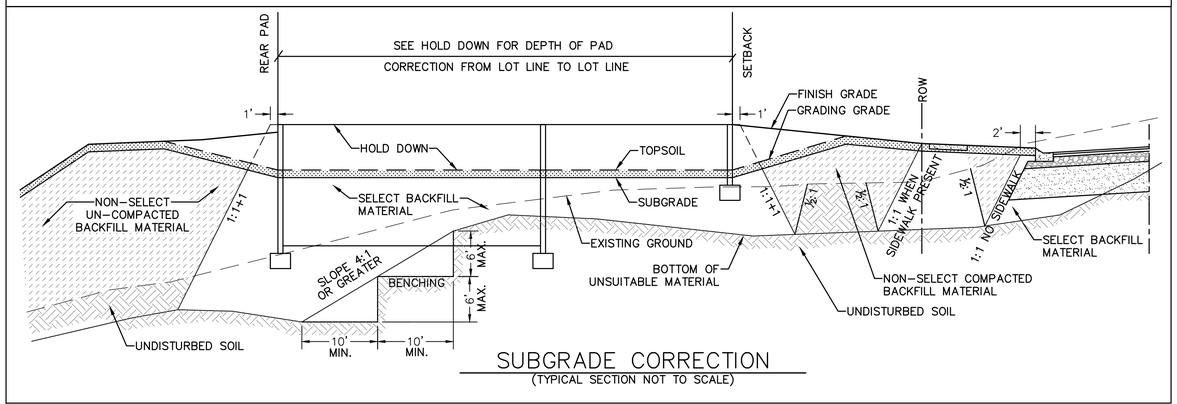
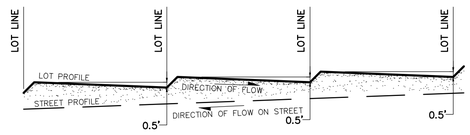
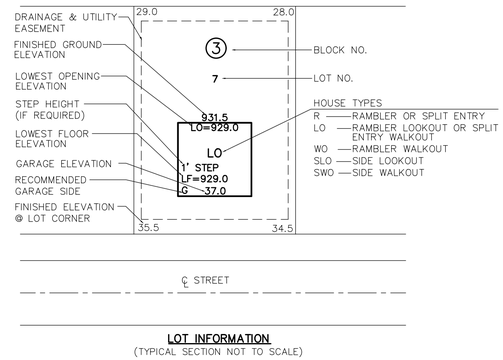


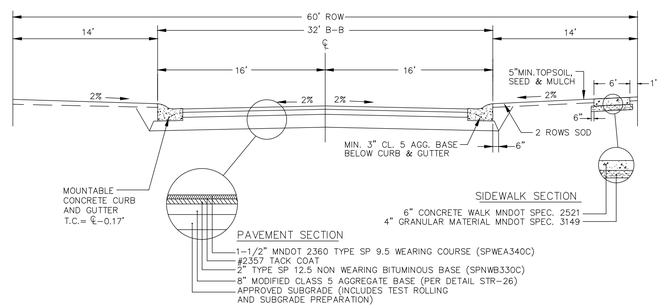
SUBGRADE CORRECTION
(TYPICAL SECTION NOT TO SCALE)



LOT BENCHING DETAIL
NO SCALE



LOT INFORMATION
(TYPICAL SECTION NOT TO SCALE)



TYPICAL STREET SECTION
TYPICAL SECTION (N.T.S.)
SEE CITY DETAILS FOR ADDITIONAL INFORMATION

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PRELIMINARY GRADING DETAILS

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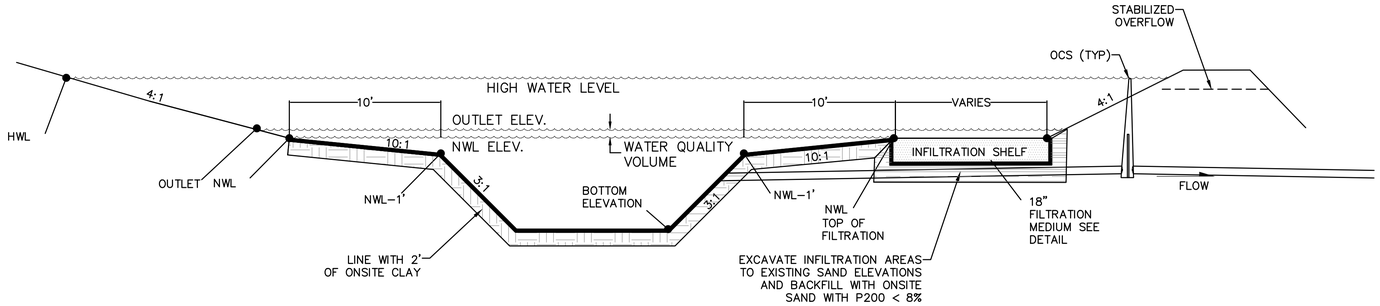
HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-DTLS-GRAD



STORMWATER BASIN DETAIL

N.T.S.

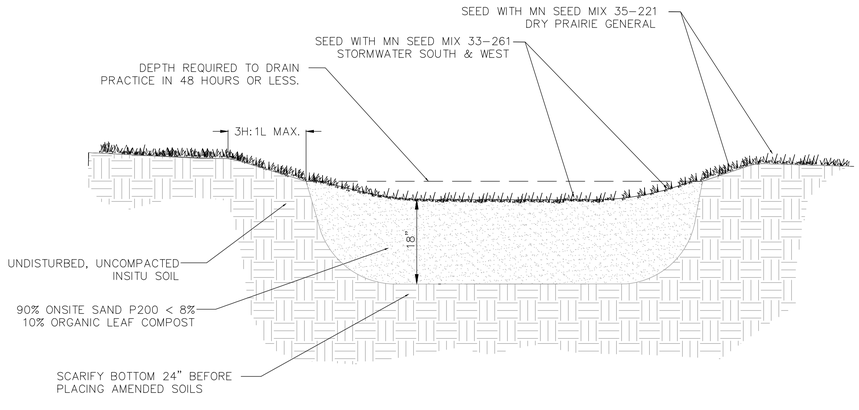
INFILTRATION BASIN CONSTRUCTION NOTES

CONSTRUCTION SEQUENCING

1. INSTALL SILT FENCE AND/OR OTHER APPROPRIATE EROSION CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING OR ENTERING THE PRACTICE DURING CONSTRUCTION.
2. ALL DOWN-GRADIENT PERIMETER SEDIMENT CONTROL BMPS MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITY BEGINS.
3. PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.
4. INSTALL UTILITIES (WATER, SANITARY SEWER, ELECTRIC, PHONE, FIBER OPTIC, ETC) PRIOR TO SETTING FINAL GRADE OF RETENTION DEVICE.
5. ROUGH GRADE THE SITE. DO NOT USE RETENTION AREA AS TEMPORARY SEDIMENT BASINS.
6. PERFORM ALL OTHER SITE IMPROVEMENTS.
7. SEED AND MULCH ALL AREAS AFTER DISTURBANCE.
8. CONSTRUCT RETENTION DEVICE UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA.
9. IMPLEMENT TEMPORARY AND PERMANENT EROSION CONTROL PRACTICES.
10. PLANT AND MULCH RETENTION DEVICE.
11. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE CONTRIBUTING DRAINAGE AREA IS ADEQUATELY VEGETATED.

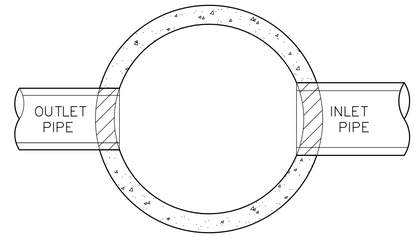
GENERAL NOTES

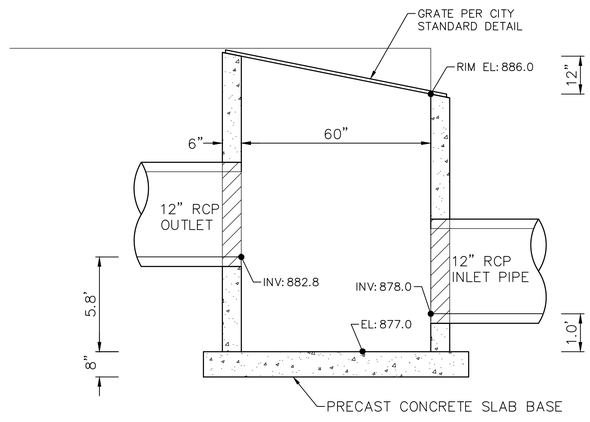
1. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL SHALL BE REMOVED FROM THE PRACTICE PRIOR TO CONTINUING CONSTRUCTION.
2. GRADING OF RETENTION DEVICES SHALL BE ACCOMPLISHED USING LOW-COMPACTION EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF UNDERLYING SOILS.
3. ALL SUB MATERIALS BELOW THE SPECIFIED BIORETENTION DEPTH (ELEVATION) SHALL BE UNDISTURBED, UNLESS OTHERWISE NOTED.



INFILTRATION FACILITY CROSS-SECTION

NOT TO SCALE





POND OUTLET CONTROL STRUCTURE OCS-100

(NOT TO SCALE)

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www.pioneereng.com

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Name Brian N. Molinaro

Reg. No. 47504 Date

Revisions
1. 2024-02-05 City Comments

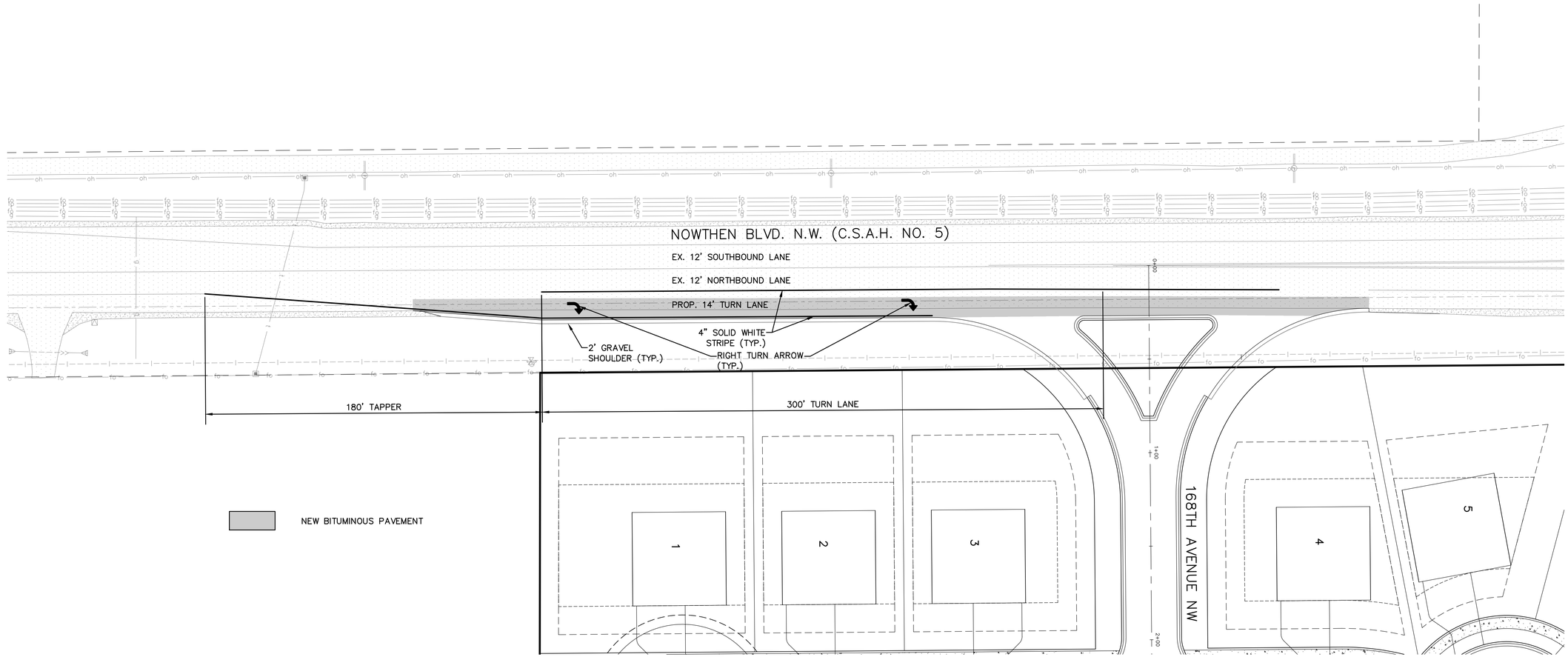
Date
Designed
Drawn

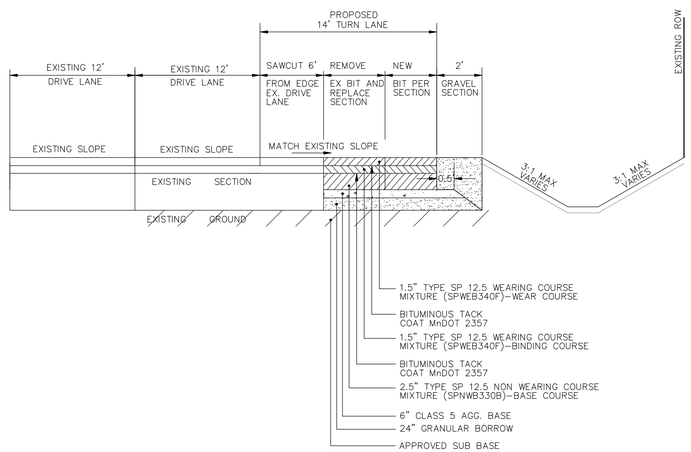
PRELIMINARY GRADING DETAILS

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-DTLS-GRAD





NOWTHEN BLVD N.W. (C.S.A.H.) TURN LANE TYPICAL SECTION
(MATCH EXISTING SECTION)

0 15 30 60
GRAPHIC SCALE IN FEET

BENCH MARK
TOP NUT OF HYDRANT AT NE QUAD OF INTERSECTION OF NOWTHEN BLVD. N.W. AND 167TH AVE. N.W. EL=890.48
TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W. EL=901.06

00-ENG-123074-SHEET-GRAD-TURN

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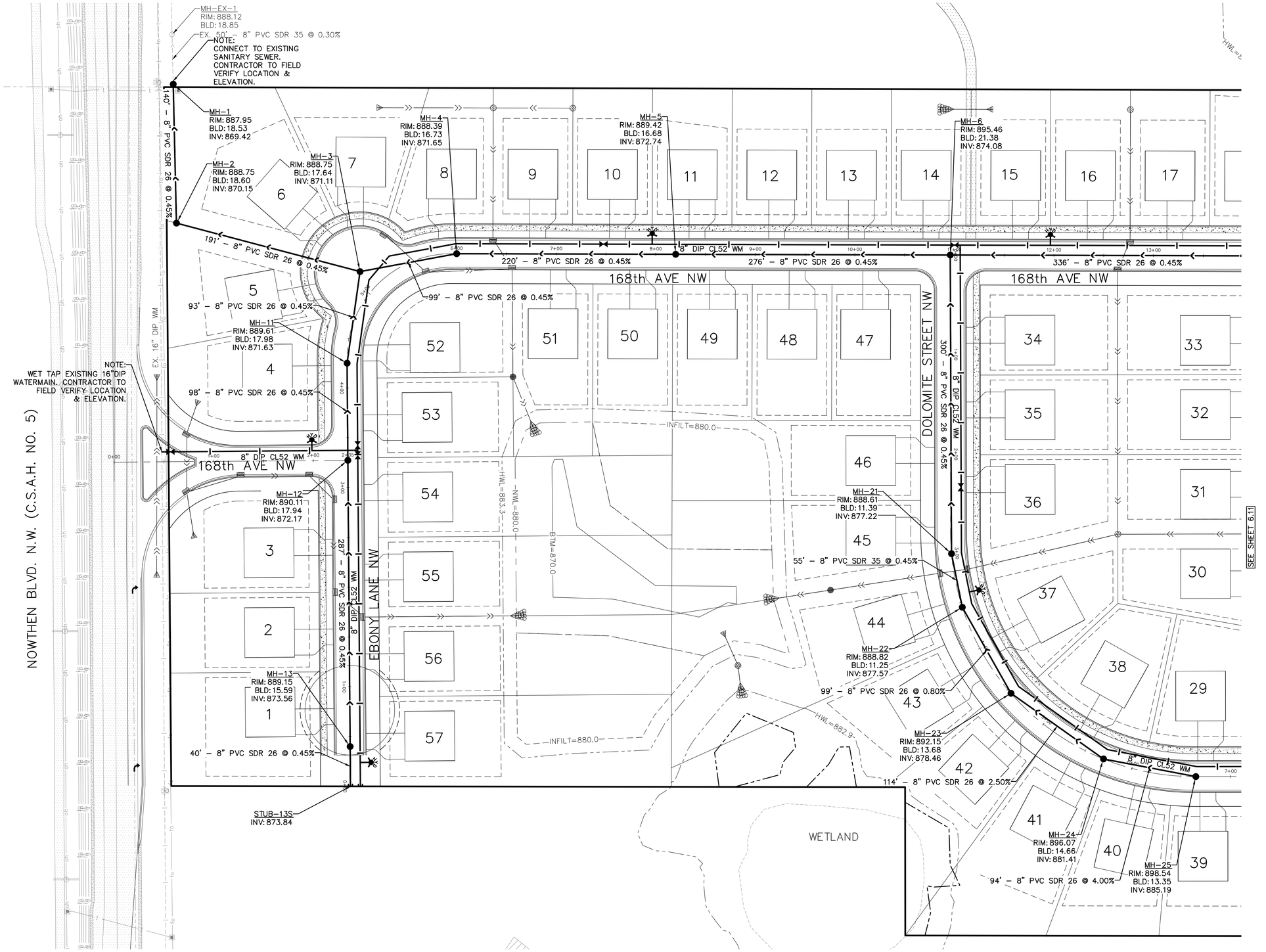
Drawn

