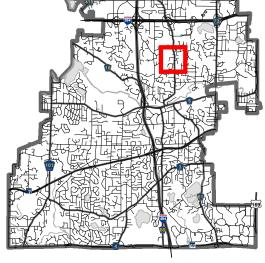


#### **Location Map**

Project:Woodhaven at Minnetonka Address: 2424 & 2440 Plymouth Rd







#### AIRBORNE WOODHAVEN, LLC

13605 1st Avenue N., Suite 100 ● Plymouth, MN 55441 ● Tel: 612.889.4787 ● Fax: 763.412.4090 ● www.ae-mn.com

Development Name: Woodhaven of Minnetonka

Location: 2424 & 2440 Plymouth Rd. Minnetonka, MN

Developed By: Airborne Woodhaven, LLC

Roger Anderson 612-889-4787

#### **Development Narrative**

<u>History</u>: Two (2), adjacent, homesteaded homes with parcels which total about 5.0 acres. Zoned and Guided Low Density, Single Family Residential. Both homes currently access Plymouth Rd. Quite wooded with one (1) wetland on the northerly side.

<u>Previous Meetings</u>: Three (3) public meetings were held to obtain the input of the Neighborhood, the Planning Commission and the City Council. A concept plan of ten (10) lots was proposed at each meeting. The feedback from all three (3) meetings focused on storm water management, preservation of the wetland and tree retention. As a result of this input, the Engineering Plans and Application were carefully prepared to address all details.

<u>Application:</u> In response to the public meetings, the developer, Airborne Construction One LLC, decided to pursue a platting of the entire site into nine (9) single family, custom homesites pursuant to the R-1A Zoning Ordinance. Average lot size = about 20,300 square feet per lot. Per the plans, a public road and full size cul de sac are shown. As noted below, the "island" entrance will be maintained by the HOA. Both existing homes will be demolished and both, existing, curb cuts to Plymouth Rd. will be eliminated, which served 2424 and 2440.

<u>Homeowners Association:</u> Airborne wishes\_to create a HOA to do the maintenance of the grass and driveways (snow removal). The HOA will also be responsible to maintain the flower garden, shrubs, etc. at the "island" entry. Lastly, the HOA will retain a civil engineering company to do an annual inspection of the on-site, stormwater management. Any corrective measures required from the inspection will be the responsibility of the HOA.

<u>Custom Design and Build:</u> Each home will be custom designed and built. The developer will record a Declaration of Covenants so that each home design will meet certain size and quality restrictions to assure a quality standard consistent with upper bracket homes as well as to adhere to the R1-A requirements.

#### Woodhaven at Minnetonka

2424 & 2440 Plymouth Rd, Minnetonka, MN 55305

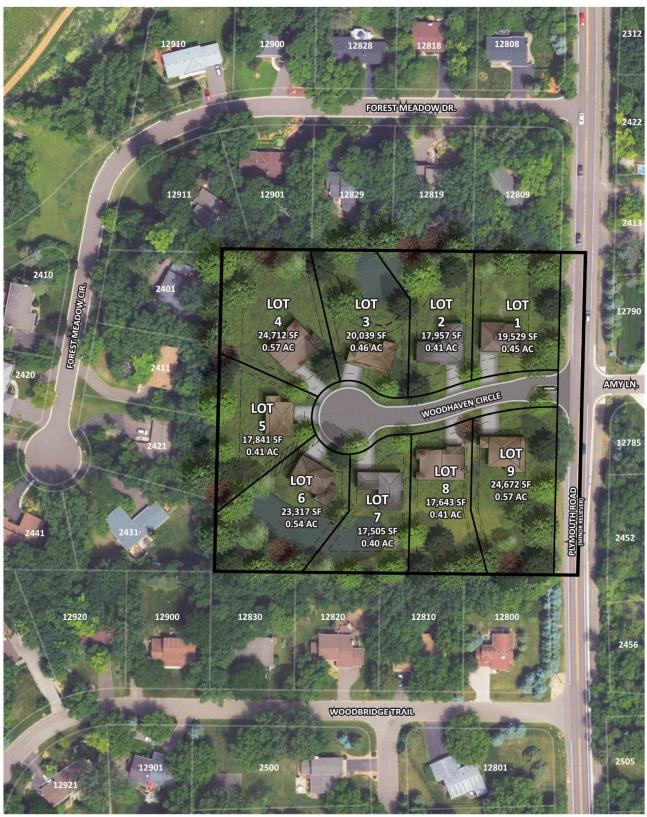


EXHIBIT DATED: 10-07-2021

## WOODHAVEN AT MINNETONKA MINNETONKA, MN



13605 1st Avenue N. #100 Plymouth, MN 55441 | **ae-mn**.com **P** 763.412.4000 | **F** 763.412.4090

# N.T.S. Ridgedale Center Ridgedale Center Big Willow Park

#### INDEX

<b>SHEET</b>	DESCRIPTION
C1	COVER SHEET
C2	EXISTING CONDITIONS SURVEY
C3	PRELIMINARY PLAT
C4	DEMOLITION & TREE REMOVAL PLAN
C5	GRADING & DRAINAGE PLAN
C6	UTILITY PLAN
C7	STREET PLAN & PROFILE
C8	SANITARY & STORM PROFILES
C9	EROSION & SEDIMENT CONTROL PLAN
C10	SWPPP - PG 1
C11	SWPPP - PG 2
C12	SITE DETAILS
L1	TREE PRESERVATION PLAN
L2	TREE PRESERVATION NOTES
L3	PLANTING PLAN
L4	PLANTING NOTES & DETAILS

#### APPLICANT

AIRBORNE WOODHAVEN, LLC 13605 1ST AVENUE NORTH, SUITE 100 PLYMOUTH, MN 55441 ROGER ANDERSON: 612-889-4787

#### SURVEYOR / ENGINEER

ANDERSON ENGINEERING OF MN, LLC 13605 1ST AVENUE NORTH, SUITE 100 PLYMOUTH, MN 55441 763-412-4000

#### LANDSCAPE ARCHITECT

ANDERSON ENGINEERING OF MN, LLC 13605 1ST AVENUE NORTH, SUITE 100 PLYMOUTH, MN 55441 763-412-4000

## WOODHAVEN AT MINNETONKA 2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OF REPORT 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.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: NOT FOR CONSTRUCTION

DESCRIPTION OF REVISIONS

REVISION LOG

	CITY SUBMITTAL

10/08/2021

DESIGNED: DRAWN: CHECKED BY: BJF

DRAWING TITLE

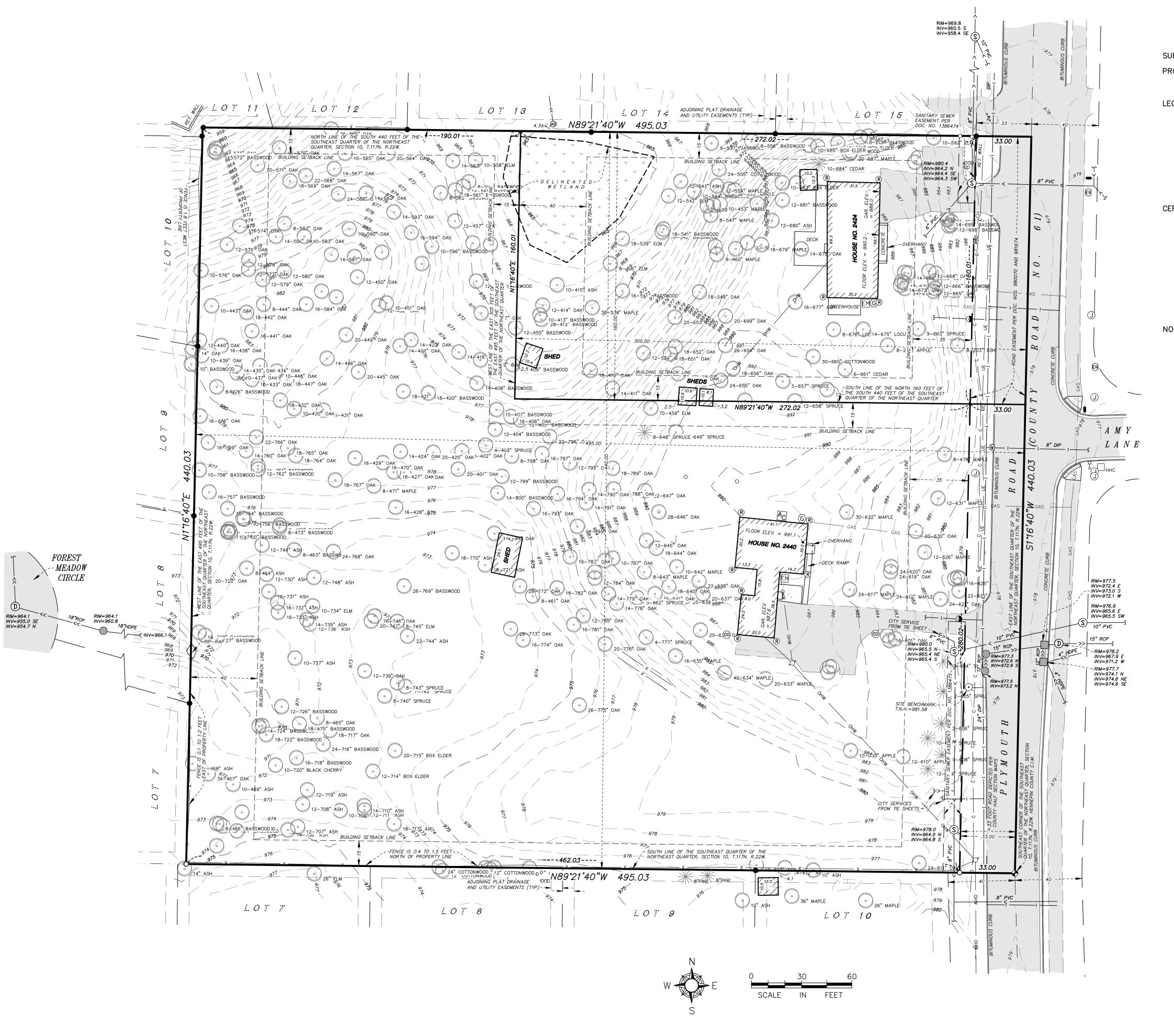
COVER SHEET

DRAWING NO.

C

LOTTED: COMM. NO. 16523





16523\_s\_base

#### **EXISTING CONDITIONS SURVEY**

#### SURVEY FOR: AIRBORNE CONSTRUCTION ONE L.L.C.

PROPERTY ADDRESS:

2424 Plymouth Road and 2440 Plymouth Road, Minnetonka, Minnesota.

LEGAL DESCRIPTION:

The North 160 feet of the East 305 feet of the South 440 feet of the East 495 feet of the Southeast Quarter of the Northeast Quarter of Section 10, Township 117, Range 22, Hennepin County, Minnesota. (2424 Plymouth Road, Commitment No. 58624)

The South 440 feet of the East 495 feet of the Southeast Quarter of the Northeast Quarter of Section 10, Township 117, Range 22, except the North 160 feet of the East 305 feet thereof. Hennepin County, Minnesota. (2440 Plymouth Road, Commitment No. 58625)

Both Torrens Property.

#### CERTIFICATION:

I hereby certify that this survey was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Dated: August 11, 2021

Anderson Engineering of Minnesota, LLC

David Anderson Minnesota License No. 43501

#### NOTES:

- 1. The horizontal datum and bearings are based on the Hennepin County Coordinate System NAD83 (2011).
- 2. The vertical datum is NAVD 88. The site bench mark is the top nut of the hydrant located on the west side of Plymouth Road and approximately 150 feet south of its tee intersection with Amy Lane (depicted hereon). Elevation = 981.58 feet.
- 3. The area of the property addressed 2424 Plymouth Road is 48,803 square feet or 1.1204 acres. The area of said property less the road easement is 43523 square feet or 0.9992 acres.
- 4. The area of the property addressed 2440 Plymouth Road is 169,010 square feet or 3.8799 acres. The area of said property less the road area is 159,769 square feet or 3.6678 acres.
- 5. The location and extent of underground utilities, if shown, are based upon existing drawings provided by the utility companies, above ground evidence and Gopher State One Call markings per ticket numbers 211651304 and 211651305. Exclusive of excavation, there is no guarantee as to the accuracy or the completeness of this information. The size and location should be considered approximate. Additional underground utilities may be present. Verification of the existence and location of all utilities should be obtained from the utility owners prior to any planning or design. In accordance with State Statute, the location of utilities shall be confirmed prior to any demolition or construction.
- 6. The tree information shown hereon was collected during the field survey by non-forestry trained Anderson Engineering of Minnesota survey personnel. Tree sizes are estimates and locations are accurate to plus or minus three feet.
- 7. The legal description and easement information were provided by Chicago Title Insurance Company, Commitment for Title Insurance, Commitment Nos. 58624 and 58625, issued by its agent, Commercial Partners Title and dated May 10, 2021.
- 8. According to the City of Minnetonka, the subject property is zoned R-1 and has the building setback requirements listed below. It is recommended that the property owner obtain a zoning letter from the City to verify all conditions that affect the property through the city zoning ordinance. This survey does not purport to describe all conditions contained in said ordinance.

#### BUILDING SETBACKS

Front= 35 feet

Rear = 20% of lot depth or 40 feet, whichever is less. Side = Aggregate of 30 feet. Minimum of 10 feet on one side.

#### I ECEND

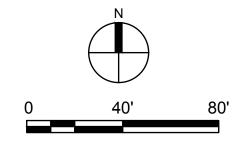
	LEGEND			
A	AIR CONDITIONER	— с —		COMMUNICATION
(AI	) AREA DRAIN	—		FENCE
	CATCH BASIN	—— FO —		FIBER OPTICS
(CE	CLEAN OUT	——— GAS —		GAS MAIN
(J	) COMMUNICATION JUNCTION BOX	—— он <b>w</b> —	—	OVERHEAD WIRES
>	CULVERT	>		SANITARY SEWER
EI	ELECTRIC BOX	»>		STORM SEWER
EN	ELECTRIC METER	—— UE —		UNDERGROUND ELECTRIC
G	GAS METER	<del></del>		WATER MAIN
G	GAS VALVE			BITUMINOUS SURFACE
С	POST	· · · · · · · · · · · · · · · · · · ·		OONODETE OUDEAOE
	HHC HANDHOLE COMMUNICATIONS	4	4 I	CONCRETE SURFACE
$\bigcirc$				TRUNCATED DOMES
ď	LIGHT POLE	V V	<b>∀</b>	WETLAND
$\mathcal{L}$	POWER POLE	Ψ Ψ		WETLAND
(—	- POWER POLE ANCHOR	< T	_ )	DEPRESSION CONTOUR
R	ROOF DRAIN			WALL
(3	) SANITARY MANHOLE		17.	CONIFEROUS TREE
-	+ SIGN	1		COMIT ENGGG TINEE
(D	) STORM MANHOLE		$\circ$	DECIDUOUS TREE
(			)	HIGH PRIORITY TREE
W		DI		DUCTILE IRON PIPE
	FOUND IRON MONUMENT	HL	DPE	HIGH-DENSITY POLYETHYLENE
C		P	vc	POLYVINYL CHLORIDE PIPE
•	HENNEPIN CO. CAST IRON MONUMI	ENT "	CD	DEINICODOED CONODETE DIDE

Anderson Engineering of Minnesota, LLC 13605 1st Avenue North, Suite 100 Plymouth, MN 55441 763-412-4000 (o) 763-412-4090 (f) ENGINEERING • ARCHITECTURE • LAND SURVEYING ENVIRONMENTAL SERVICES • LANDSCAPE ARCHITECTURE | www.ae-mn.com

PIPE

RCP REINFORCED CONCRETE PIPE

### PRELIMINARY PLAT OF: WOODHAVEN AT MINNETONKA



ADJACENT PROPERTY

EXISTING DRAINAGE AND

PROPOSED DRAINAGE AND

WETLAND BUFFER LINE

MAINTENANCE ACCESS

217,813 SF (5.0003 AC)

9 UNITS / 5.00 AC = 1.8 UNITS PER ACRE

75 FEET MIN.

45 FEET MIN.

125 FEET MIN.

2,400 SF MIN.

15,000 SF MIN

PROPOSED R-1A

25 FEET MIN.

35 FEET MIN.

10 FEET MIN.

30 FEET MIN.

35 FEET MIN.

AREA (ACRES) | AREA (SF) | MAX F.A.R.

20039

24712

17841

23317

17505

17643

24672

20076

217813

183215

20357

R-1A: 9 LOTS

0.45

0.46

0.57

0.41

0.54

0.40

0.41

0.57

0.46

0.33

5.00

4.22

0.47

TOTAL LOT AREA

AVG. LOT AREA

50% MAX.

0.22 MAX.

9 UNITS / 4.90 AC = 1.84 UNITS PER ACRE

24 FEET

35 FEET

<120 SF; 25 FEET

16.5 FEET

35 FEET

24 FEET

30 FEET 30 FEET

110 FEET

65 FEET

35 FEET

50 FEET

10 FEET

40 FEET

35 - 60 FEET

4296

3950

4408

5436

3925

5129

3851

3881

5427

<120 SF; 25 FE

BUILDING SETBACKS

**UTILITY EASEMENT** 

**UTILITY EASEMENT** 

WETLAND BUFFER

**EASEMENT** 

LEGEND



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#### WOODHAVEN AT **MINNETONKA**