PRELIMINARY TURN LANE PLAN

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

5.60 OF 30



0 25 50 100

GRAPHIC SCALE IN FEET

BENCH MARK

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TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W. EL=901.06

00-ENG-123074-SHEET-SSWR

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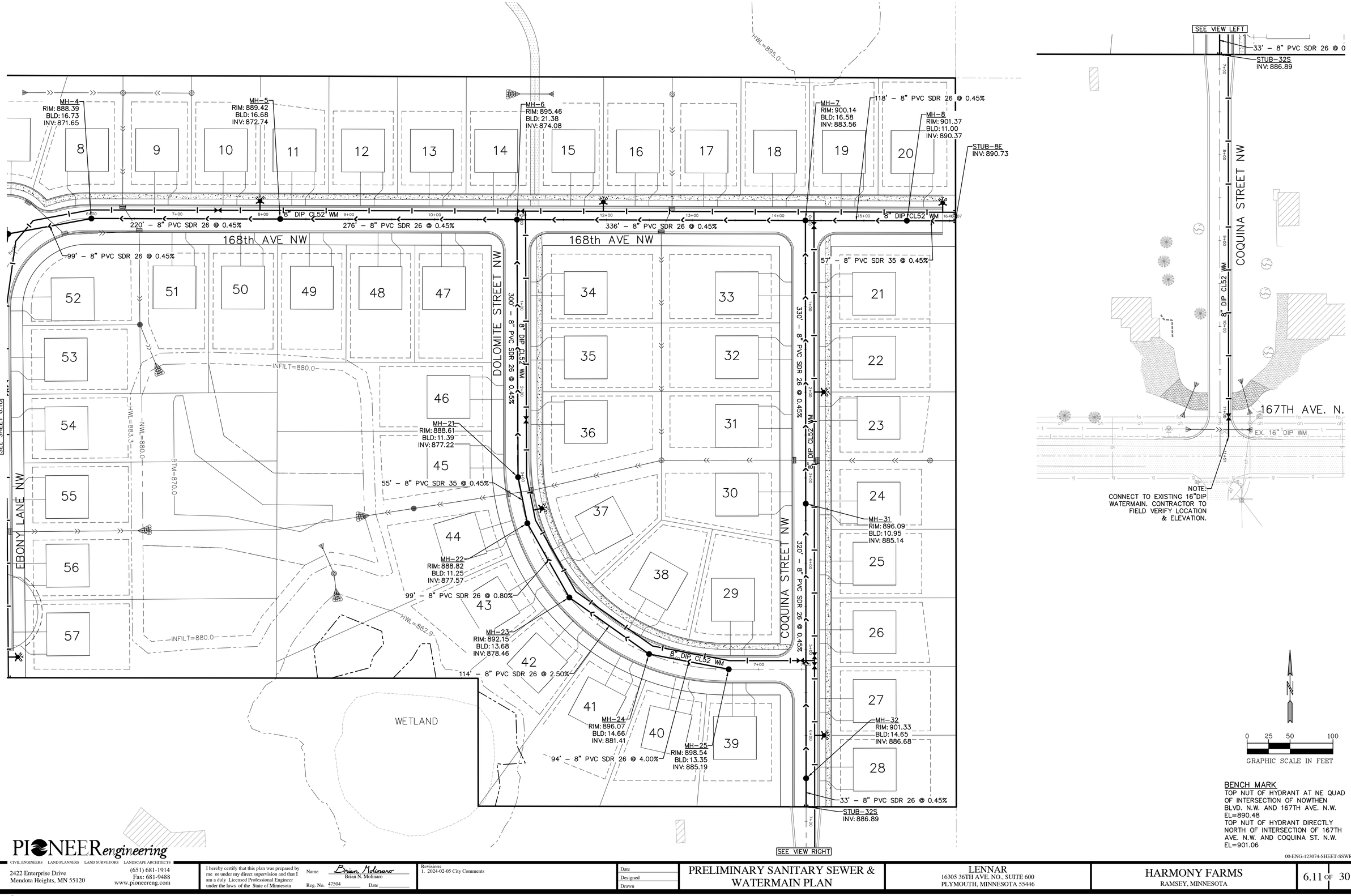
PRELIMINARY SANITARY SEWER & WATERMAIN PLAN

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

6.10 OF 30



BENCH MARK
TOP NUT OF HYDRANT AT NE QUAD OF INTERSECTION OF NOWTHEN BLVD. N.W. AND 167TH AVE. N.W.
EL=890.48
TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W.
EL=901.06

00-ENG-123074-SHEET-SSWR

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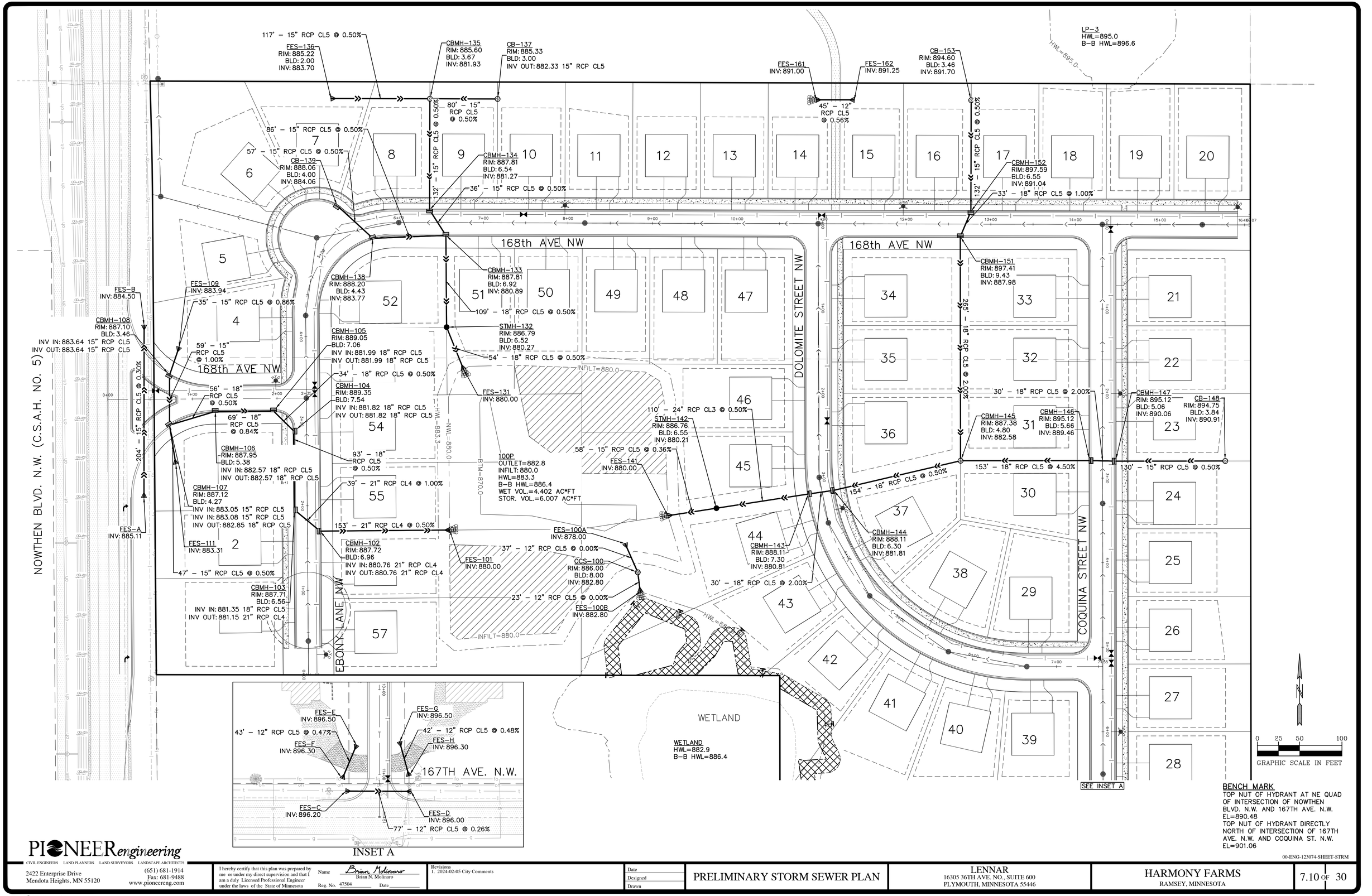
Date
Designed
Drawn

PRELIMINARY SANITARY SEWER & WATERMAIN PLAN

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

6.11 OF 30



INSET A

BENCH MARK
TOP NUT OF HYDRANT AT NE QUAD OF INTERSECTION OF NOWTHEN BLVD. N.W. AND 167TH AVE. N.W.
EL=890.48
TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W.
EL=901.06

00-ENG-123074-SHEET-STRM

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PRELIMINARY STORM SEWER PLAN

LENNAR
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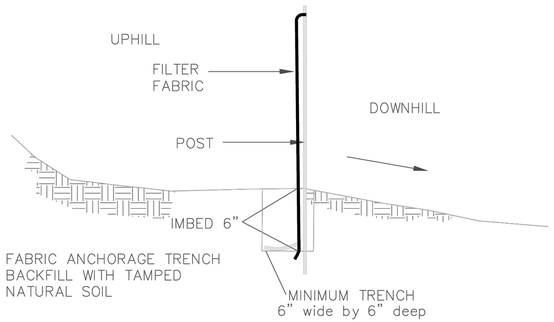
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

7.10 OF 30



INSTALL AS PER FILTER FABRIC MANUFACTURER'S RECOMMENDATIONS

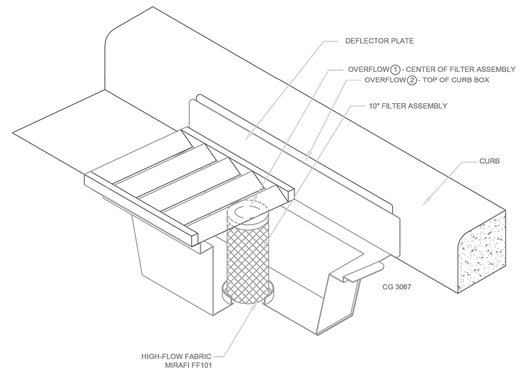
SILT FENCE DETAIL

NO SCALE

APPROVED: 1 – 2016

STANDARD DETAILS: SILT FENCE

CITY PLATE No. ERO–1



INLET PROTECTION – WIMCO OR EQUAL

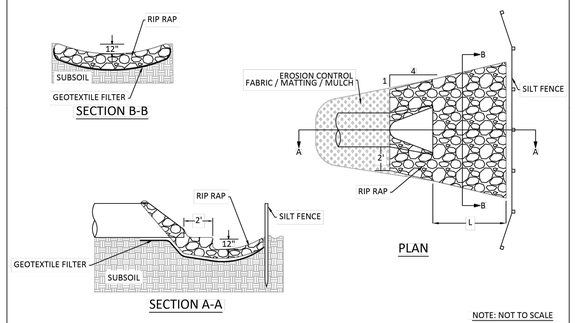
N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINTED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

APPROVED: 1 – 2016

STANDARD DETAILS: INLET PROTECTION

CITY PLATE No. ERO–2



NOTE: NOT TO SCALE

NOTES:

1. ON SLOPES 4:1 OR GREATER, ANCHOR OR STRAIGHT DISKED STRAW MULCH, SEEDED NETTING, GABRIC, OR MATTING SUCH AS EXCELSIOR SHALL BE USED TO STABILIZE DISTURBED SOILS. THESE EXPOSED SOILS MUST BE STABILIZED IMMEDIATELY AFTER GRADING OF SOIL IS COMPLETE.
2. A SKIRTING OF EROSION CONTROL FABRIC OR MULCH MUST BE USED TO PROTECT OUTLETS AS ILLUSTRATED REGARDLESS OF SLOPE.
3. RIP RAP IS CLASS III PLACED 18" THICK.
4. FOR PIPE GREATER THAN 48" DIAMETER OR 58" SPAN, QUANTITY OF GEOTEXTILE FABRIC AND RIP RAP WILL BE HANDLED IN A CASE BY CASE MANNER.
5. GEOTEXTILE FABRIC SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIP RAP MATERIAL.

RIP RAP AT RCP OUTLETS

DIA. OF PIPE (IN.)	L (FT.)	GEOTEXTILE FABRIC (SY)	18" DEPTH RIP RAP (CU. YD)
12	8	19.6	4.4
15	8	20.8	4.8
18	10	25.6	6.4
21	10	27.4	7.1
24	12	33.4	9.2
27	12	35.2	9.9
30	14	41.6	12.3
36	16	50.5	15.8
42	18	57.8	18.7
48	20	66.5	22.2

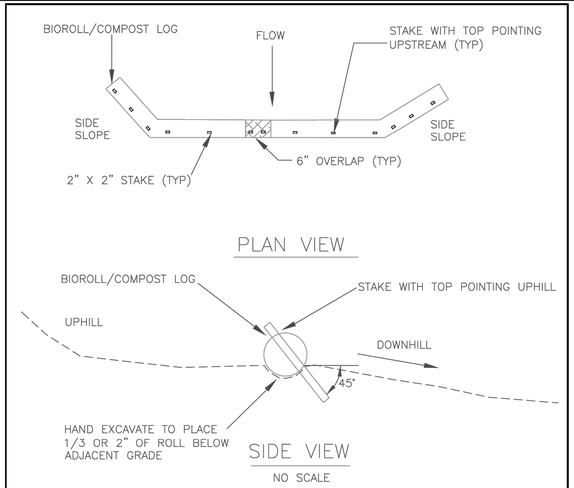
RIP RAP AT RCP-A OUTLETS

SPAN OF PIPE (IN.)	L (FT.)	GEOTEXTILE FABRIC (SY)	18" DEPTH RIP RAP (CU. YD)
22	10	25.6	6.1
28	12	33.2	8.5
36	14	41.5	11.2
43	16	50.5	14.3
51	18	57.5	16.9
58	20	65.2	19.8

APPROVED: 9 – 2016

STANDARD DETAILS: RIP–RAP

CITY PLATE No. ERO–3



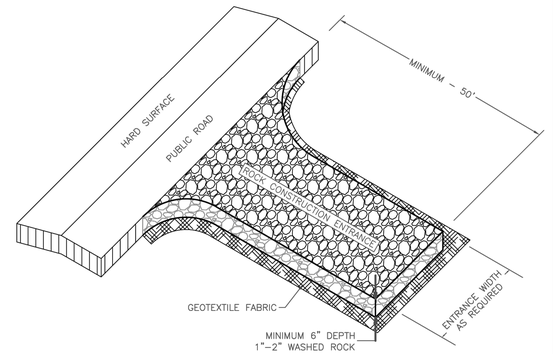
NO SCALE

NOTE:
STAKE INTO GROUND WITH WOOD STAKES DRIVING STAKE 6" INTO GROUND AND PROTRUDING 2" ABOVE LOG
WOOD STAKES ARE A MINIMUM 0.5" X 2" X 16" AND PLACED EVERY 1' UNLESS PRECLUDED BY A ROCK
WHEN MORE THAN 1 BIOROLL/COMPOST LOG IS NEEDED, OVERLAP ENDS A MINIMUM OF 6" AND STAKE
WOOD STAKES ARE DRIVEN THROUGH BACK HALF OF BIOROLL OR COMPOST LOG AT 45° ANGLE WITH TOP OF STAKE POINTING UPHILL

APPROVED: 3 – 2016

STANDARD DETAILS: BIO ROLL (COMPOST LOG)

CITY PLATE No. ERO–4



NOTE:
1. MINIMUM CONSTRUCTION ENTRANCE WIDTH EQUAL TO PROPOSED ROADWAY WIDTH. WIDTH OF RADIUS AS REQUIRED TO ENSURE VEHICLES DO NOT TRACK ONTO PUBLIC ROAD.
2. MAINTAINENCE AS REQUIRED TO PREVENT TRACKING ONTO PUBLIC ROADS. THIS MAY REQUIRE TOP DRESSING WITH ADDITIONAL ROCK OR REMOVAL AND REINSTALLATION OF THE ENTRANCE AS NEEDED.