2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

SUPERVISION AND THAT I AM A DULY LICENSEI PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: NOT FOR CONSTRUCTION

DATE: 10/08/2021 LICENSE NO. 57224

**REVISION LOG** 

DESCRIPTION OF REVISIONS

CITY SUBMITTAL

10/08/2021

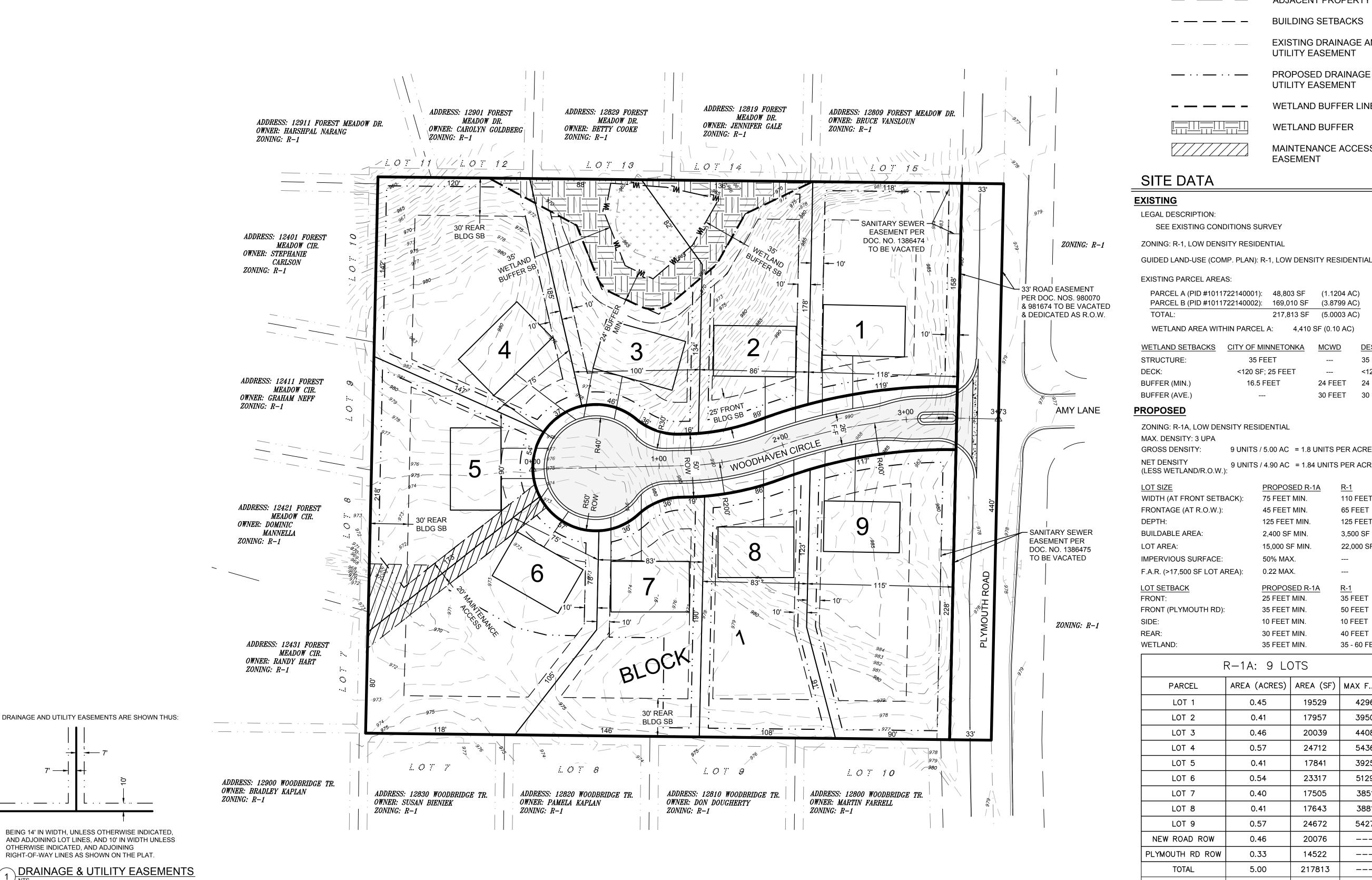
DESIGNED: DRAWN: CHECKED BY:

DRAWING TITLE

PRELIMINARY PLAT

DRAWING NO.

COMM. NO. 16523



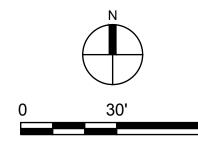
DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS

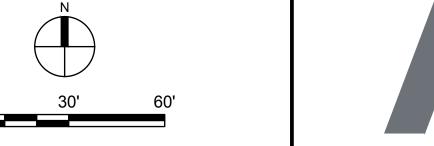
BEING 14' IN WIDTH, UNLESS OTHERWISE INDICATED,

AND ADJOINING LOT LINES, AND 10' IN WIDTH UNLESS

OTHERWISE INDICATED, AND ADJOINING

RIGHT-OF-WAY LINES AS SHOWN ON THE PLAT.





**EXISTING FENCE EXISTING GAS MAIN** ELECTRIC EXISTING HYDRANT AND GV W D 💹 **-**REMOVE EXISTING UTILITY LINE REMOVE EXISTING BUILDING STRUCTURE REMOVE EXISTING CONCRETE HIGH PRIORITY TREE EXEMPT DEMO TREE

PROPERTY LIMITS CONSTRUCTION LIMITS **EXISTING WATERMAIN** 

**EXISTING SANITARY SEWER EXISTING STORM SEWER** 

**EXISTING OVERHEAD WIRES EXISTING TELEPHONE** 

EXISTING UNDERGROUND

**EXISTING SANITARY MANHOLE EXISTING STORM SEWER INLET** 

REMOVE EXISTING PAVEMENT

**EXEMPT LIMITS** (BASIC TREE REMOVAL AREA)

**EXISTING TREE TO REMAIN** 

NON-EXEMPT TREE REMOVAL

NON-EXEMPT DEMO TREE

**DEMO AREA** 

#### **KEY NOTES**

- REMOVE EXISTING CONCRETE CURB & GUTTER
- REMOVE EXISTING OVERHEAD POWER
- REMOVE EXISTING SERVICES FOR ADDRESS 2424 & 2440 PER CITY STANDARDS
- REMOVE EXISTING HOUSE, FOUNDATIONS, AND AMENITIES IN ITS ENTIRETY.
- REMOVE EXISTING FENCE
- CONTRACTOR TO COORDINATE W/ UTILITY OWNER TO REMOVE & RELOCATE EX. ELECTRICAL MH.

#### **CONTRACTOR NOTES**

- 1. UTILITIES SHOWN HERE ON IS FOR INFORMATIONAL USE ONLY AND IS NOT GUARANTEED IN IT'S ACCURACY. VERIFY ALL TOPOGRAPHIC INFORMATION PRIOR TO COMMENCING WORK. NOTIFY PROJECT MANAGER OF ANY/ALL DISCREPANCIES IMMEDIATELY.
- 2. CONTRACTOR SHALL HIRE PRIVATE UTILITY LOCATOR AS NECESSARY TO VERIFY UNDERGROUND UTILITIES. UTILITIES SHOWN ON PLANS MAY VARY FROM EXISTING CONDITIONS, AND CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO UTILITY LINES SHOWN, NOT SHOWN, OR SHOWN INCORRECTLY.



Plymouth, MN 55441 | ae-mn.com **P** 763.412.4000 | **F** 763.412.4090 Anderson Engineering of Minnesota, LLC

#### **WOODHAVEN AT MINNETONKA**

2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: NOT FOR CONSTRUCTION

DATE: <u>10/08/2021</u> LICENSE NO. <u>57224</u>

REVISION LOG

DESCRIPTION OF REVISIONS

CITY SUBMITTAL

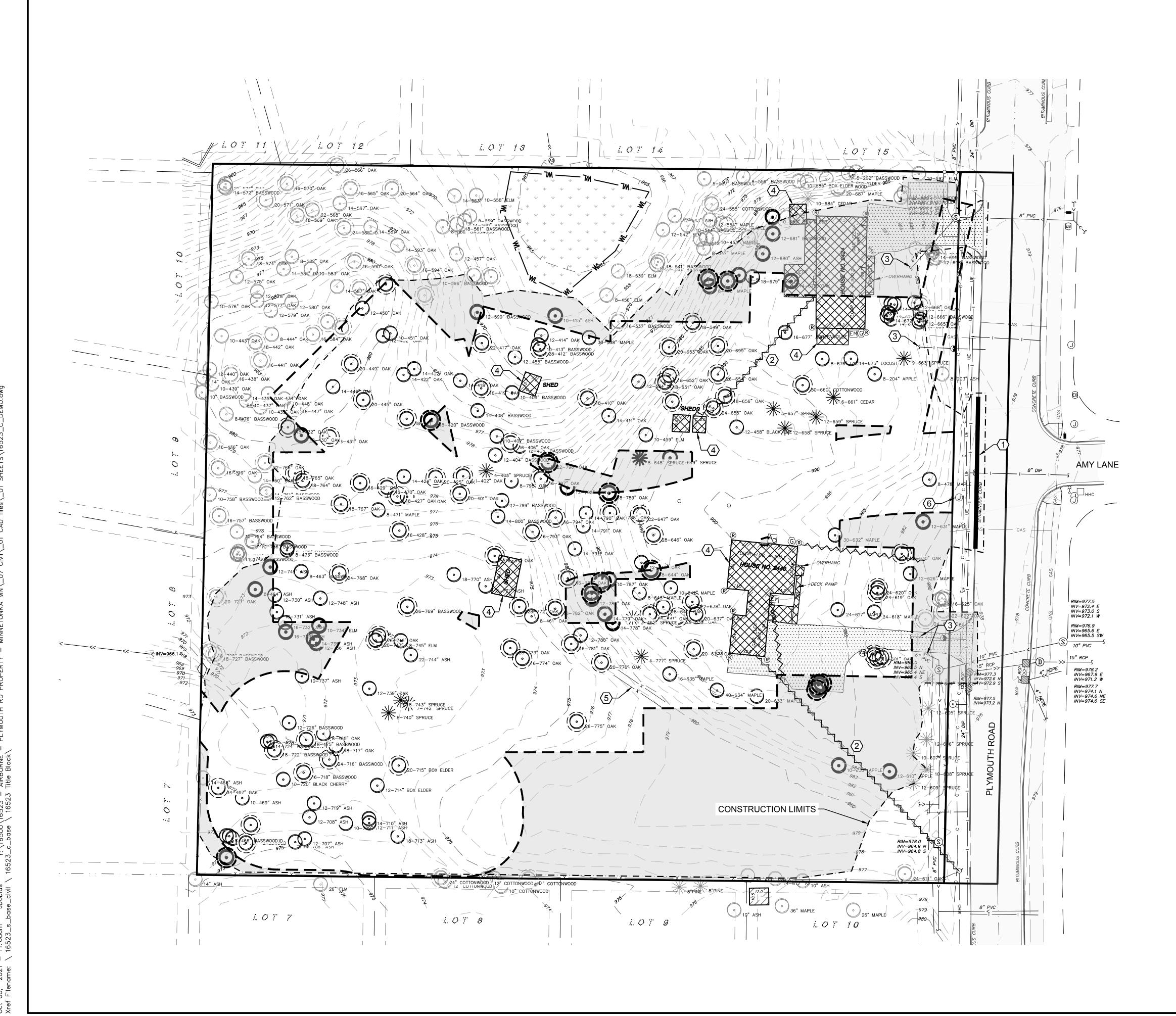
10/08/2021

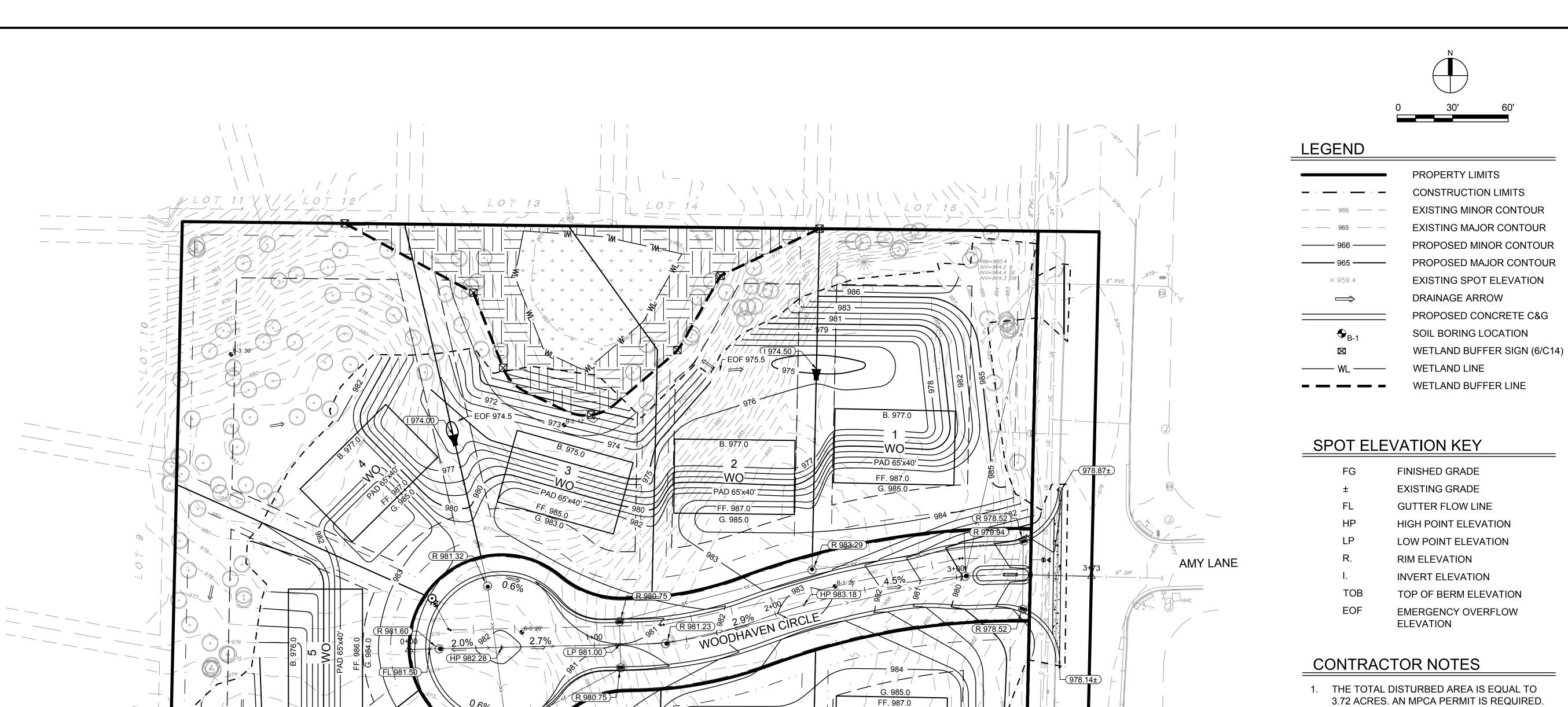
CHECKED BY: DESIGNED: DRAWN: BJF

DRAWING TITLE

**DEMOLITION & TREE** REMOVAL PLAN

DRAWING NO.





SPAD 60'x40' <sup>2</sup>

B. 977.0

G. 984.0

PAD 60'x40'

B. 976.0

-FILTRATION

**BENCH** 

EOF = 972.0 —

R 972.50

NWL = 969.0

100 YR HWL = 971.9

BOTTOM ELEV. = 965.0

-PAD 60'x40'

B. 977.0 \( \)

1.07 70

3.72 ACRES. AN MPCA PERMIT IS REQUIRED. 2. PROPOSED SPOT ELEVATIONS ARE TO TOP OF FINISHED SURFACE UNLESS PRECEDED BY LETTER DESIGNATION SHOWN ABOVE.

INV=972.4 E INV=973.0 S INV=972.1 W

RIM=976.9 INV=965.6 E INV=965.5 SW

10" PVC

RIM=978.2 INV=967.9 E INV=971.2 W

RIM=977.7 INV=974.1 N INV=974.6 NE INV=974.6 SE

3. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES. LOCATIONS OF UTILITIES SHOWN BASED ON SURVEY AND AS-BUILT INFORMATION AND MAY NOT REPRESENT ACTUAL CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR UTILIZING UTILITY LOCATES PRIOR TO STARTING ANY WORK.

## ANDERSON

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#### **WOODHAVEN AT** MINNETONKA

2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: NOT FOR CONSTRUCTION

DATE: <u>10/08/2021</u> LICENSE NO. <u>57224</u>

**REVISION LOG** 


DESCRIPTION OF REVISIONS

CITY SUBMITTAL 10/08/2021

CHECKED BY: DESIGNED: DRAWN: BJF JPD BJF

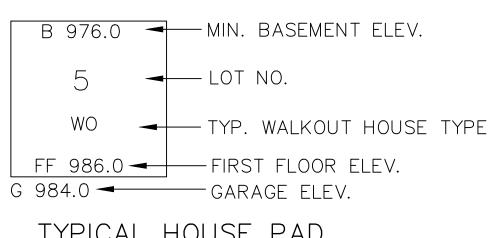
DRAWING TITLE

**GRADING &** DRAINAGE PLAN

DRAWING NO.

C5

COMM. NO. PLOTTED: 16523

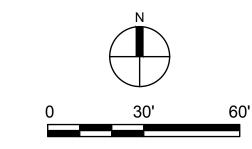


TYPICAL HOUSE PAD
NOT TO SCALE

#### SERVICE UTILITY NOTES

- ALL CONSTRUCTION SHALL COMPLY WITH RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER UNLESS DIRECTED OTHERWISE (SEE GEOTECHNICAL REPORT ON SEPTEMBER 14, 2021 BY KILO ENGINEERING).
- 2. ALL CONSTRUCTION SHALL COMPLY WITH CITY OF MINNETONKA ENGINEERING STANDARDS AND THE 2018 EDITION OF MNDOT SPECIFICATIONS, UNLESS DIRECTED OTHERWISE.
- 3. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE MUNICIPAL, WATERSHED DISTRICT, COUNTY, MPCA, DEPT. OF HEALTH, AND MNDOT PERMITS. VERIFY RECEIPT OF ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
- 4. EXISTING TOPOGRAPHIC AND UTILITY INFORMATION PROVIDED BY THE OWNER ON A SURVEY PREPARED BY ANDERSON ENGINEERING. BE ADVISED THAT THE LOCATION AND TYPE OF EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE INFORMATION IS NOT WARRANTED TO BE ACCURATE OR COMPLETE. THE CONTRACTOR, IN COOPERATION WITH THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY, IS RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND DEPTH OF ALL UNDERGROUND UTILITIES.
- 5. WATER LINES ARE REQUIRED TO BE INSTALLED AT 7.5 FEET MINIMUM DEPTH AND PROVIDE MINIMUM 10' HORIZONTAL AND 18" VERTICAL SEPARATION OF ALL WATERMAIN CROSSINGS FROM STORM OR SANITARY SEWER, WATERMAIN TO BE

- INSULATED PER C.E.A.M. SPECIFICATIONS, WHERE COVER DEPTHS CANNOT BE ACHIEVED. CONTRACTOR SHALL CONTACT THE ENGINEER IF THERE ARE AREAS WHERE MINIMUM COVER DEPTH CANNOT BE MET.
- 6. WATER SERVICE MATERIALS SHALL BE PVC C900. CONTRACTOR SHALL VERIFY EXISTING SERVICE SIZE AND MATERIALS PRIOR TO CONSTRUCTION. ALL INSTALLED PIPE WILL REQUIRE TESTING PER CITY AND STATE REQUIREMENTS. THIS WILL INCLUDE, AT A MINIMUM, CONDUCTIVITY AND PRESSURE TESTING, AS WELL AS TESTING FOR BACTERIA AND PROPER DISINFECTION. FOLLOW C.E.A.M. STANDARD SPECIFICATIONS UNLESS NOTED OTHERWISE. INSTALL TRACER WIRE, JOINT RESTRAINTS AND THRUST BLOCKING ON ALL WATERMAIN PIPE AND FITTING, PER CITY OF MINNETONKA STANDARDS.
- 7. SANITARY SEWER PIPE MATERIALS SHALL BE PVC SDR 26. PIPE SHALL BE INSULATED PER CITY AND C.E.A.M. STANDARDS WHERE 7.5 FOOT COVER DEPTHS ARE NOT ACHIEVED. THIS APPLIES TO ALL PROPOSED NEW PIPE FOR THIS PROJECT. ALL SANITARY SEWER PIPE WILL REQUIRE TESTING PER CITY AND C.E.A.M. STANDARDS. THIS WILL INCLUDE, AT A MINIMUM, LEAKAGE AND ALIGNMENT TESTING.
- 8. ALL JOINTS AND CONNECTIONS IN THE STORM SEWER SYSTEM SHALL BE WATER TIGHT. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATER TIGHT



#### LEGEND

	PROPERTY LIMITS
	EXISTING WATERMAIN
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
<u> </u>	PROPOSED WATERMAIN
<del></del>	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
—	PROPOSED 6" DRAINTILE
•	PROPOSED SANITARY MANHOLE AND CLEANOUT
	PROPOSED STORM INLETS