NOT TO SCALE

APPROVED: 1 – 2016

STANDARD DETAILS: ROCK CONSTRUCTION ENTRANCE

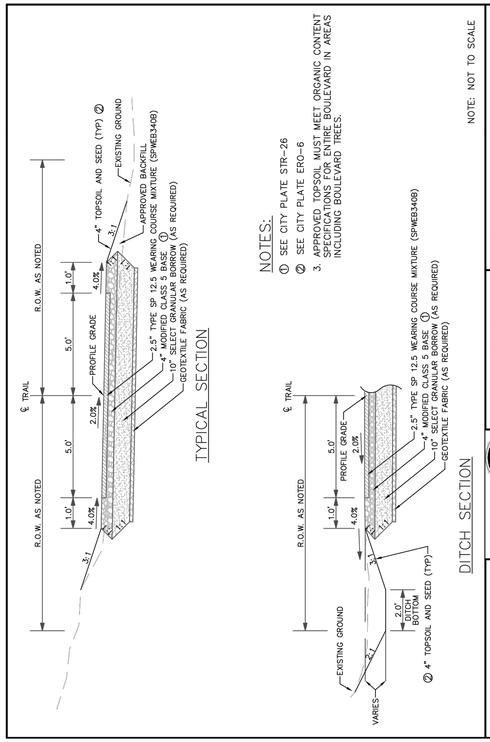
CITY PLATE No. ERO–5

Notes:
1. INSTALLATION OF 4" OF TOPSOIL REQUIRED ACROSS ALL DISTURBED AREAS.
2. TOPSOIL IS DEFINED AS BLACK DIRT COMPOSED OF UNCONSOLIDATED MATERIAL, LARGELY UNDECOMPOSED ORGANIC MATTER WHICH IS SUITABLE FOUNDATION FOR VEGETATIVE GROWTH.
3. THE COMPOSITION OF TOPSOIL SHOULD CONTAIN NO MORE THAN THIRTY-FIVE PERCENT (35%) SAND CONTENT.

APPROVED: 7 – 2019

STANDARD DETAILS: TOPSOIL REQUIREMENTS

CITY PLATE No. ERO–6

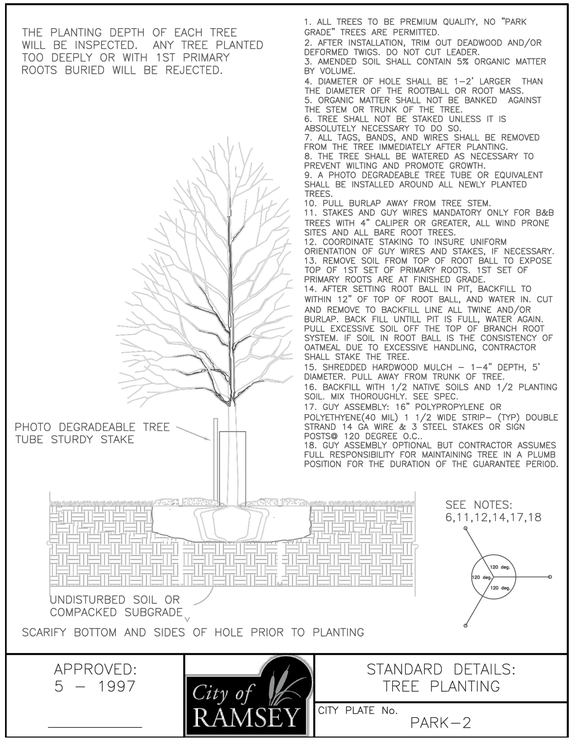


NOTE: NOT TO SCALE

STANDARD DETAILS: BITUMINOUS TRAIL

CITY PLATE No. PARK–1

APPROVED: 1 – 2016



APPROVED: 5 – 1997

STANDARD DETAILS: TREE PLANTING

CITY PLATE No. PARK–2

CITY PLATE No. ERO–4

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Reg. No. 47504 Date

Revisions
1. 2024-02-05 City Comments

Date
Designed
Drawn

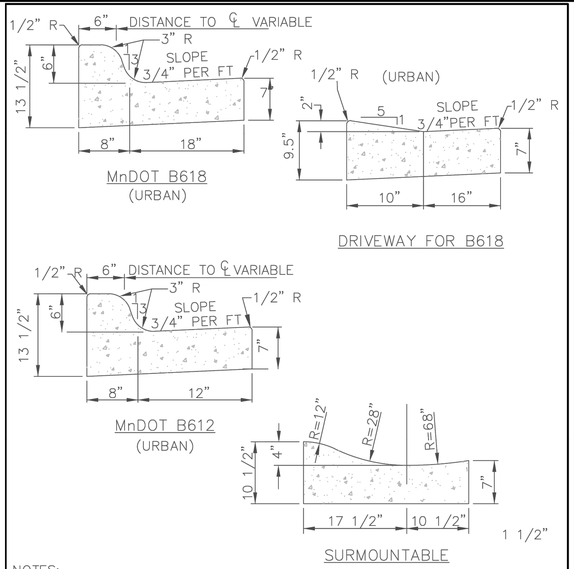
PRELIMINARY DETAILS

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-DTLS-CITY

8.10 OF 30



NOTES:

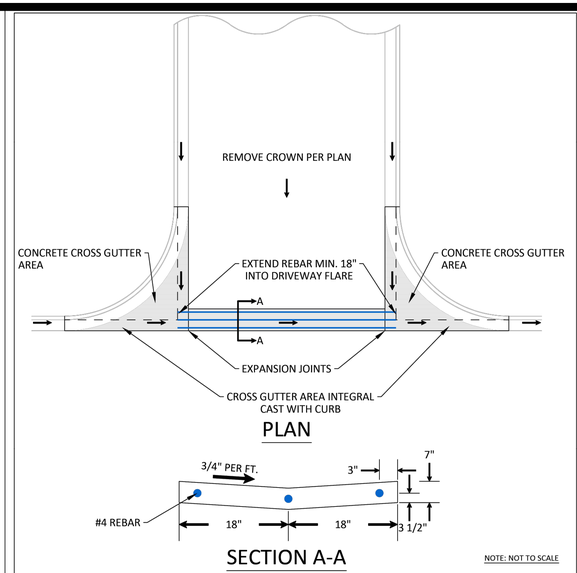
1. ON WEAR COURSE MILL THE EXISTING BITUMINOUS 1.5" BY 24" IN FRONT OF THE REPLACEMENT CURB.
2. ON BASE COURSE SAW CUT AND REMOVE EXISTING BITUMINOUS 18" IN FRONT OF THE REPLACEMENT CURB.

APPROVED: 1 - 2016

City of RAMSEY

STANDARD DETAILS: CURB AND GUTTER

CITY PLATE No. STR-1



NOTE: NOT TO SCALE

NOTES:

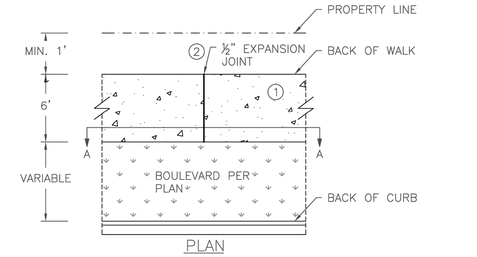
1. WITH REMOVAL OF EXISTING CURB AT A STREET, MILL BITUMINOUS TO A DEPTH OF 1.5" AND A WIDTH OF 18" IN EXISTING STREET.
2. TO BE USED WHENEVER CROSS DRAINAGE IS < 2%.
3. CONCRETE CURB AND GUTTER SHALL BE CAST INTEGRAL WITH CONCRETE CROSS GUTTER AREA.
4. CONCRETE CURB AND GUTTER SHALL BE PAID SEPARATELY FROM CONCRETE CROSS GUTTER AREA.

APPROVED: 3 - 2017

City of RAMSEY

STANDARD DETAILS: CROSS GUTTER

CITY PLATE No. STR-2



NOTE:

① BROOM FINISH CONCRETE WALK SURFACE

② MAXIMUM 100 FOOT SPACING BETWEEN EXPANSION JOINTS

③ 1/2" EXPANION JOINT MEETING MNDOT SPEC 3702. PROVIDE ONE PIECE OF FILLER FOR THE ENTIRE DEPTH AND WIDTH OF THE JOINT

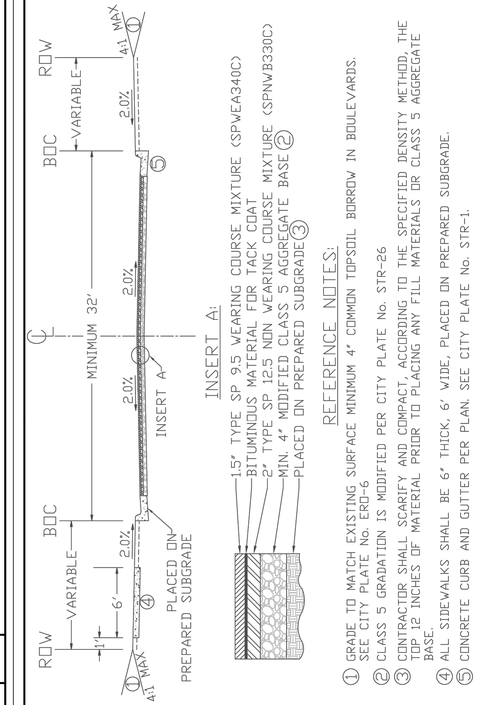
NOT TO SCALE

APPROVED: 10 - 2015

City of RAMSEY

STANDARD DETAILS: CONCRETE SIDEWALK

CITY PLATE No. STR-3



REFERENCE NOTES:

① GRADE TO MATCH EXISTING SURFACE MINIMUM 4" COMMON TOPSOIL BORROW IN BOULEVARDS. SEE CITY PLATE No. ERO-6

② CLASS 5 GRADATION IS MODIFIED PER CITY PLATE No. STR-26

③ CONTRACTOR SHALL SCARIFY AND COMPACT, ACCORDING TO THE SPECIFIED DENSITY METHOD, THE TOP 12 INCHES OF MATERIAL PRIOR TO PLACING ANY FILL MATERIALS OR CLASS 5 AGGREGATE BASE.

④ ALL SIDEWALKS SHALL BE 6" THICK, 6' WIDE, PLACED ON PREPARED SUBGRADE.

⑤ CONCRETE CURB AND GUTTER PER PLAN. SEE CITY PLATE No. STR-1.

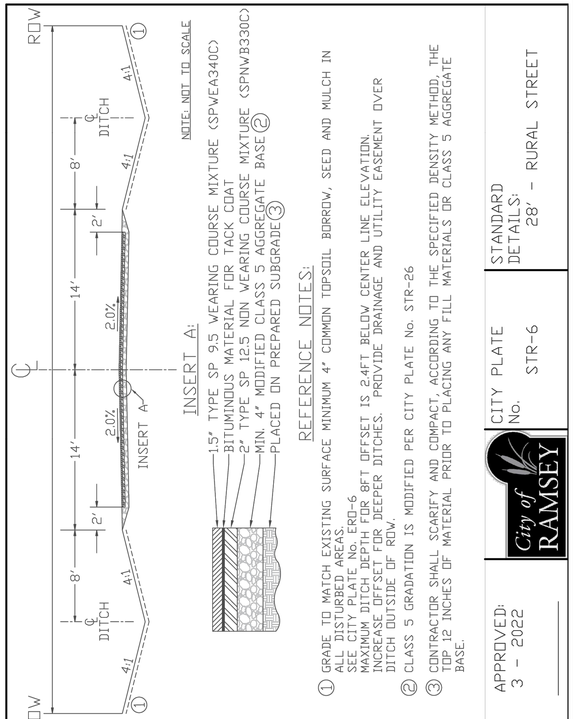
NOTE: NOT TO SCALE

STANDARD DETAILS: 32' - URBAN STREET

CITY PLATE No. STR-5

APPROVED: 3 - 2022

City of RAMSEY



NOTE: NOT TO SCALE

INSERT A:

1.5" TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C)
BITUMINUS MATERIAL FOR TACK COAT
2" TYPE SP 12.5 NON WEARING COURSE MIXTURE (SPNWB330C)
MIN. 4" MODIFIED CLASS 5 AGGREGATE BASE ②
PLACED ON PREPARED SUBGRADE ③

REFERENCE NOTES:

① GRADE TO MATCH EXISTING SURFACE MINIMUM 4" COMMON TOPSOIL BORROW, SEED AND MULCH IN ALL DISTURBED AREAS. SEE CITY PLATE No. ERO-6

② CLASS 5 GRADATION IS MODIFIED PER CITY PLATE No. STR-26

③ CONTRACTOR SHALL SCARIFY AND COMPACT, ACCORDING TO THE SPECIFIED DENSITY METHOD, THE TOP 12 INCHES OF MATERIAL PRIOR TO PLACING ANY FILL MATERIALS OR CLASS 5 AGGREGATE BASE.

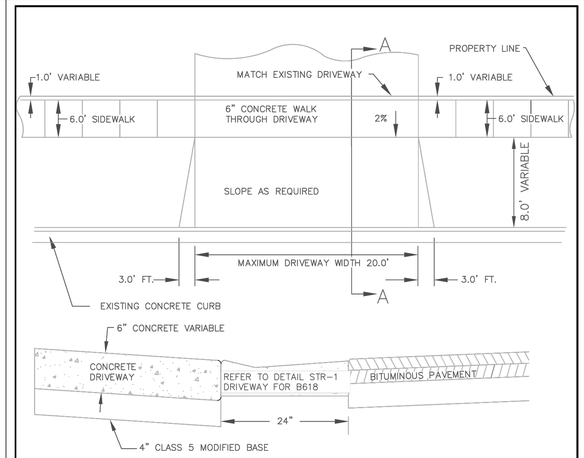
MAXIMUM DITCH DEPTH FOR 8FT OFFSET IS 2.4FT BELOW CENTER LINE ELEVATION. INCREASE OFFSET FOR DEEPER DITCHES. PROVIDE DRAINAGE AND UTILITY EASEMENT OVER DITCH OUTSIDE OF RDW.

STANDARD DETAILS: 28' - RURAL STREET

CITY PLATE No. STR-6

APPROVED: 3 - 2022

City of RAMSEY



SECTION A-A

CONCRETE DRIVEWAY ENTRANCE

NOTES:

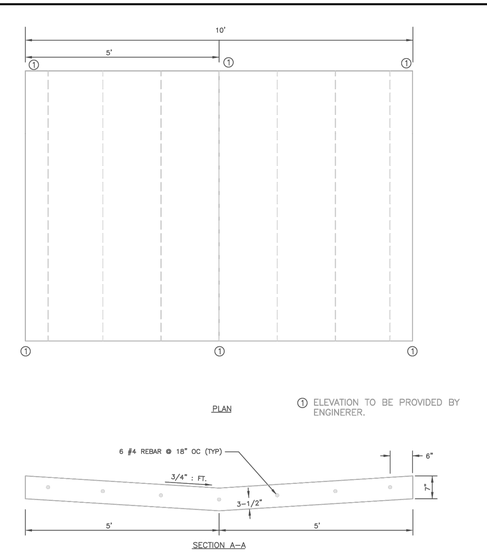
1. PANEL WIDTH SHALL NOT EXCEED 10 FT. WITHOUT A CENTERLINE CONSTRUCTION JOINT.
2. DRIVEWAY TO BE ONE COURSE CONCRETE PAVEMENT. (SEE SPECIAL PROVISIONS FOR CLASS OF CONCRETE.)
3. GUTTER TO BE PAVED INTEGRAL WITH DRIVEWAY.
4. 6" THICK FOR RESIDENTIAL. 8" THICK FOR COMMERCIAL DRIVEWAYS AND ALLEYS.
5. 1/2" EXPANSION JOINT, 1/2" PREFORMED JOINT FILLER MATERIAL, AASHTO M 213 (REQUIRED WHEN 2 CONCRETE AREAS ARE POURED SEPARATELY.)

APPROVED: 2 - 2004

City of RAMSEY

STANDARD DETAILS: RESIDENTIAL DRIVEWAY

CITY PLATE No. STR-19



CONCRETE VALLEY GUTTER

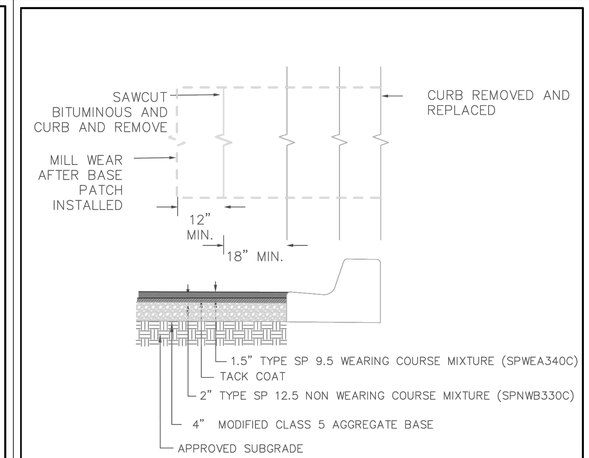
NOTE: TO BE USED WHENEVER CROSS DRAINAGE IS < 2% SLOPE

APPROVED: 9 - 2011

City of RAMSEY

STANDARD DETAILS: 10' CROSS GUTTER - OVERLAYS

CITY PLATE No. STR-20



NOTES:

1. BITUMNOUS SHALL BE SAWCUT AND REMOVED AFTER CURB IS REPLACED.
2. CLASS 5 AND BITUMINOUS COURSES SHALL BE MECHNICALLY COMPACTED.
3. SEE CITY PLATE STR-26 FOR MODIFIED CLASS 5 SPECIFICATIONS.

APPROVED: 3 - 2022

City of RAMSEY

STANDARD DETAILS: STREET PATCHING STANDARDS

CITY PLATE No. STR-25

PIONEERengineering
CIVIL ENGINEERS LAND PLANNERS LAND SURVEYORS LANDSCAPE ARCHITECTS
2422 Enterprise Drive
Mendota Heights, MN 55120
(651) 681-1914
Fax: 681-9488
www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Name Brian N. Molinaro

Reg. No. 47504 Date

Revisions
1. 2024-02-05 City Comments

Date
Designed
Drawn

PRELIMINARY DETAILS

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-DTLS-CITY

8.11 OF 30

TABLE A
MODIFIED CLASS 5 SPECIFICATIONS

% PASSING

1"	100
3/4"	90 – 100
3/8"	50 – 80
No.4	35 – 70
No.10	20 – 60
No.40	10 – 35
No.200	5 – 10

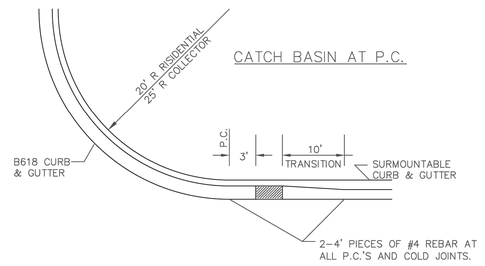
NOTES:
1. THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.
2. IF THE AGGREGATE BASE FAILS TO MEET THE REQUIREMENTS OF TABLE A THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEET THE REQUIREMENTS OF TABLE A.
3. IN THE EVENT THAT RECYCLED MATERIAL IS USE IT MUST MEET MNDOT REQUIREMENTS FOR RECYCLED BASE.

APPROVED: 2 - 2003

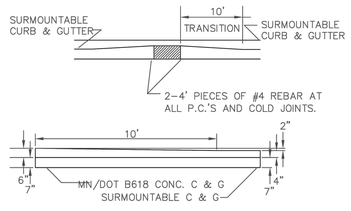
City of RAMSEY

STANDARD DETAILS: MODIFIED CLASS 5 SPECIFICATIONS

CITY PLATE No. STR-26



CATCH BASIN AT P.C.



INLINE CATCH BASIN

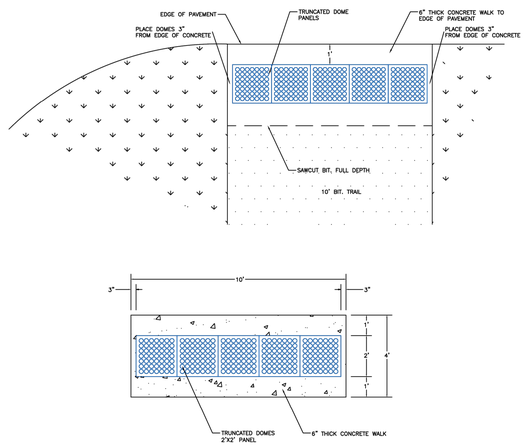
10' TRANSITION

APPROVED: 4 - 2016

City of RAMSEY

STANDARD DETAILS: CATCHBASIN PLACEMENT - SURMOUNTABLE CURB

CITY PLATE No. STR-27



NOTE:
1. SAWCUT BIT. FULL DEPTH / REMOVE BIT.
2. PLACE 6" THICK CONCRETE FOR TRUNCATED DOMES UP TO EDGE OF PAVEMENT.
3. MEDIUM BROOM FINISH ON CONCRETE
4. MAINTAIN 3" FROM EDGE OF TRUNCATED DOMES AND CONCRETE EDGE.
5. IT MAY BE NECESSARY TO TRIM TRUNCATED DOME PANELS.

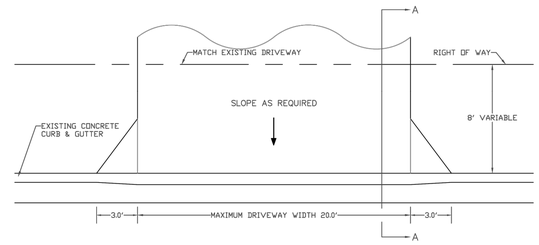
NOTE: NOT TO SCALE

APPROVED: 7 - 2015

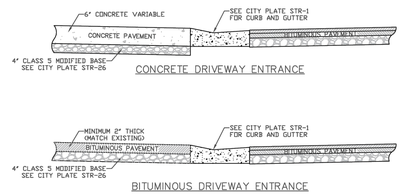
City of RAMSEY

STANDARD DETAILS: TRUNCATED DOME PLACEMENT - BITUMINOUS TRAIL NO CURB

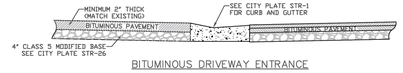
CITY PLATE No. STR-28



SECTION A-A



CONCRETE DRIVEWAY ENTRANCE



BITUMINOUS DRIVEWAY ENTRANCE

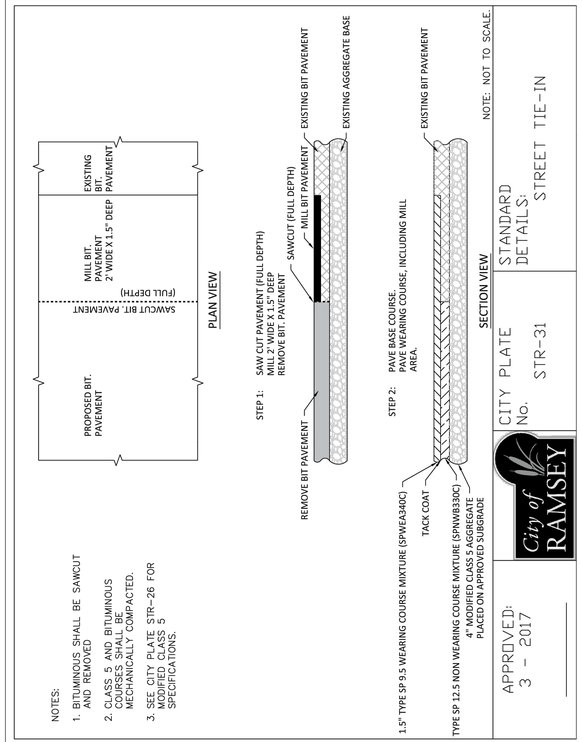
NOTES:
1. PANEL WIDTH SHALL NOT EXCEED 10 FT. WITHOUT A CENTERLINE CONSTRUCTION JOINT.
2. CONCRETE DRIVEWAY TO BE ONE COURSE CONCRETE PAVEMENT. (SEE SPECIAL PROVISIONS FOR CLASS OF CONCRETE.)
3. CONCRETE DRIVEWAYS TO BE 6" THICK.
4. ½" EXPANSION JOINT, ½" PREFORMED JOINT FILLER MATERIAL, AASHTO M 213 (REQUIRED WHEN 2 CONCRETE AREAS ARE POURED SEPERATELY.)
5. BITUMINOUS DRIVEWAYS MINIMUM 2" THICK, MATCH EXISTING BITUMINOUS PAVEMENT THICKNESS.

APPROVED: 1 - 2016

City of RAMSEY

STANDARD DETAILS: RESIDENTIAL DRIVEWAY - NO SIDEWALK

CITY PLATE No. STR-30



CITY PLATE No. STR-31

STANDARD DETAILS: STREET TIE-IN

APPROVED: 3 - 2017

City of RAMSEY

PIONEER engineering
CIVIL ENGINEERS LAND PLANNERS LAND SURVEYORS LANDSCAPE ARCHITECTS
2422 Enterprise Drive
Mendota Heights, MN 55120
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Name Brian N. Molinaro

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Revisions
1. 2024-02-05 City Comments

Date
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PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-DTLS-CITY

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TO COMPLY WITH THE GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY

THE FULL STORMWATER MANAGEMENT PLAN IS A SEPARATE DOCUMENT AVAILABLE UPON REQUEST

CONSTRUCTION ACTIVITY INFORMATION

PROJECT NAME: HARMONY FARMS
PROJECT LOCATION:
NOWTHEN BLVD N.W. & 167TH AVE N.W.
RAMSEY, MINNESOTA 55303
ANOKA COUNTY
LATITUDE/LONGITUDE: 45.273713, −93.439776

TOTAL PROJECT AREA DISTURBED: 23.3 ACRES
TOTAL EXISTING IMPERVIOUS AREA: 0.0 ACRES
TOTAL PROPOSED IMPERVIOUS AREA: 7.3 ACRES

RECEIVING WATERS:
TROTT BROOK

DATES OF CONSTRUCTION:
CONSTRUCTION START DATE: MAY 1, 2024 EST. COMPLETION DATE: OCTOBER 1, 2026

CONTACT INFORMATION

PROJECT OWNER
LENNAR HOMES
(SWPPP TO BE PROVIDED BY LENNAR)

CONTRACTOR:
TBD

GENERAL CONSTRUCTION PROJECT INFORMATION

THE CONSTRUCTION OF ENTRANCE TURN LANE, BITUMINOUS PATHS, STREETS A THROUGH D, AND 57 LOTS FOR RESIDENTIAL DEVELOPMENT. THIS CONSTRUCTION WILL COMPLETE GRADING, INSTALLATION OF SANITARY SEWER, WATERMAIN, STORM SEWER, CONCRETE CURB AND GUTTER, BITUMINOUS SURFACING, STREET LIGHTING, LANDSCAPING, EROSION CONTROL, AND TURF ESTABLISHMENT.

BASED ON THE SOIL BORINGS THAT WERE RETRIEVED FROM THE SITE, SOILS ENCOUNTERED ON SITE ARE POORLY GRADED SAND, SILTY SAND AND LEAN CLAY.

GENERAL SITE INFORMATION (III.A)

1. THE PROJECT IS REQUIRED TO MEET THE CONSTRUCTION STORMWATER REQUIREMENTS FOR THE NPDES GENERAL STORMWATER PERMIT AND MNDOT SPEC. 1717, 2573, AND 2575.
2. THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH MNDOT GENERAL CONDITIONS 2573 TO BE INSPECTED BY THE CITY PRIOR TO STARTING ANY CONSTRUCTION OPERATION THAT MAY CAUSE ANY SEDIMENTATION OR SILTATION AT THE SITE.
3. LOCATIONS, TYPE AND QUANTITY OF TEMPORARY AND PERMANENT EROSION CONTROL MEASURES CAN BE FOUND WITHIN THE CONSTRUCTION PLANS.
4. THE PROJECT IS LOCATED WITHIN 1 MILE AND FLOWS TO AN IMPAIRED WATER BODY. THEREFORE, THE PROJECT WILL NEED TO STABILIZE ALL EXPOSED SOILS NO LATER THAN 7 DAYS. DITCHES OR RAVINES THROUGHOUT THE PROJECT THAT ARE DISTURBED SHALL BE STABILIZED WITHIN 24 HOURS.
5. THE PROJECT IS LOCATED WITH 1 MILE AND FLOWS TO AN IMPAIRED WATER BODY. THEREFORE, TEMPORARY SEDIMENT BASINS ARE NEEDED FOR DRAINAGE AREAS OF 5 ACRES OR MORE FLOWING TO A COMMON LOCATION.
6. THE CONTRACTOR SHALL INSTALL ADDITIONAL BMP'S AS NECESSARY TO PREVENT SEDIMENT TRANSPORT PER PERMIT REQUIREMENTS
7. INLET PROTECTION, SILT FENCE AND BIOROLLS SHALL BE INSTALLED IN THE FIELD AS SHOWN ON THE PLANS AS DIRECTED BY THE ENGINEER.
8. PERMIT COVERAGE FOR THIS PROJECT CANNOT BE ISSUED UNTIL ALL OF THE REQUIREMENTS OF SECTION 22 OF THE GENERAL STORMWATER PERMIT WITH REGARDS TO WETLAND PERMITTING, DECISIONS, AND MITIGATIVE SEQUENCING HAVE BEEN FINALIZED AND DOCUMENTED.

THE INTENDED SEQUENCING OF MAJOR CONSTRUCTION ACTIVITIES IS AS FOLLOWS:
1. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCE
2. INSTALLATION OF SILT FENCE AROUND SITE
3. INSTALL DOUBLE SILT FENCE AROUND WETLAND AREAS
4. INSTALL ORANGE CONSTRUCTION FENCING AROUND INFILTRATION AREAS.
5. CLEAR AND GRUB FOR TEMPORARY SEDIMENT BASIN/POND INSTALL.
6. CONSTRUCT TEMP PONDS – CAN USE PROPOSED BASINS AS TEMP PONDS
7. CLEAR AND GRUB REMAINDER OF SITE
8. STRIP AND STOCKPILE TOPSOIL
9. ROUGH GRADING OF SITE
10. STABILIZE DENUDED AREAS AND STOCKPILES
11. INSTALL SANITARY SEWER, WATER MAIN, STORM SEWER AND SERVICES
12. INSTALL SILT FENCE/INLET PROTECTION AROUND CB'S
13. INSTALL STREET SECTION
14. INSTALL CURB AND GUTTER
15. BITUMINOUS ON STREETS
16. INSTALL SMALL UTILITIES (GAS, ELECTRIC, PHONE, CABLE, ETC.)
17. FINAL GRADE BOULEVARD, INSTALL SEED AND MULCH
18. REMOVE ACCUMULATED SEDIMENT FROM BASIN/POND
19. FINAL GRAD POND/INFILTRATION BASINS (DO NOT COMPACT SOILS IN INFILTRATION AREAS.)
20. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED BY EITHER SEED OR SOD/LANDSCAPING, REMOVE SILT FENCE AND RESEED AREAS DISTURBED BY THE REMOVAL.

ENVIRONMENTALLY SENSITIVE AREAS:
WETLANDS – THERE ARE NO/IMPACTS TO WETLANDS PER SECTION 22 OF THE PERMIT. SEE ATTACHED WETLAND PLAN FOR IMPACTS AND MITIGATION. THE APPROVED WETLANDS PERMIT IS ON FILE WITH THE OWNER.

SPECIAL AND IMPAIRED WATERS – TROTT BROOK IMPAIRMENT(S): BENTHIC MACROINVERTEBRATES BIOASSESSMENTS; DISSOLVED OXYGEN; FISH BIOASSESSMENTS; SULFATE

TMDL – THERE ARE ESTABLISHED TMDL PLANS FOR TURBIDITY, FECAL COLIFORM, MERCURY IN FISH TISSUE, MERCURY IN WATER COLUMN.

SCIENTIFIC OR NATURAL AREAS – THERE ARE NO SNA WITHIN 1 MILE OF THE PROJECT. EXPLAIN IF THERE IS.

KARST AREA – THE PROJECT IS NOT LOCATED WITHIN A KARST AREA.

CALCAREOUS FENS – THE PROJECT DOES NOT DISCHARGE TO A FEN.

TRAINING (21.1)

THE CONTRACTOR SHALL ENSURE THAT THE TRAINING REQUIREMENTS IN PART 21.1 OF THE GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY ARE COMPLIED WITH. THE INDIVIDUALS TRAINED WILL BE RECORDED IN THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS PERSONNEL FOR THE PROJECT HAVE BEEN DETERMINED. PROVIDE INFORMATION IN THE SPACE PROVIDED BELOW FOR ADDITIONAL PERSONNEL ON THE PROJECT AS REQUIRED BY THE PERMIT.