#### **KEY NOTES**

- (1) CONNECT TO EXISTING 24" DIP W.M. VIA WET TAP & SADDLE W/ 8" GATE VALVE.
- (2) TYPICAL 6" PVC C900 WATER & 8" PVC SDR 26 SANITARY SERVICE INSTALLATION.
- (3) INSTALL 6" LEAD, NEW HYDRANT, 8"X6" REDUCER, & 6" GATE VALVE.
- (4) INSTALL DRAINTILE CLEAN OUT (TYP.)
- (5) OUTLET CONTROL STRUCTURE
- 6 DIRECTIONAL BORE APPROXIMATELY 110LF
  OF 8" SANITARY SEWER. CONNECT VIA CORE
  DRILL TO EX. MH-A @ ELEV. 964.5±

STO	RM STRUCTURE	SCHEDULE		
STRUCTURE NUMBER	SIZE	CASTING (NEENAH OF APPROVED EQUAL)		
STMH-1	48" ROUND	R-1642-D, SOLID, "STORM"		
OCS-2	60" ROUND	HAALA 60-57 SPLIT TYPE		
FES-3	18" RCP	_		
FES-3	18" RCP	_		
STMH-5	48" ROUND	R-1642-D, SOLID, "STORM"		
STMH-6	48" ROUND	R-1642-D, SOLID, "STORM"		
CBMH-7	48" ROUND	R-3067-V		
CBMH-8	48" ROUND	R-3067-V		
STMH-9	48" ROUND	R-1642-D, SOLID, "STORM"		
CBMH-10	48" ROUND	R-3067-V		
CB-11	2' x 3' BOX	R-3067-V		
STMH-12	48" ROUND	R-1642-D, SOLID, "STORM"		
FES-13	12" RCP	_		
FES-14	12" RCP	_		
SANITARY STRUCTURE SCHEDULE				
STRUCTURE NUMBER	SIZE	CASTING (NEENAH OF APPROVED EQUAL)		
MH-1	48" ROUND	R-1642-D, SOLID, "SANITARY"		
MH-2	48" ROUND	R-1642-D, SOLID, "SANITARY"		
MH-3	48" ROUND	R-1642-D, SOLID, "SANITARY"		



13605 1st Avenue N. #100 Plymouth, MN 55441 | ae-mn.com P 763.412.4000 | F 763.412.4090 Anderson Engineering of Minnesota, LLC

## WOODHAVEN AT MINNETONKA

2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

PRINT NAME: BRIAN J. FIELD, PE

SIGNAT	URE: NOT F	OR CONSTRU	CTION
DATE:	10/08/2021	LICENSE NO.	57224

RE'	VISION	N LOG
NO.	DATE	DESCRIPTION OF REVISIONS
-		
<b> </b> _		
-		
	(	CITY SUBMITTAL

DESIGNED: DRAWN: CHECKED BY:
BJF JPD BJF

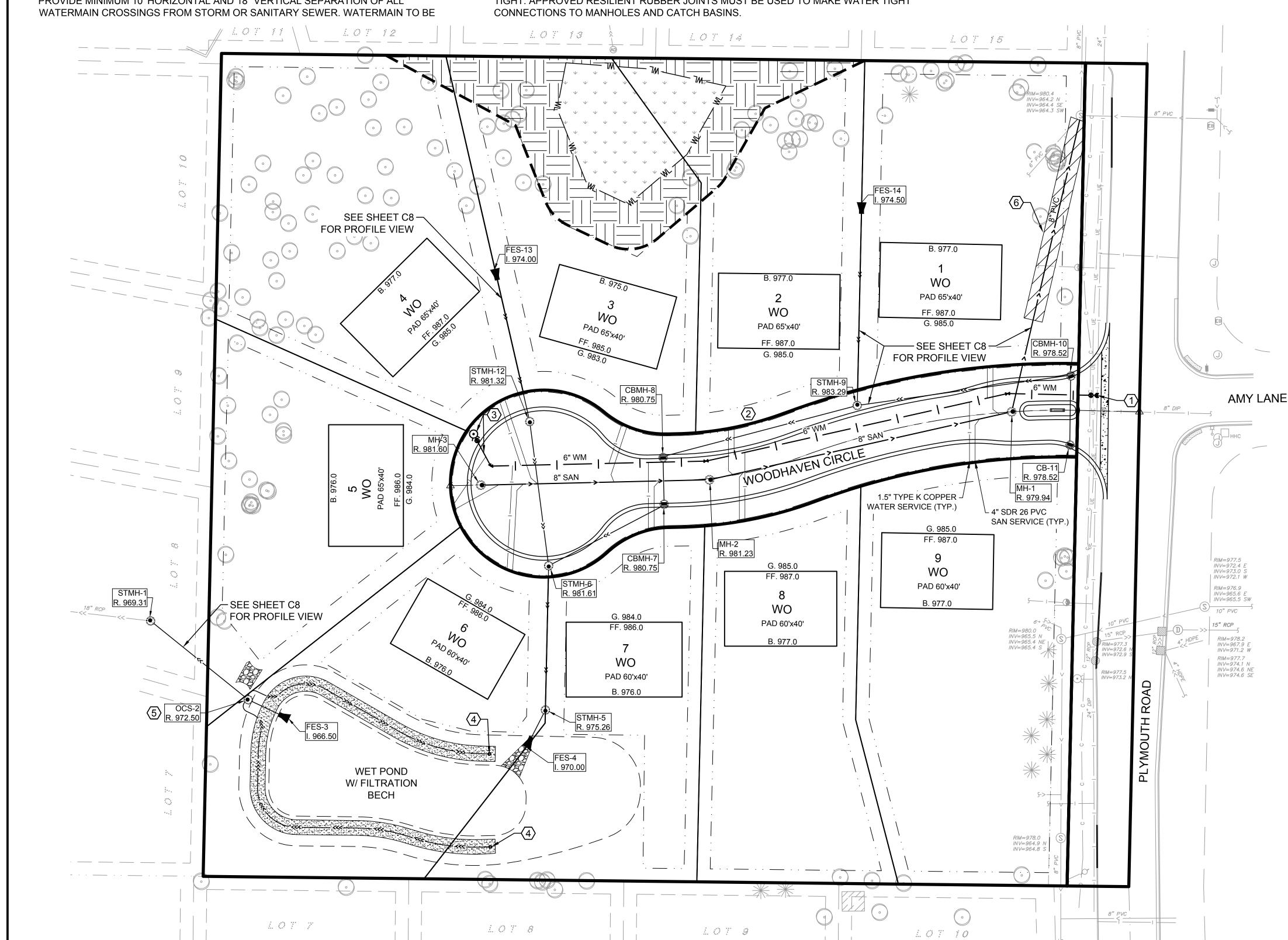
DRAWING TITLE

UTILITY PLAN

DRAWING NO.

C6

PLOTTED: COMM. NO. 16523



PROFILE VIEW - WOODHAVEN CIRCLE

SCALE: HORIZONTAL 1" = 30' VERTICAL 1" = 5'

#### LEGEND

AMY LANE

| RIM=977.5 | INV=972.4 E | INV=973.0 S | INV=972.1 W

RIM=976.9 INV=965.6 E INV=965.5 SW

INV=974.1 N INV=974.6 NE INV=974.6 SE

15" RCP

8" DIP

PROPERTY LIMITS **EXISTING WATERMAIN EXISTING SANITARY SEWER EXISTING STORM SEWER** — PROPOSED WATERMAIN PROPOSED SANITARY SEWER PROPOSED STORM SEWER ---- PROPOSED DRAINTILE PROPOSED SANITARY MANHOLE AND CLEANOUT PROPOSED STORM INLETS

#### W.M. & SAN. SEWER NOTES:

- 1. ALL CONSTRUCTION TO BE IN ACCORDANCE W/ CITY OF MINNETONKA DETAIL PLATES AND CONSTRUCTION STANDARDS.
- 2. WATER SERVICE TO BE 1  $\frac{1}{2}$ " TYPE "K" COPPER WITH CURB STOP PLACED WITHIN 1' OF R.O.W. LINE.
- 3. SERVICE LOCATIONS SHOWN ARE APPROXIMATE & MAY BE RELOCATED INFIELD BY THE ENGINEER.
- 4. SANITARY SERVICES TO BE 4" PVC SDR 26 PLACED WITHIN 1' OF R.O.W. LINE.
- 5. UTILITY SERVICES SHALL HAVE A 3' SEPARATION.
- 6. INSTALL CLEANOUTS ON SANITARY SEWER SERVICES LONGER THAN 70'.
- 7. TIE ALL FITTINGS, VALVES, & HYDRANTS W/ (2)  $\frac{3}{4}$ " RODS.
- 8. HYDRANT ASSEMBLEY INCLUDES 6" GATE VALVE, HYDRANT, AND 6" DIP CL. 52 CONNECTING PIPE BETWEEN GATE VALVE & HYDRANT.

#### **KEYNOTES:**

(1) LOWER WATERMAIN FROM STA 0+28 TO STA 1+35.