SWPPP DESIGNER	COMPANY	CERTIFICATION
SWPPP INSTALLER		
SWPPP INSPECTOR		

PERMANENT STORMWATER MANAGEMENT SYSTEM (15.1)

1. THE PROJECT WILL CREATE A NEW CUMULATIVE IMPERVIOUS SURFACE GREATER THAN OR EQUAL TO ONE ACRE. THE PROJECT PROPOSES TO CONSTRUCT A STORMWATER TREATMENT SYSTEM TO COLLECT RUNOFF TO BE DISCHARGED OFFSITE. TREATMENT FOR THE RUNOFF IS TO BE EXECUTED BY THE PROPOSED STORMWATER MANAGEMENT SYSTEM. CALCULATIONS DETAILING THE BASINS ARE AVAILABLE UPON REQUEST.

BMP SELECTION & STORMWATER MANAGEMENT (7.1)

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN THE BMPS IDENTIFIED IN THIS PLAN IN AN APPROPRIATE AND FUNCTIONAL MANNER AND IN ACCORDANCE WITH RELEVANT MANUFACTURER SPECIFICATIONS AND ACCEPTED ENGINEERING PRACTICES TO MINIMIZE THE DISCHARGE OF POLLUTANTS IN STORMWATER FROM CONSTRUCTION ACTIVITIES. THESE BMPS SHALL BE INSPECTED BY THE CITY.
2. THE CONTRACTOR SHOULD CONSTRUCT TEMPORARY OR PERMANENT WET SEDIMENTATION BASINS IDENTIFIED IN THIS PLAN (WHEN REQUIRED, SEE SECTION 14 AND 15) AS A FIRST STEP IN CONSTRUCTION AND STORMWATER ROUTED TO THESE.
3. THE CONTRACTOR MUST PHASE CONSTRUCTION SO TO LIMIT DISTURBED LAND TO AREAS THAT CAN BE EFFECTIVELY INSPECTED AND MAINTAINED. PER SECTION 11 OF THE PERMIT.
4. ALL EROSION CONTROL NETTING USED ON THE SITE AS PART OF THE SOIL STABILIZATION TECHNIQUES, ARE ENCOURAGED TO USE PRODUCTS THAT HAVE BEEN SHOWN TO MINIMIZE IMPACTS ON WILDLIFE. THE U.S. FISH & WILDLIFE SERVICE RECOMMENDS USING TYPES OF NETTING PRACTICES THAT ARE CONSIDERED "WILDLIFE FRIENDLY," INCLUDING THOSE THAT USE NATURAL FIBER OR 100 PERCENT BIODEGRADABLE MATERIALS AND THAT USE A LOOSE WEAVE WITH A NON–WELDED, MOVABLE JOINTED NETTING.

EROSION PREVENTION PRACTICES (8.1)

1. THE CONTRACTOR SHALL PHASE THE WORK TO LIMIT THE OVERALL DISTURBANCE OF THE PROJECT AT ANY GIVEN TIME. NATURAL VEGETATIVE BUFFERS SHALL BE MAINTAINED BETWEEN THE WORK LIMITS AND ALL SURFACE WATERS OR WETLANDS THROUGHOUT THE COURSE OF CONSTRUCTION.
2. THE AREAS NOT TO BE DISTURBED WILL BE DELINEATED THROUGH THE USE OF SILT FENCE, BIOROLLS AND CONSTRUCTION STAKING.
3. THE CONTRACTOR SHALL MAINTAIN A NATURAL, VEGETATED BUFFER ADJACENT TO THE WETLANDS WHEREVER POSSIBLE DURING CONSTRUCTION.
4. TEMPORARY COVER SHALL BE PROVIDED USING TEMPORARY SEED WITH EROSION CONTROL BLANKET OR HYDROMULCH.
5. PERMANENT COVER SHALL BE PROVIDED AS DETAILED ON THE CONSTRUCTION PLANS USING SEED WITH EROSION CONTROL BLANKET OR HYDROMULCH. PERMITTEES MUST NOT USE MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES WITHIN ANY PORTION OF THE NORMAL WETTED PERIMETER OF A TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE SECTION WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT
6. THE CONTRACTOR IS REQUIRED TO PROVIDE ANY ADDITIONAL EROSION PREVENTION MEASURES NECESSARY FOR CONFORMANCE TO THE NPDES CONSTRUCTION PERMIT THROUGHOUT CONSTRUCTION.
7. STABILIZATION TIME FRAMES – INITIATE STABILIZATION IMMEDIATELY WHEN CONSTRUCTION TEMPORARILY OR PERMANENTLY CEASES ON A PORTION OF THE SITE. COMPLETE STABILIZATION WITHIN THE TIME FRAMES LISTED.

7.1.	LAST 200 LINEAL FEET OF DITCH OR SWALE	24 HOURS OF CONNECTION TO SURFACE WATERS
7.2.	REMAINING DITCH OR SWALE	7 DAYS
7.3.	PIPE AND CULVERT OUTLETS	24 HOURS
7.4.	EXPOSED SOIL AND STOCKPILES	7 DAYS

SEDIMENT CONTROL PRACTICES (9.1)

1. SILT FENCE AND ALL OTHER DOWN GRADIENT PERIMETER CONTROL DEVICES SHALL BE INSTALLED AND INSPECTED BY THE CITY PRIOR TO ANY LAND DISTURBANCE ACTIVITY.
2. EROSION CONTROL BLANKET AND BIOROLLS SHALL BE PLACED WITHIN THE DITCH BOTTOMS WITHIN 24 HOURS AFTER FINE GRADING.
3. PRIOR TO STOCKPILING SOIL, SEDIMENT CONTROLS AT THE BASE OF THE STOCKPILE NED TO BE INSTALLED. STOCKPILES LOCATED ON SITE SHALL BE SEEDED, MULCHED OR BLANKETED AND HAVE SILT FENCE OR A BMP APPROVED BY THE ENGINEER IN THE FIELD PLACED AROUND THE BASE OF THE STOCKPILE.
4. MAINTAIN A 50–FOOT NATURAL BUFFER DOWN GRADIENT OF THE SITE OR REDUNDANT SEDIMENT CONTROLS IF BUFFER IS NOT FEASIBLE, WHEN THE CONSTRUCTION IS WITHIN 50 FEET OF A SURFACE WATER.
5. MINIMIZE SOIL COMPACTION BY NOT DISTURBING AREAS OUTSIDE OF THE CONSTRUCTION LIMITS. DELINEATE AREAS NOT TO BE DISTURBED PRIOR TO STARTING GROUND DISTURBING ACTIVITIES. PRESERVE ALL NATURAL BUFFERS SHOWN ON THE PLANS. NO HEAVY CONSTRUCTION EQUIPMENT ALLOWED IN FILTRATION OR INFILTRATION AREAS PER PLANS.
6. CONTRACTOR SHALL USE STREET SWEEPING IN ADDITION TO VEHICLE TRACKING BMPS IF THESE BMPS ALONE ARE NOT ADEQUATE TO PREVENT SEDIMENT TRACKING ONTO THE STREET.
7. ANY SEDIMENT CONTROL PRACTICE USING SOIL IMPLEMENTED BY THE CONTRACTOR SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 24 HOURS OF INSTALLATION.

SEE FOLLOWING SHEET FOR CONTINUED SWPPP NOTES

DEWATERING AND BASIN DRAINING (10.1)

1. DEWATERING IS NOT ANTICIPATED ON THIS PROJECT. HOWEVER, IF DEWATERING IS NECESSARY, THE CONTRACTOR SHALL SUBMIT A PLAN TO THE ENGINEER FOR ACCEPTANCE.
2. IF DEWATERING IS NECESSARY, IT MUST NOT CAUSE NUISANCE CONDITIONS IN SURFACE WATERS FROM DEWATERING AND BASIN DRAINING DISCHARGE.
3. IF THE DEWATERING OR PUMPING PROCESS IS TURBID OR CONTAINS SEDIMENT LADEN WATER, IT MUST BE TREATED THROUGH THE USE OF A SEDIMENT CONTROL (TRAPS, VEGETATIVE FILTER STRIPS, FLOCCULANTS OR OTHER SEDIMENT REDUCING MEASURES) SUCH THAT DISCHARGE DOES NOT VISIBLY CONTAIN MORE TURBIDITY THAN THE RECEIVING WATER.
4. WHEN POSSIBLE, USE WELL VEGETATED (EG. GRASSY OR WOODED) UPLAND AREAS ON THE SITE TO INFILTRATE DEWATERING WATERS BEFORE DISCHARGED OFF SITE.
5. DISCHARGE DIRECTLY INTO A SURFACE WATER OR WETLAND IS NOT PERMITTED. RECEIVING WATERS CANNOT BE USED AS PART OF THE TREATMENT AREA.
6. ALL CONSTRUCTION DEWATERING SHALL BE DISCHARGED TO AN APPROVED LOCATION FOR TREATMENT PRIOR TO DISCHARGE TO THE RECEIVING WATER. THE DEWATERING PLAN SHALL BE DEVELOPED AND SUBMITTED TO THE ENGINEER FOR REVIEW IN ACCORDANCE WITH MNDOT SPEC. 1717.2E.
7. CONDITIONS OF THE SITE MAY REQUIRE A PERMIT TO BE OBTAINED FROM THE MINNESOTA DEPARTMENT OF NATURAL RESOURCES FOR WATER APPROPRIATIONS. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS FOR DEWATERING.
8. THE DISCHARGE POINT OF DEWATERING WATERS SHOULD BE VISUALLY INSPECTED AND PHOTOGRAPHED AT THE BEGINNING OF OPERATION AND AT LEAST ONCE EVERY 24 HOURS OF OPERATION TO ENSURE EXCESS TURBIDITY IS NOT BEING RELEASED TO THE RECEIVING WATERS.'
9. IF NUISANCE CONDITIONS RESULT FROM THE DISCHARGE, PERMITTEES MUST CEASE DEWATERING IMMEDIATELY AND CORRECTIVE ACTIONS MUST OCCUR BEFORE DEWATERING IS RESUMED. NUISANCE CONDITIONS INCLUDES, BUT IS NOT LIMITED TO, A SEDIMENT PLUME IN THE DISCHARGE OR THE DISCHARGE APPEARS CLOUDY, OR OPAQUE, OR HAS A VISIBLE CONTRAST, OR HAS A VISIBLE OIL FILM, OR HAS AQUATIC HABITAT DEGRADATION THAT CAN BE IDENTIFIED BY AN OBSERVER.

INSPECTIONS AND MAINTENANCE (11.1)

1. THE CONTRACTOR SHALL IDENTIFY A CERTIFIED EROSION AND SEDIMENT CONTROL SUPERVISOR TO CONDUCT INSPECTIONS FOR THE PROJECT.
2. THE CONSTRUCTION SITE SHALL BE OBSERVED AT LEAST ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS AND 7 DAYS AFTER THAT. PER SECTION 11.11 THE INSPECTION CAN BE ADJUSTED AS FOLLOW:
   - AREAS WITH PERMANENT COVER CAN BE REDUCED TO ONCE A MONTH
   - SITES WITH PERMANENT COVER AND NO CONSTRUCTION ACTIVITY CAN BE REDUCED TO ONCE A MONTH
   - WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, INSPECTION MAY BE SUSPENDED AND RESUME WITHIN 24 HOURS OF RUNOFF OCCURRING
3. WHEN SEDIMENT IS OBSERVED UP TO APPROXIMATELY ONE–THIRD OF THE HEIGHT OF SILT FENCE, SEDIMENT SHALL BE REMOVED. SILT FENCE WILL BE REPLACED, OR SUPPLEMENTED IF IT BECOMES NON–FUNCTIONAL.
4. THE CITY OF RAMSEY IS RESPONSIBLE TO MAINTAIN PERMANENT BMP'S.
5. DURING EACH INSPECTION THE FOLLOWING SHALL BE OBSERVED:
   - ALL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S AND POLLUTION PREVENTION MEASURES.
   - SURFACE WATERS – INCLUDING DITCHES AND CONVEYANCE SYSTEMS NEED TO BE OBSERVED FOR EROSION AND SEDIMENT.
   - CONSTRUCTION SITE VEHICLE EXIT LOCATIONS FOR EVIDENCE OF TRACKING ONTO PAVED SURFACES.
   - INSPECT SURROUNDING PROPERTIES FOR EVIDENCE OF OFF SITE SEDIMENT ACCUMULATION.
   - INFILTRATION AREAS FOR SIGNS OF SEDIMENT DEPOSITION AND COMPACTION (TO ENSURE THAT EQUIPMENT IS NOT BEING DRIVEN ACROSS THE AREA).
7. RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES IN WRITING WITHIN 24 HOURS. SUBMIT INSPECTION REPORTS IN A FORMAT THAT IS ACCEPTABLE TO THE PROJECT ENGINEER. INCLUDE THE FOLLOWING IN THE RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY:
   - DATE AND TIME OF INSPECTIONS
   - NAME OF PERSONS CONDUCTING INSPECTIONS
   - FINDINGS OF INSPECTIONS WITH PHOTOGRAPHS AND RECOMMENDATIONS FOR CORRECTIVE ACTIONS
   - CORRECTIVE ACTIONS TAKEN, INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES
   - DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCH IN 24 HOURS
   - DOCUMENT AND DISCHARGES, DEWATERING OPERATIONS AND NUISANCE CONDITIONS WITH PHOTOGRAPHS.
   - DOCUMENTS AND CHANGES MADE TO THE SWPPP
8. REPLACE, REPAIR OR SUPPLEMENT ALL NONFUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVERY UNLESS LISTED DIFFERENTLY BELOW:
   - A. REPAIR, REPLACE, OR SUPPLEMENT PERIMETER CONTROL DEVICES WHEN IT BECOMES NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT OF THE DEVICE. COMPLETE REPAIRS BY THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVERY.
   - B. REPAIR OR REPLACE INLET PROTECTION DEVICES WHEN THEY BECOME NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT AND/OR DEPTH OF THE DEVICE.
   - C. DRAIN AND REMOVE SEDIMENT FROM TEMPORARY AND PERMANENT SEDIMENT BASINS ONCE THE SEDIMENT HAS REACHED 1/2 THE STORAGE VOLUME. COMPLETE WORK WITHIN 72 HOURS OF DISCOVERY.
   - D. REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS. RESTABILIZE ANY AREAS THAT ARE DISTURBED BY SEDIMENT REMOVAL OPERATIONS. SEDIMENT REMOVAL AND STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS OF DISCOVERY. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR WORKING IN SURFACE WATERS. CONTACT ALL APPROPRIATE AUTHORITIES PRIOR TO WORKING IN SURFACE WATERS.
   - E. REMOVE TRACKED SEDIMENT FROM PAVED SURFACES BOTH ON AND OFF SITE WITHIN 24 HOURS OF DISCOVERY. STREET SWEEPING MAY HAVE TO OCCUR MORE OFTEN TO MINIMIZE OFF SITE IMPACTS. LIGHTLY WET THE PAVEMENT PRIOR TO SWEEPING.
   - F. MAINTAIN ALL BMPS UNTIL WORK HAS BEEN COMPLETED, SITE HAS GONE UNDER FINAL STABILIZATION, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED TO THE MPCA.

POLLUTION PREVENTION MANAGEMENT MEASURES (12.1)

ALL WORK NECESSARY TO PROVIDE PROPER POLLUTION PREVENTION MEASURES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
1. COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, AND OTHER WASTE MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.
2. CONSTRUCTION MATERIALS NEED TO BE COVERED TO MINIMIZE STORMWATER INTERACTION UNLESS MATERIAL IS NOT A POTENTIAL SOURCE OF STORMWATER CONTAMINATION.
3. OIL, GASOLINE, PAINT AND ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGES. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.
4. EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES IS NOT ALLOWED ON SITE. RUNOFF MUST BE CONTAINED AND WASTE PROPERLY DISPOSED OF. NO ENGINE DEGREASING IS ALLOWED ON SITE.
5. ALL LIQUID AND SOLID WASTE GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK–PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER THAT DOES NOT ALLOW WASHOUT LIQUIDS TO ENTER THE GROUND WATER IS CONSIDERED AN IMPERMEABLE LINER. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTE MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.

00-ENG-123074-SHEET-SWPPP

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I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota
Name Brian N. Molinaro
Reg. No. 47504 Date

Revisions
1. 2024-02-05 City Comments

Date
Designed
Drawn

STORMWATER POLLUTION PREVENTION PLAN

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

S1 OF 30

5. ANY SPILLS OF HAZARDOUS MATERIALS AND/OR A MINIMUM OF 5-GALLONS PETROLEUM SHALL BE IMMEDIATELY REPORTED TO THE MPCA (STATE DUTY OFFICER: 1.800.422.0798 OR 651.297.8610). ANY SPILLS ABOVE THE REPORTABLE QUANTITIES LIMITS IN THE CODE OF FEDERAL REGULATIONS (CFR) TITLE 40, PART 302 SHALL BE REPORTED TO THE EPA NATIONAL RESPONSE CENTER (1.800.424.8802). IN ORDER TO REDUCE THE RISK OF HAZARDOUS MATERIALS COMING INTO CONTACT WITH STORM WATER, THE FOLLOWING PRACTICES WILL BE FOLLOWED: A) AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE WORK, B) ALL MATERIALS STORED ON SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND IF POSSIBLE, UNDER COVER, C) PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL UNLESS THE ORIGINAL CONTAINER CANNOT BE RESEALED, IN WHICH CASE THE ORIGINAL LABEL AND MATERIALS SAFETY DATA SHALL BE RETAINED, D) SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER, E) WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED BEFORE DISPOSING OF THE CONTAINER, F) THE MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED, AND G) THE OPERATOR WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON SITE. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

6. ALL SANITARY WASTE WILL BE COLLECTED BY TEMPORARY SANITARY FACILITIES PROVIDED AT THE SITE BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROJECT. ALL CONSTRUCTION PERSONNEL SHALL UTILIZE TEMPORARY SANITARY FACILITIES, WHICH SHALL BE REGULARLY SERVICE BY A COMMERCIAL OPERATOR. TEMPORARY SANITARY FACILITIES SHALL BE PLACED IN A LOCATION WHERE ACCIDENTAL SPILLAGE OF THE FACILITY SHALL NOT DISCHARGE TO THE STORM SEWER SYSTEM.

TEMPORARY SEDIMENTATION BASINS (14.2)

1. TEMPORARY SEDIMENTATION BASINS ARE REQUIRED WHERE 10 OR MORE ACRES DRAIN TO A COMMON LOCATION TO PROVIDE TREATMENT OF THE RUNOFF BEFORE IT LEAVES THE CONSTRUCTION SITE OR ENTERS SURFACE WATERS. WHEN A CONSTRUCTION SITE DISCHARGES TO AN IMPAIRED WATER BODY, TEMPORARY SEDIMENTATION BASINS ARE REQUIRED WHERE 5 OR MORE ACRES DRAIN TO A COMMON LOCATION. TEMPORARY SEDIMENTATION BASINS CAN BE CONVERTED TO PERMANENT BASINS AFTER CONSTRUCTION IS COMPLETE.

2. THE TEMPORARY BASIN MUST PROVIDE LIVE STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A TWO (2)-YEAR, 24-HOUR STORM FROM EACH ACRE DRAINED TO THE BASIN OR 1,800 CUBIC FEET OF LIVE STORAGE PER ACRE DRAINED, WHICHEVER IS GREATER. WHERE PERMITTEES HAVE NOT CALCULATED THE TWO (2)-YEAR, 24-HOUR STORM RUNOFF AMOUNT, THE TEMPORARY BASIN MUST PROVIDE 3,600 CUBIC FEET OF LIVE STORAGE PER ACRE OF THE BASINS DRAINAGE AREA.

3. PERMITTEES MUST DESIGN THE OUTLET STRUCTURE TO WITHDRAW WATER FROM THE SURFACE TO MINIMIZE THE DISCHARGE OF POLLUTANTS. PERMITTEES MAY TEMPORARILY SUSPEND THE USE OF A SURFACE WITHDRAWAL MECHANISM DURING FROZEN CONDITIONS. THE BASIN MUST INCLUDE A STABILIZED EMERGENCY OVERFLOW TO PREVENT FAILURE OF POND INTEGRITY. PROVIDE ENERGY DISSIPATION FOR THE BASIN OUTLET WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.

4. WHERE A TEMPORARY SEDIMENT BASIN MEETING THE REQUIREMENTS OF THE ABOVE IS INFEASIBLE, PERMITTEES MUST INSTALL EFFECTIVE SEDIMENT CONTROLS SUCH AS SMALLER SEDIMENT BASINS AND/OR SEDIMENT TRAPS, SILT FENCES, VEGETATIVE BUFFER STRIPS OR ANY APPROPRIATE COMBINATION OF MEASURES AS DICTATED BY INDIVIDUAL SITE CONDITIONS. IN DETERMINING WHETHER INSTALLING A SEDIMENT BASIN IS INFEASIBLE, PERMITTEES MUST CONSIDER PUBLIC SAFETY AND MAY CONSIDER FACTORS SUCH AS SITE SOILS, SLOPE, AND AVAILABLE AREA ON-SITE. PERMITTEES MUST DOCUMENT THIS DETERMINATION OF INFEASIBILITY IN THE SWPPP.

FINAL STABILIZATION (4.1)

1. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE CONSTRUCTION PLANS. METHODS TO ACHIEVE FINAL STABILIZATION INCLUDE: SEED WITH MULCH OR EROSION CONTROL BLANKET AND SOD.

2. ALL AREAS SEEDED BY MEANS OF BROADCAST SEEDING SHALL BE HAND RAKED TO INCORPORATE THE SEEDS INTO THE TOPSOIL.

3. EROSION CONTROL BLANKETS SHALL BE PLACED IN THE DITCH BOTTOM WITHIN 24 HOURS AFTER FINE GRADING. BIOROLLS SHALL BE PLACED IN CONJUNCTION WITH THE BLANKET IN THE DITCH BOTTOMS. THE BIOROLLS ARE INTENDED TO SERVE AS PERMANENT DITCH CHECKS.

4. THE PERMITTEE WILL SUBMIT A NOTICE OF TERMINATION (NOT) WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION SHALL CONSIST OF A UNIFORM PERENNIAL VEGETATIVE COVER OF AT LEAST 70 PERCENT OF THE EXPECTED FINAL VEGETATIVE GROWTH DENSITY OR OTHER PERMANENT COVER HAS BEEN ESTABLISHED OVER THE ENTIRE PERVIOUS SURFACES.

5. PERMIT COVERAGE TERMINATES ON INDIVIDUAL LOTS IF THE STRUCTURES ARE FINISHED AND TEMPORARY EROSION PREVENTION AND DOWNGRADIENT PERIMETER CONTROL IS COMPLETE, THE RESIDENCE SELLS TO THE HOMEOWNER, AND THE PERMITTEE DISTRIBUTES THE MPCA'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER.

PERMIT TERMINATION CONDITIONS (13.1)

1. PERMITTEES MUST COMPLETE ALL CONSTRUCTION ACTIVITY AND MUST INSTALL PERMANENT COVER OVER ALL AREAS PRIOR TO SUBMITTING THE NOTICE OF TERMINATION (NOT). VEGETATIVE COVER MUST CONSIST OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES NO VEGETATION, SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER.

2. FOR RESIDENTIAL CONSTRUCTION ONLY, PERMIT COVERAGE TERMINATES ON INDIVIDUAL LOTS IF THE LOT IS SOLD TO THE HOMEOWNER, STRUCTURES ARE FINISHED, AND PERMANENT COVER HAS BEEN ESTABLISHED. FOR LOTS THAT ARE SOLD TO THE HOMEOWNER WHERE PERMANENT COVER HAS NOT BEEN ESTABLISHED, COVERAGE TERMINATES IF TEMPORARY EROSION PREVENTION AND DOWNGRADIENT PERIMETER CONTROL IS PROPERLY INSTALLED, AND THE PERMITTEE DISTRIBUTES THE MPCA'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER.

3. WHEN SUBMITTING THE NOT PERMITTEES MUST INCLUDE EITHER GROUND OR AERIAL PHOTOGRAPHS SHOWING THE REQUIREMENTS OF 13.2 HAVE BEEN MET. PERMITTEES ARE NOT REQUIRED TO TAKE PHOTOGRAPHS OF EVERY DISTINCT PART OF THE SITE, HOWEVER THE CONDITIONS PORTRAYED MUST BE SUBSTANTIALLY SIMILAR TO THOSE AREAS THAT ARE NOT PHOTOGRAPHED. PHOTOGRAPHS MUST BE CLEAR AND IN FOCUS AND MUST INCLUDE THE DATE THE PHOTO WAS TAKEN.

RECORDS RETENTION (5.1&6.1)

1. RECORDS MUST BE KEPT ON SITE IN A PHYSICAL OR ELECTRONIC FORMAT DURING NORMAL WORKING HOURS WITH PERSONNEL WHO HAVE OPERATIONAL CONTROL OVER THE APPLICABLE PORTION OF THE SITE. THESE RECORDS MUST INCLUDE:
   A. COPY OF THE SWPPP AND AMENDMENTS
   B. TRAINING DOCUMENTATION
   C. INPSECTION AND MAINTENANCE RECORDS

2. THIS SWPPP WILL BE AMENDED AS NEEDED AND/OR AS REQUIRED BY PROVISIONS OF THE PERMIT. ANY CHANGES TO THE SWPPP SHALL BE NOTED BELOW AND ON THE APPLICABLE PLAN SHEETS. ANY AMENDMENTS TO THE SWPPP MUST BE INCORPORATED WITHIN 7 DAYS TO INCLUDE ADDITIONAL OR MODIFIED BMPS.

3. THE CONTRACTOR WILL RECORD CHANGES TO THE SWPPP AND MAINTAIN DOCUMENTATION OF THESE CHANGES ON SITE AT ALL TIMES. A SUMMARY MAINTENANCE/CONSTRUCTION OBSERVATION REPORT WILL BE RECORDED AFTER EACH SITE INSPECTION/OBSERVATION.

4. THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN AND REPAIR THE EROSION AND SEDIMENT CONTROL BMP'S UNTIL FINAL STABILIZATION IS COMPLETE AND A NOTICE OF TERMINATION (NOT) IS SUBMITTED.

ITEM DESCPRIPTION	UNIT	ESTIMATED QUANTITY
CONSTRUCTION LIMIT STAKING	LF	6917
ROCK CONSTRUCTION ENTRANCE	EA	1
ROCK CONSTRUCTION ENTRANCE MAINTENANCE	EA	1
EROSION CONTROL FENCE	LF	6718
MAINTENANCE OF PERIMETER EROSION CONTROL	YR	1
BIOROLL DITCH CHECK	EA	24
STREET SWEEPING AND VACUUMING	YR	1
STORM DRAIN INLET PROTECTION	EA	28
TEMPORARY SEED AND MULCH	AC	18.0
PERMANENT SEED AND MULCH	AC	18.0
MAINTAIN SEED AND MULCH	AC	18.0
EROSION CONTROL BLANKET (MNDOT CAT. 20)	SY	16600
VEHICLE AND EQUIPMENT CLEANING	LS	1
VEHICLE AND EQUIPMENT FUELING	LS	1
VEHICLE AND EQUIPMENT MAINTENANCE	LS	1
SPILL PREVENTION AND CONTROL	LS	1
ROCK BERM EROSION CONTROL	LS	1
RIP RAP ENERGY DISSIPATOR	CY	27.1
INDIVIDUAL LOT HOME CONSTRUCTION EROSION CONTROL	EA	57

AMENDMENT	BY	DATE

NOTE:
SEE SHEET 5.51 FOR OUTLET CONTROL STRUCTURE DETAILS

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Name Brian N. Molinaro
Reg. No. 47504 Date

Revisions
1. 2024-02-05 City Comments

Date
Designed
Drawn

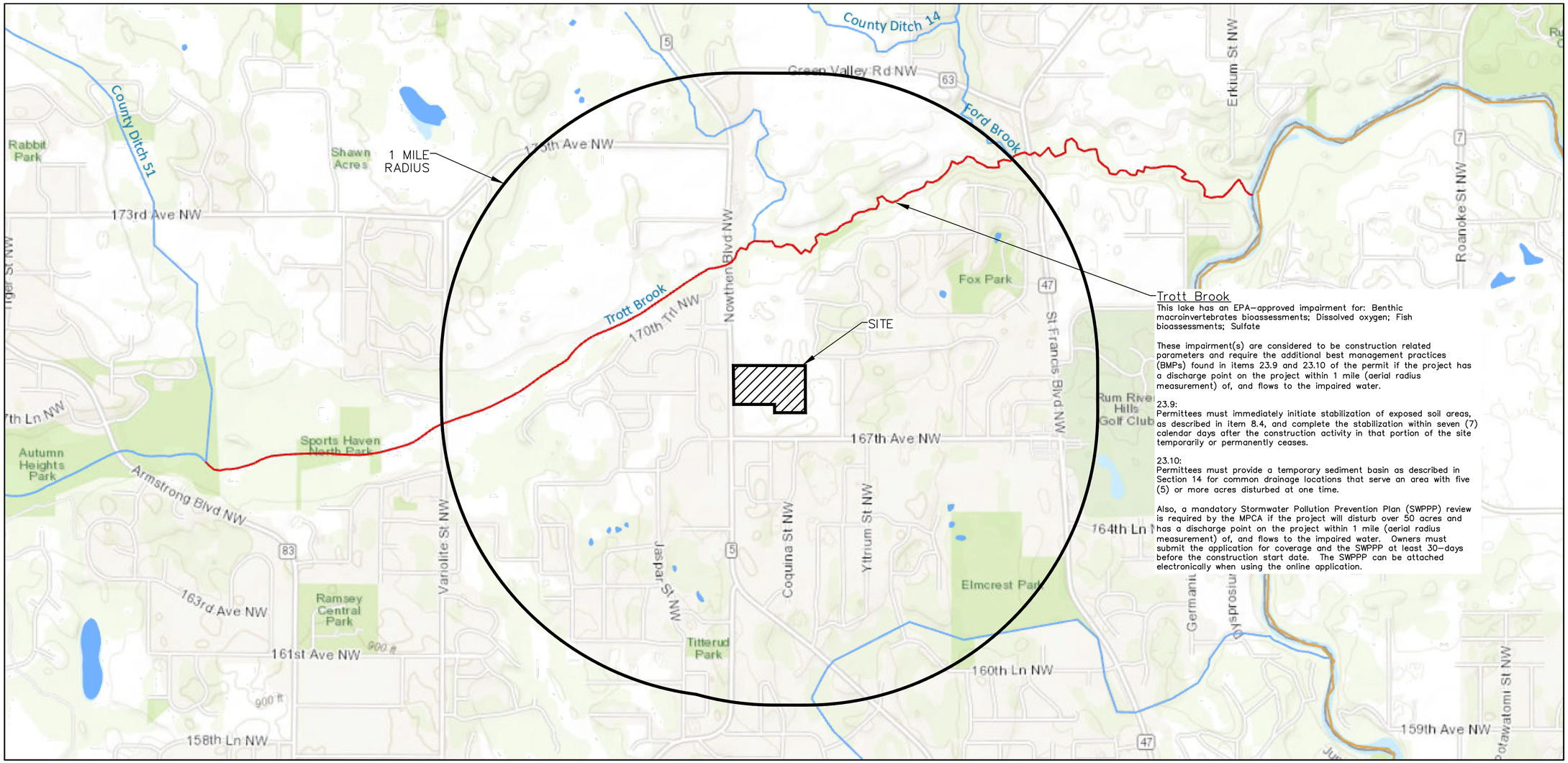
STORMWATER POLLUTION PREVENTION PLAN

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-SWPPP

MPCA's Construction Stormwater Special Waters Search



Trott Brook

This lake has an EPA–approved impairment for: Benthic macroinvertebrates bioassessments; Dissolved oxygen; Fish bioassessments; Sulfate

These impairment(s) are considered to be construction related parameters and require the additional best management practices (BMPs) found in items 23.9 and 23.10 of the permit if the project has a discharge point on the project within 1 mile (aerial radius measurement) of, and flows to the impaired water.

23.9:
Permittees must immediately initiate stabilization of exposed soil areas, as described in item 8.4, and complete the stabilization within seven (7) calendar days after the construction activity in that portion of the site temporarily or permanently ceases.

23.10:
Permittees must provide a temporary sediment basin as described in Section 14 for common drainage locations that serve an area with five (5) or more acres disturbed at one time.

Also, a mandatory Stormwater Pollution Prevention Plan (SWPPP) review is required by the MPCA if the project will disturb over 50 acres and has a discharge point on the project within 1 mile (aerial radius measurement) of, and flows to the impaired water. Owners must submit the application for coverage and the SWPPP at least 30–days before the construction start date. The SWPPP can be attached electronically when using the online application.