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#### WOODHAVEN AT MINNETONKA

2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, O REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

PRINT NAME: BRIAN J. FIELD, PE

GNATURE: _	NOT FOR	CONSTR	UCTIO
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DATE: <u>10/08/2021</u> LICENSE NO. <u>57224</u>

#### REVISION LOG

DESCRIPTION OF REVISIONS

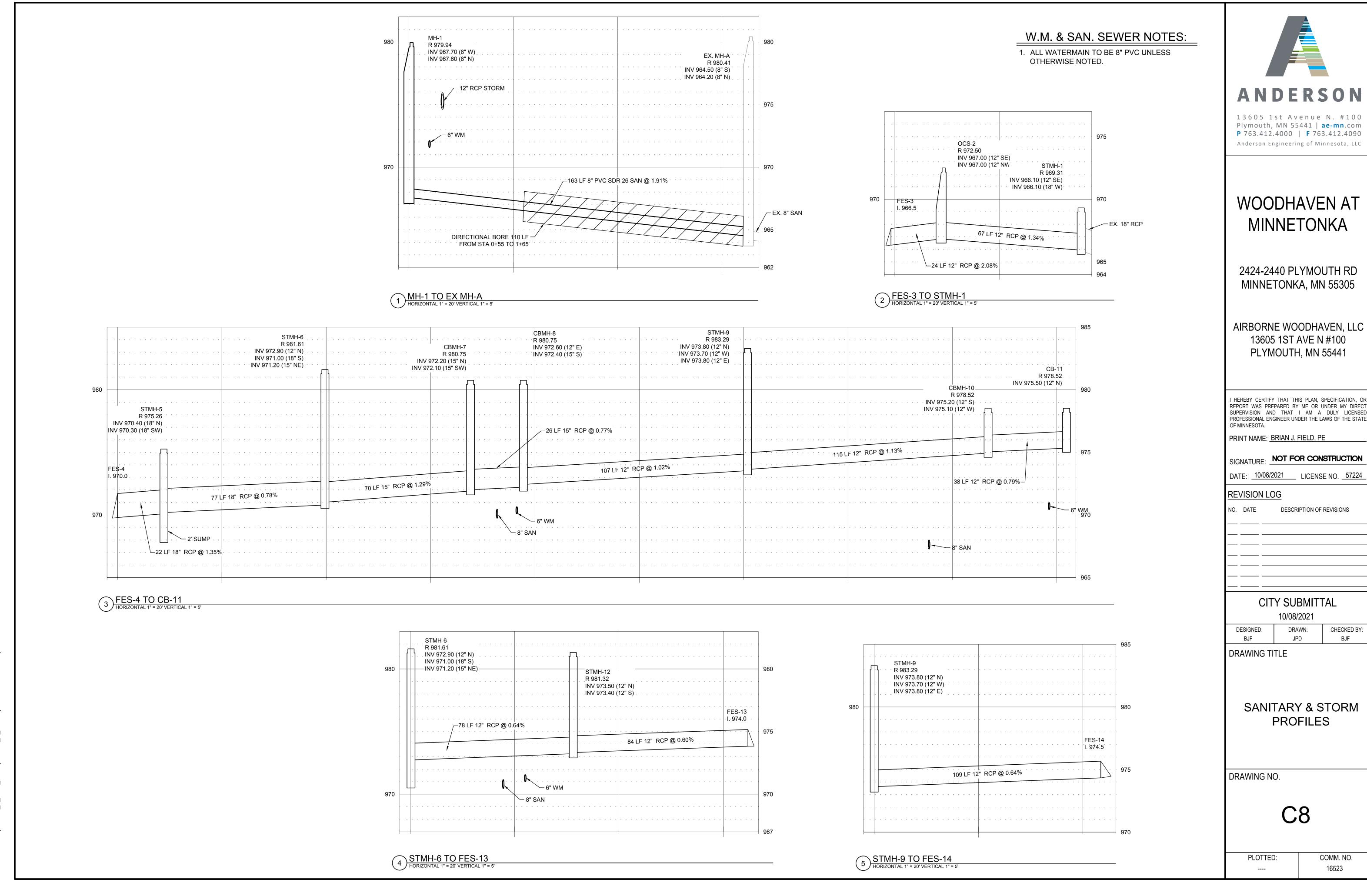
#### CITY SUBMITTAL 10/08/2021

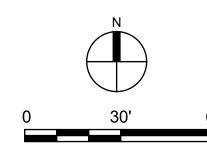
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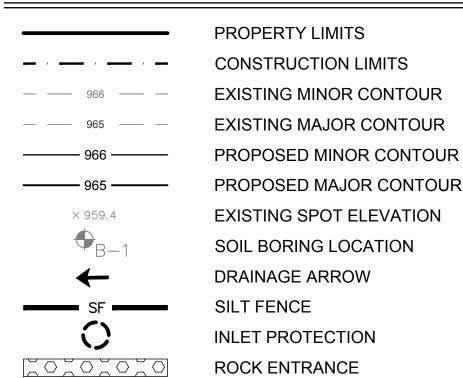
DRAWING TITLE

STREET PLAN & **PROFILE** 

DRAWING NO.







#### **KEY NOTES**

- 1 INSTALL & MAINTAIN SILT FENCE PERIMETER SEDIMENT PROTECTION IN TURF AREAS. USE BIO-ROLLS AS NEED IN PAVED AREA FOR PHASING PURPOSES.
- (2) INSTALL AND MAINTAIN INLET SEDIMENT PROTECTION.
- 3 INSTALL TEMP ROCK ENTRANCE OR HARD SURFACE ASPHALT/CONCRETE AT CONSTRUCTION INGRESS & EGRESS LOCATION(S) PRIOR TO EXCAVATION & TO BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.
- AREA WITH SLOPES 4:1 OR STEEPER TO HAVE EROSION CONTROL BLANKET & SEED INSTALLED. EROSION CONTROL BLANKET TO BE "NATURAL NET ONLY" CATEGORY 3N PER MNDOT SPEC 3885
- (5) INSTALL REDUNDANT SILT FENCE ALONG EXISTING WETLAND 5' APART
- (6) INSTALL RIP-RAP AT EMERGENCY OVERFLOW SPILLWAY.
- PROTECT FES INLET STRUCTURES W/ BIO-FILTRATION LOGS.

#### **GENERAL NOTES:**

- 1. PROPOSED WET POND TO SERVE AS TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION.
- 2. CONTRACTOR TO EXCAVATE EXCESS SEDIMENT BUILDUP WITHIN POND AS A RESULT OF CONSTRUCTION ACTIVITIES.



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I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

PRINT NAME: BRIAN J. FIELD, PE

SIGNATURE: NOT FOR CONSTRUCTION

DATE: \_10/08/2021 \_\_\_ LICENSE NO. \_57224

#### **REVISION LOG**

NO.	DATE	DESCRIPTION OF REVISIONS
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#### CITY SUBMITTAL 10/08/2021

DESIGNED: DRAWN:

ESIGNED: DRAWN: CHECKED BY:
BJF JPD BJF

DRAWING TITLE

EROSION &
SEDIMENT CONTROL
PLAN

DRAWING NO.

**C**9

PLOTTED: COMM. NO. 16523

#### STORM WATER POLLUTION PREVENTION PLAN NARRATIVE - PAGE 1 OF 2

#### PROJECT DESCRIPTION/LOCATION

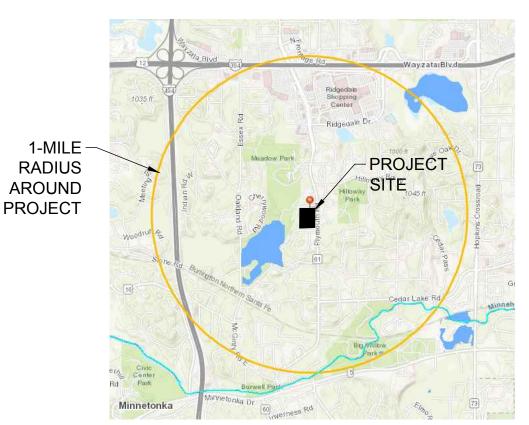
WOODHAVEN AT MINNETONKA IS LOCATED IN THE CITY OF MINNETONKA IN HENNEPIN COUNTY. BOUNDED BY FOREST MEADOW DR TO THE NORTH, WOODBRIDGE TRAIL TO THE SOUTH, FOREST MEADOW CIR TO THE WEST, AND PLYMOUTH RD TO THE EAST. THE PROPERTY IS LOCATED IN THE MINNEHAHA CREEK WATERSHED DISTRICT, AND ENCOMPASSES 4.67 ACRES.

#### THE PLANNED SCOPE OF THE PROJECT INCLUDES:

- THE INSTALLATION OF EROSION CONTROL MEASURES AS REQUIRED FOR THE MASS GRADING OF THE SITE FOR THE CONSTRUCTION OF NEW BUILDINGS AND ACCOMPANYING PARKING/DRIVEWAYS
- GRADING AS REQUIRED FOR THE INSTALLATION OF THE STRUCTURES, ROADS, ETC
- INSTALLATION OF SANITARY SEWER, WATERMAIN, AND STORM SEWER
- PLACEMENT OF CONCRETE AS REQUIRED TO ESTABLISH CURB, GUTTER, AND SIDEWALKS THROUGHOUT THE SITE.
- CONSTRUCTION OF NEW BUILDINGS AND ACCOMPANYING PARKING/DRIVEWAYS

#### **RECEIVING WATERS**

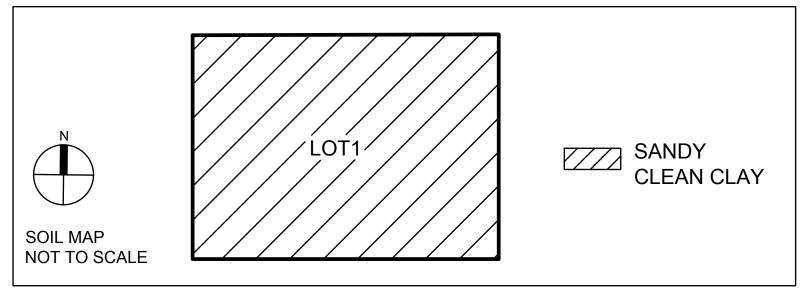
THESE WATERS ARE LOCATED WITHIN ONE MILE (AERIAL RADIUS) OF THE PROJECT LIMITS AND RECEIVE RUNOFF FROM THE PROJECT SITE. DUE TO THE PROXIMITY OF THE RECEIVING WATERS, THE BMPS DESCRIBED IN APPENDIX A OF THE NPDES PERMIT MAY APPLY TO ALL AREAS OF THE



WATERS WITHIN 1 MILE RADIUS					
NAME OF WATER BODY	TYPE (LAKE, RIVER, WETLAND, DITCH, ETC)	APPENDIX A SPECIAL WATER (YES OR NO)	IMPAIRED WATER WITHIN 1 MILE OF PROJECT SITE (YES OR NO)	APPROVED TMDL	RECEIVING WATERS (YES OR NO)
MINNEHAHA CREEK	CREEK	NO	YES	YES	NO
CRANE LAKE	LAKE	NO	NO	YES	NO

#### SOIL TYPES

SOIL TYPES TYPICALLY FOUND ON THIS PROJECT RANGE FROM SANDY LEAN CLAY, CLAYEY SAND, & SILTY SAND PER SOIL BORINGS TAKEN BY KILO ENGINEERING ON 09/14/2021. REPORT IS TO BE KEPT ON SITE AS PART OF THE SWPPP & IS TO BE MADE AVAILABLE UPON REQUEST



#### PROJECT PERSONNEL AND TRAINING

THIS SWPPP WAS PREPARED BY PERSONNEL THAT ARE VERIFIED IN THE DESIGN OF CONSTRUCTION SWPPP. COPIES OF THE CERTIFICATIONS ARE ON FILE WITH THE ENGINEER.