6/28/2023, 9:38:57 AM

- Waterbody Units - Lakes (1)
- Waterbody Units - Streams (1)
- Impaired Streams without additional construction requirements
- Impaired Streams with additional construction requirements
- Scenic and Recreational River Segments

1:30,000

0 0.25 0.5 1 mi

0 0.38 0.75 1.5 km

Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

Minnesota Pollution Control Agency

Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA | Minnesota Pollution Control Agency |

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Name Brian N. Molinaro Reg. No. 47504 Date 7-10-2023

Revisions
1. 2024-02-05 City Comments

Date 12-08-2023
Designed NAP
Drawn PDS

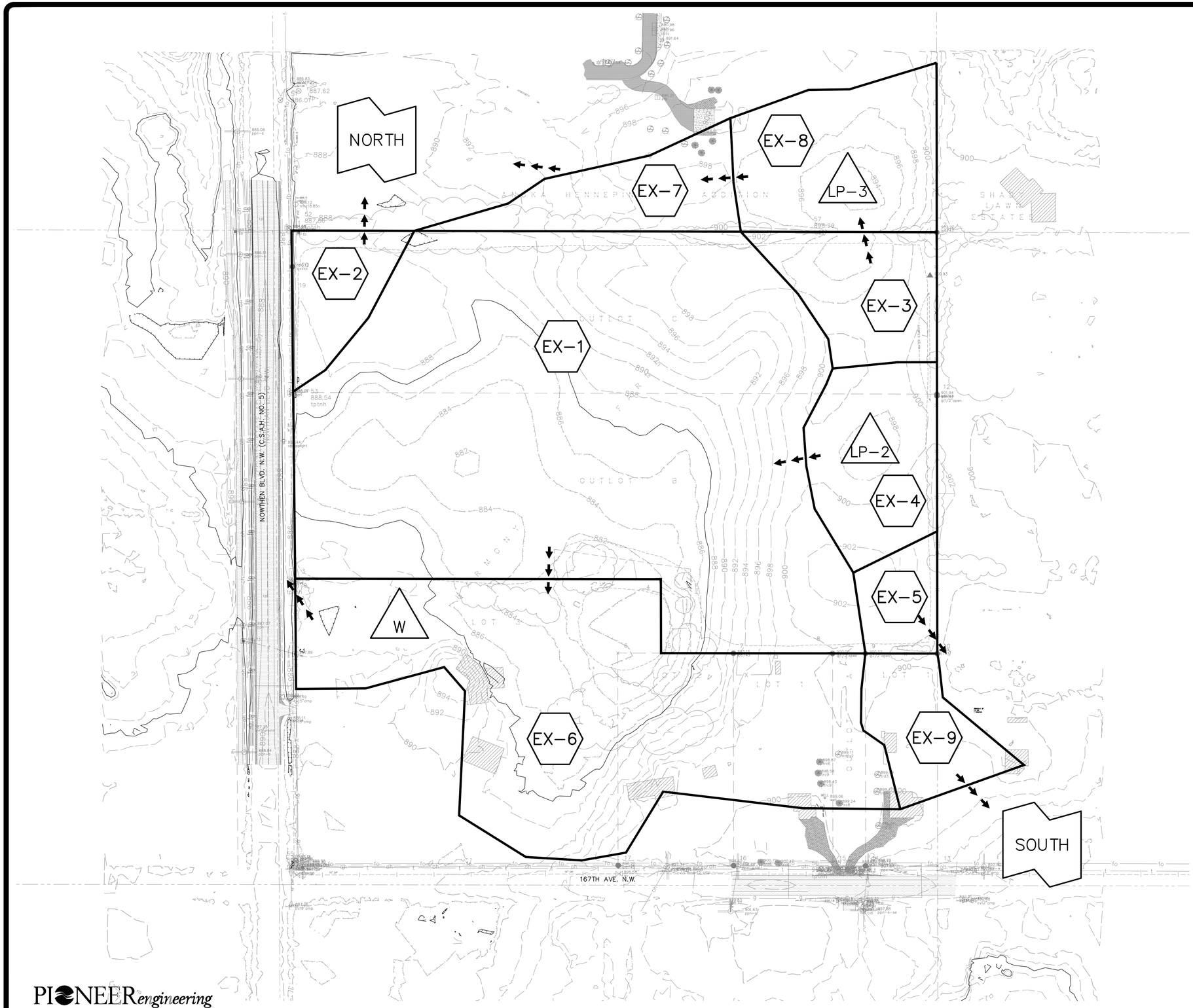
MPCA MAP

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

00-ENG-123074-SHEET-HYDR-MPCA

S3 OF 30



LEGEND

X	SUBCATCHMENT
XXP	POND
XXXX	LINK

N

0 50 100 200

GRAPHIC SCALE IN FEET

BENCH MARK

TOP NUT OF HYDRANT AT NE QUAD OF INTERSECTION OF NOWTHEN BLVD. N.W. AND 167TH AVE. N.W.
EL=890.48
TOP NUT OF HYDRANT DIRECTLY NORTH OF INTERSECTION OF 167TH AVE. N.W. AND COQUINA ST. N.W.
EL=901.06

00-ENG-123074-SHEET-HYDR-EXIS

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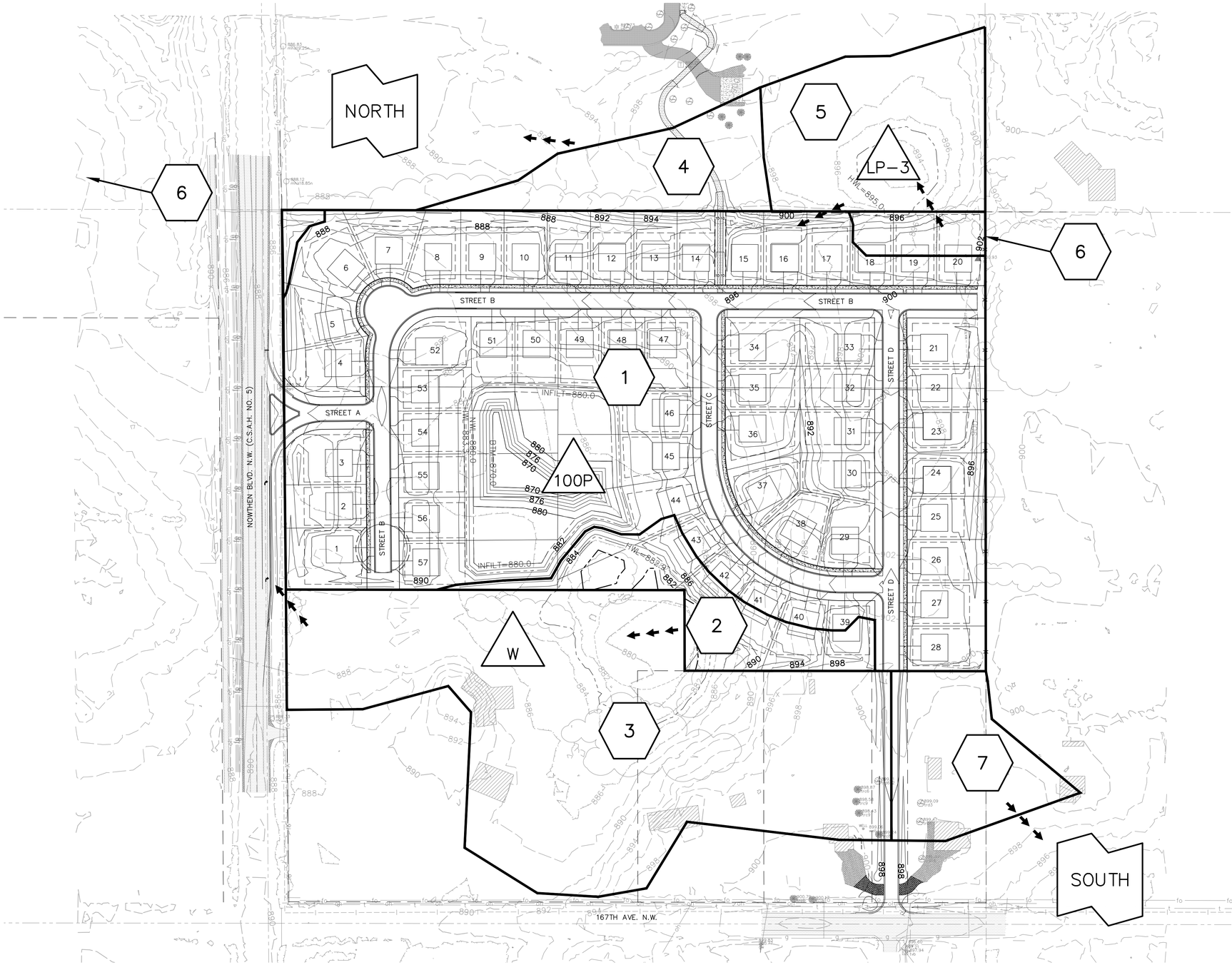
EXISTING HYDROLOGY MAP

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

S4 OF 30



LEGEND

- X — SUBCATCHMENT
- XXP — POND
- XXXX — LINK

0 50 100 200

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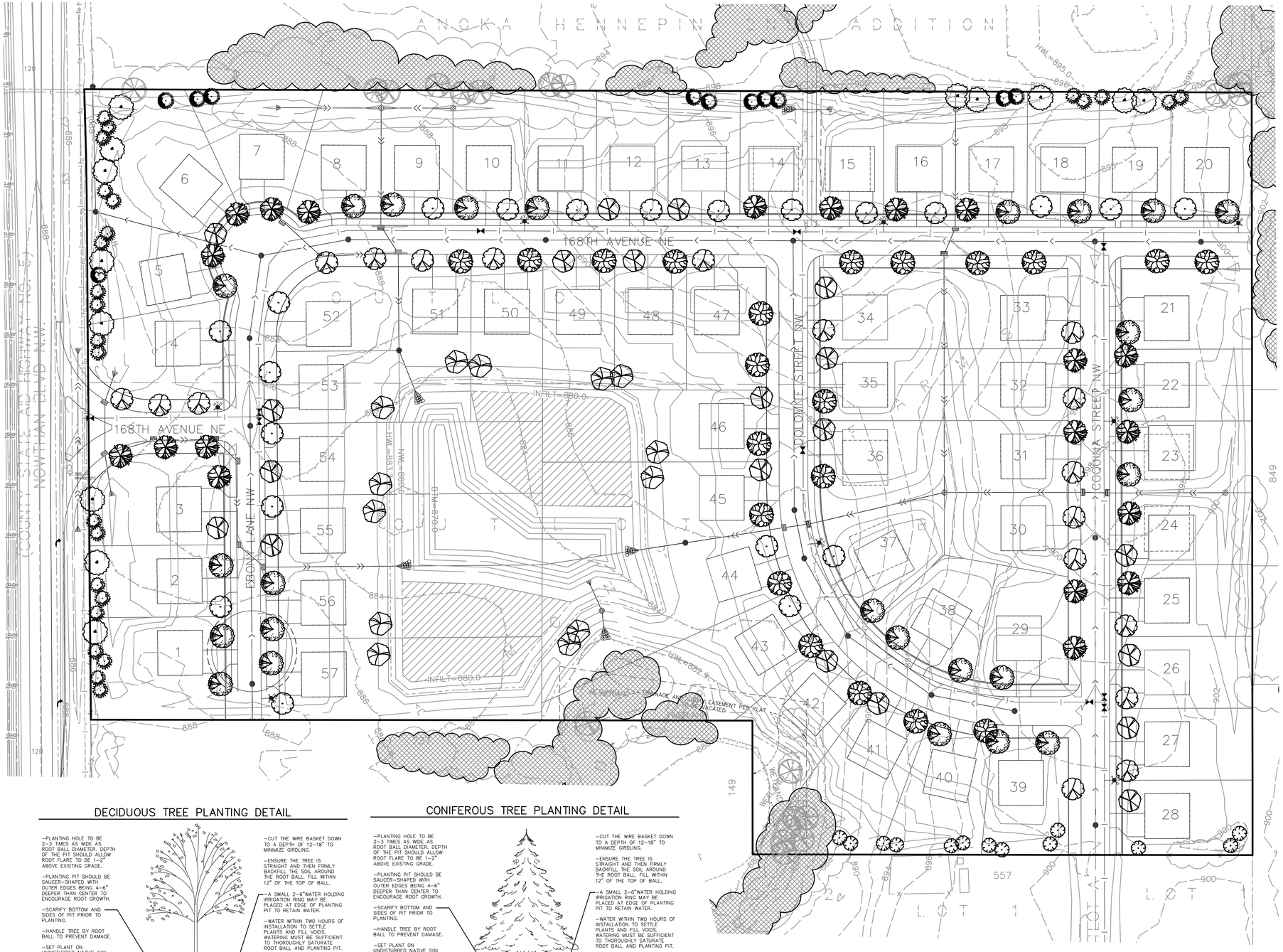
PROPOSED HYDROLOGY MAP

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

S5 OF 30



PLANTING SCHEDULE

KEY	COMMON NAME/SCIENTIFIC NAME	ROOT	QUANTITY
	OVERSTORY TREES		
	SENTRY LINDEN/TILIA AMERICANA 'SENTRY'	2.5" B&B	18
	NORTHERN PIN OAK/QUERCUS ELLIPSOIDALIS	2.5" B&B	20
	THORNLESS HONEYLOCUST/GLEDITSIA TRIACANTHOS VAR INERMIS	2.5" B&B	20
	RIVER BIRCH/BETULA NIGRA 'HERITAGE' (CLUMP)	12-14' B&B	13
	NORTHWOOD MAPLE/ACER RUBRUM 'NORTHWOOD'	2.5" B&B	21
	HACKBERRY/CELTIS OCCIDENTALIS	2.5" B&B	21
	AUTUMN BLAZE MAPLE/ACER X FREEMANII 'JEFFERSRED'	2.5" B&B	25
	SWAMP WHITE OAK/Quercus bicolor	2.5" B&B	13
	EVERGREEN TREES		
	WHITE PINE/PINUS STROBUS	6' B&B	11
	NORWAY SPRUCE/PICEA ABIES	6' B&B	13
	BLACK HILLS SPRUCE/PICEA GLUACA VAR DENSATA	6' B&B	25

CITY LANDSCAPE REQUIREMENTS:

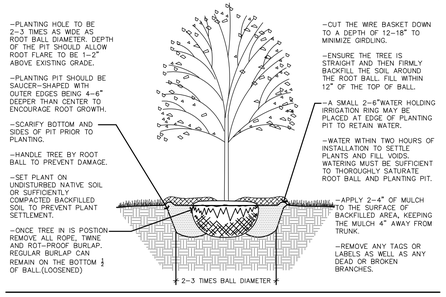
TWO TREES PER LOT PLANTED IN BOULEVARD OR FRONT YARD.
57 LOTS X 2 TREES = 114 TREES

MITIGATION REQUIRED: 331" (SEE TREE PRESERVATION PLAN)

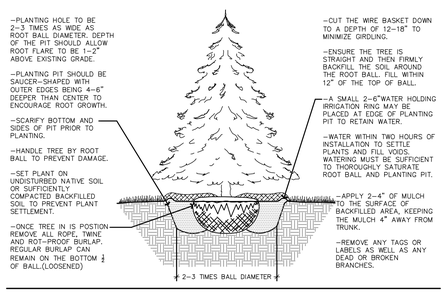
PROPOSED TREES: 200
OVERSTORY TREES (2.5"): 151
CONIFEROUS TREES (6'): 49
PROPOSED INCHES: 500"

NOTES:
1. TREE LOCATIONS MAY BE FIELD ADJUSTED TO TO ACCOMMODATE FINAL HOME DESIGNS AND DRIVEWAY LOCATIONS.
2. ANY IRRIGATION MUST INCLUDE A RAIN SENSOR AND USE WATER EFFICIENT TECHNOLOGY SUCH AS A SMART CONTROLLER OR MOISTURE SENSORS.
3. ANY DEVIATION FROM THE PLANTING SCHEDULE (INCLUDING SPECIES AND SIZE) REQUIRES CITY APPROVAL PRIOR TO INSTALLATION.
4. 4 INCHES OF TOP SOIL WITH NOT MORE THAN 35% SAND SHALL BE APPLIED TO ALL DISTURBED AREAS OF THE PROJECT THAT ARE NOT OTHERWISE IMPROVED WITH IMPERVIOUS SURFACING.