PROVIDE A CERTIFIED EROSION CONTROL SUPERVISOR IN GOOD STANDING WHO IS KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES. THE EROSION CONTROL SUPERVISOR WILL WORK WITH THE PROJECT ENGINEER / SWPPP DESIGNER TO OVERSEE THE IMPLEMENTATION OF THE SWPPP AND THE INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS BEFORE, DURING, AND AFTER CONSTRUCTION UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA. PROVIDE PROOF OF CERTIFICATION AT THE RECONSTRUCTION MEETING. WORK WILL NOT BE ALLOWED TO COMMENCE UNTIL PROOF OF CERTIFICATION HAS BEEN PROVIDED TO THE PROJECT ENGINEER.

PROVIDE AT LEAST ONE CERTIFIED INSTALLER FOR EACH CONTRACTOR OR SUBCONTRACTOR THAT INSTALLS THE PRODUCTS LISTED IN SPECIFICATION SECTION 2573.3.A.2 CERTIFIED INSTALLERS. PROVIDE PROOF OF CERTIFICATION AT THE RECONSTRUCTION MEETING. WORK WILL NOT BE ALLOWED TO COMMENCE UNTIL PROOF OF CERTIFICATION HAS BEEN PROVIDED TO THE PROJECT ENGINEER.

#### **DESIGN OF CONSTRUCTION SWPPP**

University of Minnesota	Erosion and	Stormwater
Brian Field	Manag	ement
	The bearer of this card has bee area(s) shown on the reverse of tion dates appear after each cer	this card. Certification expira-
Construction Site Management (May 31 2022) Design of Construction SWPPP (May 31 2022)	Gary Sands, Head Department of Bioproducts and Biosystems E University of Minnesota	ingineering
	http://www.erosion.umn.edu	Card Issued: 6/1/2019

## INSERT CERTIFICATION

CONSTRUCTION SITE MANAGMENT

#### CONSTRUCTION INSTALLER

### INSERT CERTIFICATION

INSERT CERTIFICATION

#### CHAIN OF RESPONSIBILITY

THE OWNER AND CONTRACTOR ARE CO-PERMITTEES FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION PERMIT. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION PERMIT AT ALL TIMES UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA THE CONTRACTOR WILL DEVELOP A CHAIN OF COMMAND WITH ALL OPERATORS ON THE SITE TO ENSURE THAT THE SWPPP WILL BE IMPLEMENTED AND STAY IN EFFECT UNTIL THE CONSTRUCTION PROJECT IS COMPLETE, THE ENTIRE SITE HAS UNDERGONE FINAL STABILIZATION. AND A NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED TO THE MPCA.

#### PROJECT CONTACTS

THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP AND INSTALLATION, INSPECTION. AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS BEFORE, DURING, AND AFTER CONSTRUCTION UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN

CONTACT IN	IFORMATION	
ORGANIZATION	CONTACT NAME	PHONE
AIRBORNE WOODHAVEN (OWNER)		
ANDERSON ENGINEERING (SWPPP DESIGN)	BRIAN FIELD*	763-412-4000
CONTRACTOR		

\*CERTIFIED FOR DESIGN OF CONSTRUCTION SWPPP BY UNIVERSITY OF MINNESOTA, EXPIRES 5/31/22

MPCA DUTY OFFICER 24 HOUR EMERGENCY NOTIFICATION: 651-649-5451 OR 800-422-0798

#### SITE INSPECTION AND MAINTENANCE

CONTRACTOR SHALL PROVIDE NAME, CONTACT INFO, AND TRAINING DOCUMENTATION FOR THE PERSON RESPONSIBLE FOR SWPPP IMPLEMENTATION AND INSPECTION/MAINTENANCE OF BMPS.

INSPECT THE ENTIRE CONSTRUCTION SITE A MINIMUM OF ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES WITHIN A 24 HOUR TIME FRAME. INSPECT ALL TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT. EROSION PREVENTION AND SEDIMENT CONTROL BMPS UNTIL THE SITE HAS UNDERGONE FINAL STABILIZATION AND THE N.O.T. HAS BEEN SUBMITTED. INSPECT SURFACE WATER INCLUDING DRAINAGE DITCHES FOR SIGNS OF EROSION AND SEDIMENT DEPOSITION. INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS FOR EVIDENCE OF TRACKING ONTO PAVED SURFACES. INSPECT SURROUNDING PROPERTIES FOR EVIDENCE OF OFF SITE SEDIMENT ACCUMULATION.

RAINFALL AMOUNTS MUST BE OBTAINED BY A PROPERLY MAINTAINED RAIN GAUGE INSTALLED ONSITE, OR BY A WEATHER STATION THAT IS WITHIN ONE MILE OR BY A WEATHER REPORTING SYSTEM. A RAIN GAUGE IS PREFERRED FOR THIS PROJECT.

RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES IN WRITING WITHIN 24 HOURS. SUBMIT INSPECTION REPORTS IN A FORMAT THAT IS ACCEPTABLE TO THE PROJECT ENGINEER.

FOR PROJECTS THAT DISCHARGE TO PROHIBITED WATERS, CONDUCT ROUTINE SITE INSPECTIONS AT A MINIMUM OF ONCE EVERY 72 HOURS (3 DAYS).

INCLUDE THE FOLLOWING IN THE RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY:

- A. DATE AND TIME OF INSPECTIONS
- B. NAME OF PERSONS CONDUCTING INSPECTIONS
- C. FINDINGS OF INSPECTIONS, INCLUDING RECOMMENDATIONS FOR CORRECTIVE ACTIONS D. CORRECTIVE ACTION TAKEN, INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES
- E. DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCH IN 24 HOURS
- F. DOCUMENTS AND CHANGES MADE TO THE SWPPP
- G. MAKE NOTE OF ANY OBSERVATIONS OF DISCHARGE THAT MAY BE OCCURRING DURING THE INSPECTION. THIS SHOULD BE DESCRIBED IN DETAIL AND PHOTOGRAPHED.

REPLACE, REPAIR OR SUPPLEMENT ALL NONFUNCTIONAL BMPS BY IN THE TIME PROVIDED BELOW: A. REPAIR, REPLACE, OR SUPPLEMENT PERIMETER CONTROL DEVICES WHEN IT BECOMES NONFUNCTIONAL OR SEDIMENT REACHES ½ 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 ½ THE HEIGHT AND/OR DEPTH OF THE DEVICE. COMPLETE REPAIRS BY THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVER.
- C. DRAIN AND REMOVE SEDIMENT FROM TEMPORARY AND PERMANENT SEDIMENT BASINS ONCE THE SEDIMENT HAS REACHED ½ THE STORAGE VOLUME.
- D. REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATER INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS. RESTABILIZED ANY AREAS THAT ARE DISTURBED BY SEDIMENT REMOVAL OPERATION. SEDIMENT REMOVAL AND STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS OF DISCOVERY. PREPARE AND SUBMIT A SITE

MANAGEMENT PLAN FOR 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

#### AREA SUMMARY

ACREAGE SUMM	MARY
AREA	ACRES
PROPERTY	4.67
DISTURBED	3.72
IMP. PRE-CONSTRUCTION	0.25
IMP. POST-CONSTRUCTION	1.00
NEW IMP.	0.75
PERVIOUS AT COMPLETION	3.67

#### SPECIAL SITE NOTES

IF SITE REQUIRES PERMANENT STORMWATER MANAGEMENT HYDROLOGIC AND WATER QUALITY MODELING DATA IS AVAILABLE UPON REQUEST.

THE SWPPP COORDINATOR MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA AND SHALL BE RESPONSIBLE FOR THE FOLLOWING:

- SUBMIT THE NPDES PERMIT APPLICATION AND COMPLY WITH ALL REQUIREMENTS
- IMPLEMENT THE SWPPP.
- OVERSEE INSTALLATION AND MAINTENANCE PRACTICES AND REPAIRS IDENTIFIED IN THE
- IMPLEMENT AND OVERSEE EMPLOYEE TRAINING AND RECORD IN OR WITH THE SWPPP. CONDUCT OR PROVIDE FOR INSPECTION AND MONITORING ACTIVITIES AND MAINTAIN LOGS
- AS PERMIT REQUIRES. • IDENTIFY OTHER POTENTIAL POLLUTANT SOURCES NOT LISTED IN THE SWPPP AND ADD
- IDENTIFY ANY DEFICIENCIES IN THE SWPPP AND CORRECT THEM.
- ENSURE THAT CHANGES TO CONSTRUCTION PLANS ARE ADDRESSED IN THE SWPPP.
- FILE THE NOTICE OF TERMINATION UPON PROJECT COMPLETION.