DECIDUOUS TREE PLANTING DETAIL



CONIFEROUS TREE PLANTING DETAIL



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0 30 60 120
GRAPHIC SCALE IN FEET

EXISTING TREES TO BE SAVED

EXISTING WOODED AREAS

LANDSCAPE NOTES

- THE LANDSCAPE CONTRACTOR SHALL VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID.
- THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF PROPOSED PHYSICAL START DATE AT LEAST 7 DAYS IN ADVANCE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL EXISTING UTILITY LOCATIONS ON THE PROJECT SITE WITH GOPHER STATE ONE CALL 1-800-252-1166 PRIOR TO COMMENCING WORK. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF EXISTING UTILITIES DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS TO FACILITATE PLANT RELOCATION.
- GRADING TO BE PERFORMED BY OTHERS.
- NO PLANT MATERIAL SHALL BE INSTALLED UNTIL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- ALL PLANT MATERIAL SHALL MEET THE STANDARDS FOUND IN THE AMERICAN ASSOCIATION OF NURSERYMEN-AMERICAN STANDARD FOR NURSERY STOCK.
- ALL CONTAINER MATERIAL TO BE GROWN IN THE CONTAINER A MINIMUM OF SIX (6) MONTHS PRIOR TO PLANTING ON SITE.
- DECIDUOUS AND CONIFEROUS TREES SHALL NOT BE STAKED, BUT THE LANDSCAPE CONTRACTOR MUST GUARANTEE STANDABILITY TO A WIND SPEED OF 60 M.P.H.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM GUARANTEE OF ONE YEAR ONE TIME REPLACEMENT ON NEW PLANT MATERIALS. GUARANTEE SHALL BE AGREED UPON BY DEVELOPER/BUILDER AND LANDSCAPE CONTRACTOR.
- THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING OR AFTER INSTALLATION.
- IF THERE IS A DESCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER SHOWN ON THE PLANT LIST, THE NUMBER SHOWN ON THE PLAN WILL TAKE PRECEDENCE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MULCHES AND PLANTING SOIL QUANTITIES TO COMPLETE WORK SHOWN ON THE PLAN. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL QUANTITIES SHOWN ON THE PLANT SCHEDULE.
- COMMERCIAL GRADE POLY LAWN EDGING SHALL BE INSTALLED WHERE NOTED.
- THE LANDSCAPE CONTRACTOR SHALL REPAIR ALL DAMAGE TO THE SITE CAUSED BY THE PLANTING OPERATION AT NO COST TO THE OWNER.
- THE LANDSCAPE CONTRACTOR SHALL KEEP PAVEMENTS CLEAN UNSTAINED. ALL PEDESTRIAN AND VEHICLE ACCESS TO BE MAINTAINED THROUGHOUT CONSTRUCTION PERIOD. ALL WASTES SHALL BE PROMPTLY REMOVED FROM THE SITE. ANY DAMAGE TO EXISTING FACILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS AND PERMITS GOVERNING THE WORK.
- STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.

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Name Jennifer L. Thompson
Reg. No. 44763 Date 12-8-2023

Revisions
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Date 12-08-2023
Designed JLT
Drawn JLT

LANDSCAPE PLAN

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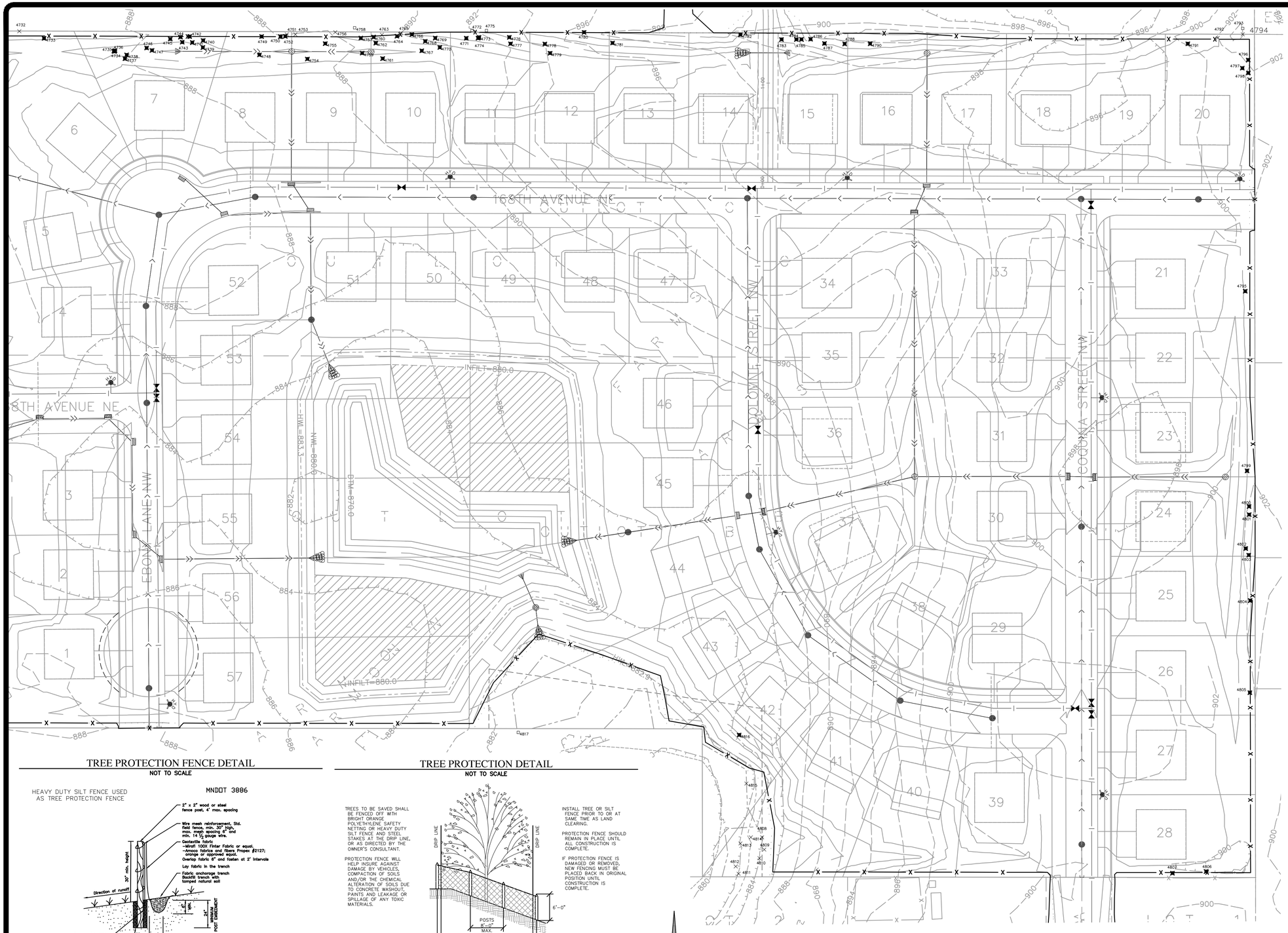
HARMONY FARMS
RAMSEY, MINNESOTA

1 OF 1



Tag No.	DBH	Common Name	Scientific Name	Notes	Status
4732	28	Box Elder	*Acer negundo*		Save
4733	8	Box Elder	*Acer negundo*		Remove
4734	9	Box Elder	*Acer negundo*		Remove
4735	8	Box Elder	*Acer negundo*		Remove
4736	10,9	Box Elder	*Acer negundo*		Remove
4737	10,9	Box Elder	*Acer negundo*		Remove
4738	9	Box Elder	*Acer negundo*		Remove
4739	8	Box Elder	*Acer negundo*		Remove
4740	16	Box Elder	*Acer negundo*		Remove
4741	8	Box Elder	*Acer negundo*		Remove
4742	8	Box Elder	*Acer negundo*		Remove
4743	13	Box Elder	*Acer negundo*		Remove
4744	18	Box Elder	*Acer negundo*		Remove
4745	11	Box Elder	*Acer negundo*		Remove
4746	9	Box Elder	*Acer negundo*		Remove
4747	9	Box Elder	*Acer negundo*		Remove
4748	8	Green Ash	*Fraxinus pennsylvanica*		Remove
4749	16,14	Box Elder	*Acer negundo*		Remove
4750	18,17	Box Elder	*Acer negundo*		Remove
4751	9	Box Elder	*Acer negundo*		Save
4752	15	Box Elder	*Acer negundo*		Remove
4753	22	Bur Oak	*Quercus macrocarpa*	hollow at base	Save
4754	8	Box Elder	*Acer negundo*		Remove
4755	10	American Elm	*Ulmus americana*		Remove
4756	18	Box Elder	*Acer negundo*		Save
4757	12	Hackberry	*Celtis occidentalis*		Remove
4758	24	Bur Oak	*Quercus macrocarpa*		Off-Site
4759	8	Black Cherry	*Prunus serotina*		Remove
4760	28	Bur Oak	*Quercus macrocarpa*		Remove
4761	8	Box Elder	*Acer negundo*		Remove
4762	8	American Elm	*Ulmus americana*		Remove
4763	20	Bur Oak	*Quercus macrocarpa*		Save
4764	21	Bur Oak	*Quercus macrocarpa*		Remove
4765	21	Bur Oak	*Quercus macrocarpa*		Save
4766	8	American Elm	*Ulmus americana*		Remove
4767	12	Hackberry	*Celtis occidentalis*		Remove
4768	8	Hackberry	*Celtis occidentalis*		Remove
4769	8	Hackberry	*Celtis occidentalis*		Remove
4770	8	American Elm	*Ulmus americana*		Remove
4771	21	Bur Oak	*Quercus macrocarpa*		Remove
4772	8	Hackberry	*Celtis occidentalis*		Off-Site
4773	29	Bur Oak	*Quercus macrocarpa*		Remove
4774	8	Box Elder	*Acer negundo*		Remove
4775	7	Northern Pin Oak	*Quercus ellipsoidalis*		Off-Site
4776	22,22,21,20	Northern Pin Oak	*Quercus ellipsoidalis*		Remove
4777	10	Hackberry	*Celtis occidentalis*		Remove
4778	8	Box Elder	*Acer negundo*		Remove
4779	8,7	Box Elder	*Acer negundo*		Remove
4780	8	Hackberry	*Celtis occidentalis*		Remove
4781	17,17,17,15,12	Silver Maple	*Acer saccharinum*		Remove
4782	10,9	Northern Pin Oak	*Quercus ellipsoidalis*		Remove
4783	29,19	Silver Maple	*Acer saccharinum*		Remove
4784	17,8	Silver Maple	*Acer saccharinum*		Remove
4785	14	Silver Maple	*Acer saccharinum*		Remove
4786	16,15,14,12	Silver Maple	*Acer saccharinum*		Remove
4787	18,16	Silver Maple	*Acer saccharinum*		Remove
4788	20,19,15	Silver Maple	*Acer saccharinum*		Remove
4790	24,19,17	Silver Maple	*Acer saccharinum*		Remove
4791	9	Northern Pin Oak	*Quercus ellipsoidalis*		Remove
4792	8	Hackberry	*Celtis occidentalis*		Save
4793	23	Northern Pin Oak	*Quercus ellipsoidalis*		Off-Site
4794	9	Black Cherry	*Prunus serotina*		Save
4795	15,14,13,11,10,10	Silver Maple	*Acer saccharinum*		Remove
4796	9,6	Northern Pin Oak	*Quercus ellipsoidalis*		Remove
4797	5	Northern Pin Oak	*Quercus ellipsoidalis*		Remove
4798	14	Northern Pin Oak	*Quercus ellipsoidalis*		Remove
4799	9	Siberian Elm	*Ulmus pumila*	Exempt-Invasive	Remove
4800	18	Green Ash	*Fraxinus pennsylvanica*	40% dead	Remove
4801	22	Green Ash	*Fraxinus pennsylvanica*		Remove
4802	11,9	Green Ash	*Fraxinus pennsylvanica*		Remove
4803	15	Green Ash	*Fraxinus pennsylvanica*		Remove
4804	20,18	Green Ash	*Fraxinus pennsylvanica*		Remove
4805	18,16	Green Ash	*Fraxinus pennsylvanica*		Remove
4806	12	Siberian Elm	*Ulmus pumila*	Exempt-Invasive	Remove
4807	14,13,8,8	Siberian Elm	*Ulmus pumila*	Exempt-Invasive	Remove
4808	13,11,10,8,8	Silver Maple	*Acer saccharinum*		Save
4809	14,12,9,8	Silver Maple	*Acer saccharinum*		Save
4810	15,13,13	Silver Maple	*Acer saccharinum*		Save
4811	9,7	Green Ash	*Fraxinus pennsylvanica*		Save
4812	8	Green Ash	*Fraxinus pennsylvanica*		Save
4813	8	Green Ash	*Fraxinus pennsylvanica*		Save
4814	15,14,13,10,9,9	Silver Maple	*Acer saccharinum*		Save
4815	14	Weeping Willow	*Salix babylonica*		Save
4816	8,6	Box Elder	*Acer negundo*		Remove
4817	16,16	Green Ash	*Fraxinus pennsylvanica*		Off-Site

TREE PRESERVATION NOTES:

TOTAL SIGNIFICANT INCHES: 1624
INCHES REMOVED: 1239 (76%)
INCHES SAVED: 385 (24%)

ALLOWED REMOVAL: 974 (60%)
REMOVAL OVER THRESHOLD: 265"

MITIGATION REQUIRED: 265 X 1.25 = 331"

EXEMPT (INVASIVE) AND OFF-SITE TREES EXCLUDED FROM ALL CALCULATIONS

TREE PRESERVATION PLAN PROVIDED BY MIDWEST NATURAL RESOURCES
KEN ARNDT, FORESTER

TREE PRESERVATION NOTES

BEFORE LAND CLEARING BEGINS, CONTRACTOR SHOULD MEET WITH THE CONSULTANT ON SITE TO REVIEW ALL WORK PROCEDURES, ACCESS ROUTES, STORAGE AREAS, AND TREE PROTECTION MEASURES.

NO FILL SHOULD BE PLACED AGAINST THE TRUNK, ON THE ROOT CROWN, OR WITHIN THE DRIP LINE AREA OF ANY TREES THAT ARE TO BE SAVED.

NO GRADING, TRENCHING OR PLACEMENT OF EQUIPMENT IS ALLOWED IN THE TREE PROTECTION AREA.

WORK PERFORMED WITHIN THE TREE PROTECTION AREA SHOULD BE DONE BY HAND AND UNDER THE SUPERVISION OF THE CONSULTING ARBORIST.

PRUNING OF OAK TREES MUST NOT TAKE PLACE FROM APRIL 15 TO JULY 15 TO PREVENT THE SPREAD OF OAK WILT DISEASE.

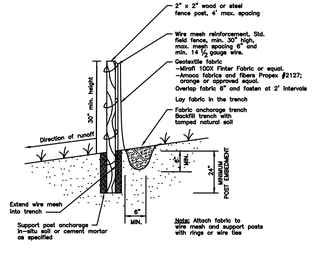
IF WOUNDING OF OAK TREES OCCUR ANYTIME BETWEEN APRIL TO AUGUST, A NON-TOXIC WOUND DRESSING MUST BE APPLIED IMMEDIATELY, (EXCAVATORS MUST HAVE A NON-TOXIC TREE WOUND DRESSING WITH THEM ON DEVELOPMENT SITES).

TREE PROTECTION FENCE DETAIL

NOT TO SCALE

HEAVY DUTY SILT FENCE USED AS TREE PROTECTION FENCE

MNDOT 3886

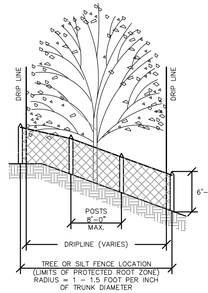


TREE PROTECTION DETAIL

NOT TO SCALE

TREES TO BE SAVED SHALL BE FENCED OFF WITH BRIGHT ORANGE POLYETHYLENE SAFETY NETTING OR HEAVY DUTY SILT FENCE AND STEEL STAKES AT THE DRIP LINE, OR AS DIRECTED BY THE OWNER'S CONSULTANT.

PROTECTION FENCE WILL HELP INSURE AGAINST DAMAGE BY VEHICLES, COMPACTION OF SOILS AND/OR THE CHEMICAL ALTERATION OF SOILS DUE TO CONCRETE WASHOUT, PAINTS AND LEAKAGE OR SPILLAGE OF ANY TOXIC MATERIALS.



INSTALL TREE OR SILT FENCE PRIOR TO OR AT SAME TIME AS LAND CLEARING.

PROTECTION FENCE SHOULD REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETE.

IF PROTECTION FENCE IS DAMAGED OR REMOVED, NEW FENCING MUST BE PLACED BACK IN ORGINAL POSITION UNTIL CONSTRUCTION IS COMPLETE.

0 30 60 120

GRAPHIC SCALE IN FEET

PIONEERengineering
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2422 Enterprise Drive
Mendota Heights, MN 55120
(651) 681-1914
Fax: 681-9488
www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota

Name Jennifer L. Thompson
Reg. No. 44763 Date 12-8-2023

Revisions
1. 2024-02-05 City Comments

Date	12-08-2023
Designed	JLT
Drawn	JLT

TREE PRESERVATION PLAN

LENNAR
16305 36TH AVE. NO., SUITE 600
PLYMOUTH, MINNESOTA 55446

HARMONY FARMS
RAMSEY, MINNESOTA

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