AFTER THE NOTICE OF TERMINATION HAS BEEN FILED, THE OWNER SHALL BE RESPONSIBLE FOR ASSIGNING RESPONSIBILITY FOR PERMANENT MAINTENANCE MEASURES.

#### **PERMITS**

THE FOLLOWING PERMITS APPLY TO THIS PROJECT

AGENCY	TYPE OF PERMIT	PERMIT # AND DATES
MINNESOTA POLLUTION CONTROL AGENCY (MPCA)	NPDES CONSTRUCTION PERMIT	
CITY OF MINNETONKA	GRADING PERMIT	
CITY OF MINNETONKA	BUILDING PERMIT	

#### LOCATION OF SWPPP REQUIREMENTS

THE REQUIRED SWPPP ELEMENTS MAY BE LOCATED IN MANY PLACES WITHIN THE PLAN SET. PLAN VIEW OF THE EROSION CONTROL MEASURES CAN BE FOUND OF SHEET C9 - EROSION & SEDIMENT CONTROL PLAN OF THE PLANS.

#### SWPPP AMENDMENTS

A QUALIFIED INDIVIDUAL MUST COMPLETE ALL SWPPP CHANGES. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.

PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OF ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION OPERATION, MAINTENANCE, WEATHER, OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR

PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER OR OPERATOR, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER OR THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCE OR THE SWPPP IS NOT CONSISTENT WITH THE OBJECTIVES OF A USEPA APPROVED TMDL.

#### STABILIZATION TIME FRAMES

ALL AREAS DISTURBED BY CONSTRUCTION WILL RECEIVE SEED OR SOD ACCORDING TO THE PLANS AND SPECIFICATIONS AND WITHIN THE SPECIFIED VEGETATIVE TIME SCHEDULE. FINAL STABILIZATION WILL OCCUR WHEN THE SITE HAS A UNIFORM VEGETATIVE COVER WITH A DENSITY OF 70% OVER THE ENTIRE DISTURBED AREA COMPARED TO EXISTING CONDITIONS. ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS MUST BE REMOVED AS PART OF THE SITE FINAL STABILIZATION. ALL SEDIMENT MUST BE CLEANED OUT OF CONVEYANCES AND TEMPORARY SEDIMENTATION BASINS IF APPLICABLE. STABILIZATION TIME FRAMES CAN BE SEEN ON THE FOLLOWING TABLE AND THE FOLLOWING SHEET OF THE SWPPP NARRATIVE.

AREA	TIME FRAME	NOTES
LAST 200 LINEAL FEET OF DRAINAGE DITCH OR SWALE	WITHIN 24 HOURS OF CONNECTION TO SURFACE WATER OR PROPERTY EDGE	1, 2, 3
REMAINING PORTIONS OF DRAINAGE DITCH OR SWALE	7 DAYS	1, 3
PIPE AND CULVERT OUTLETS	24 HOURS	
STOCKPILES	7 DAYS	1
PERMANENT COVER METHODS FOR EXPOSED SOILS	7 DAYS	6



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PRINT NAME: BRIAN J. FIELD, PE

NOT FOR CONSTRUCTION DATE: 10/08/2021 LICENSE NO. 57224

#### REVISION LOG

DESCRIPTION OF REVISIONS

#### CITY SUBMITTAL 10/08/2021

DESIGNED: DRAWN: CHECKED BY: BJF

DRAWING TITLE

SWPPP - PG1

DRAWING NO.

C10

#### STORM WATER POLLUTION PREVENTION PLAN NARRATIVE - PAGE 2 OR 2

- INITIATE INLET STABILIZATION IMMEDIATELY WHEN CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED ON ANY PORTION OF THE SITE. COMPLETE STABILIZATION WITHIN THE TIME FRAME LISTED. IN MANY INSTANCES THIS WILL REQUIRE STABILIZATION TO OCCUR MORE THAN ONCE DURING THE COURSE OF THE PROJECT. TEMPORARY SOIL STOCKPILES WITHOUT SIGNIFICANT CLAY OR SILT AND STOCKPILED AND CONSTRUCTED ROAD BASE ARE NOT APPROPRIATE AND THEREFORE EXEMPT FROM THE STABILIZATION REQUIREMENT.
- 2. APPLICATION OF MULCH, HYDROMULCH, TACKIFIER AND POLYACRYLAMIDE ARE NOT ACCEPTABLE STABILIZATION METHODS IN THESE AREAS.
- 3. STABILIZE ALL AREAS OF THE SITE PRIOR TO THE ONSET OF WINTER, ANY WORK STILL BEING PERFORMED WILL BE SNOW MULCHED, SEEDED, AND BLANKETED WITHIN THE TIME FRAMES IN THE NPDES PERMIT.
- 4. TOPSOIL BERMS MUST BE STABILIZED IN ORDER TO BE CONSIDERED PERIMETER CONTROL BMPS. USE RAPID STABILIZATION METHOD 2, 3, OR 4 AS DIRECTED BY THE ENGINEER. THE SEED MIX USED IN THE RAPID STABILIZATION MAY BE SUBSTITUTED AS FOLLOWS:
  - A. SINGLE YEAR CONSTRUCTION BETWEEN MAY 1 AUGUST 1, SEED WITH SEED MIXTURE
  - B. SINGLE YEAR CONSTRUCTION BETWEEN AUGUST 1 AND OCTOBER 31, SEED WITH SEED
  - C. MULTI YEAR CONSTRUCTION 22-111

**MIXTURE 21-112** 

- KEEP DITCHES AND EXPOSED SOILS IN AN EVEN ROUGH GRADED CONDITION IN ORDER TO BE ABLE TO APPLY EROSION CONTROL MULCHES, HYDROMULCHES AND BLANKETS.
- 6. AREAS THAT HAVE SLOPES LESS THAN 3:1 TO RECEIVE HYDROMULCH APPLICATION. AREAS WITHIN LAST 200 LINEAL FEET OF DRAINAGE DITCH OR SWALE & AREAS WITH SLOPES GRATER THAN 3:1. TO RECEIVE A COVER OF EROSION CONTROL BLANKET.
- TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.
- 8. SEED SHALL BE APPLIED AT A RATE AS SPECIFIED PER MNDOT SEEDING MANUAL. WITH 2 TONS SHREDDED AND PUNCHED IN PLACE STRAW PER ACRE. HYDROSEEDING PER MNDOT SPEC SECTION 3884 & MULCHING IS AN ACCEPTABLE ALTERNATE FOR COVER.

#### GENERAL SWPPP NOTES FOR CONSTRUCTION ACTIVITY

- CONTRACTOR SHALL AMEND THE SWPPP AND DOCUMENT ANY AND ALL CHANGES TO THE SWPPP AND ASSOCIATED PLAN SHEETS WITHIN 7 DAYS UPON IMPLEMENTATION. STORE THE SWPPP AND ALL AMENDMENTS ON SITE AT ALL TIMES
- 2. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR THE ENGINEER'S ACCEPTANCE FOR CONCRETE MANAGEMENT, CONCRETE SLURRY APPLICATION AREAS, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AREAS IDENTIFIED IN THE PLANS AS "SITE MANAGEMENT PLAN AREA", ANY WORK THAT WILL REQUIRE DEWATERING, AND AS REQUESTED BY THE ENGINEER. SUBMIT ALL SITE MANAGEMENT PLANS TO THE ENGINEER IN WRITING. ALLOW ALL MINIMUM OF 7 DAYS FOR THE ENGINEER TO REVIEW AND ACCEPT SITE MANAGEMENT PLAN SUBMITTALS. WORK WILL NOT BE ALLOWED TO COMMENCE IF A SITE MANAGEMENT PLAN IS REQUIRED UNTIL ACCEPTANCE HAS BEEN GRANTED BY THE ENGINEER THERE WILL BE NO EXTRA TIME ADDED TO THE CONTRACT DUE TO THE UNTIMELY SUBMITTAL
- 3. IT IS THE DESIGNER'S INTENT THAT THE CONTRACTOR BUILD PONDS AND INSTALL EROSION CONTROL BMPS BEFORE PUTTING THEM INTO ACTIVE SERVICE TO THE MAXIMUM EXTENT
- BURNING OF ANY MATERIAL IS NOT ALLOWED WITHIN PROJECT BOUNDARY
- 5. DO NOT DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS. DELINEATE AREAS NOT TO BE DISTURBED PRIOR TO STARTING GROUND DISTURBING ACTIVITIES. IF IT BECOMES NECESSARY TO DISTURBED AREAS OUTSIDE OF THE CONSTRUCTION LIMITS OBTAIN WRITTEN PERMISSION FROM THE PROJECT ENGINEER PRIOR TO PROCEEDING. PRESERVE ALL NATURAL BUFFERS SHOWN ON THE PLANS.
- ROUT STORMWATER AROUND UNSTABILIZED AREAS OF THE SITE WHENEVER FEASIBLE PROVIDE EROSION CONTROL AND VELOCITY DISSIPATION DEVICES AS NEEDED TO KEEP CHANNELS FROM ERODING AND TO PREVENT NUISANCE CONDITIONS AT THE OUTLET.
- DIRECT DISCHARGES FROM BMPS TO VEGETATED AREA WHENEVER FEASIBLE. PROVIDE VELOCITY DISSIPATION DEVICES AS NEEDED TO PREVENT EROSION.
- 8. THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS SHALL BE PLACED AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND TO CAPTURE SEDIMENT ON SITE. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK AND/OR GROUND DISTURBING ACTIVITIES COMMENCE
- ESTABLISH SEDIMENT CONTROL DEVICES ON ALL DOWN GRADIENT PERIMETERS AND UP GRADIENT OF ANY BUFFER ZONES BEFORE AND UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN. MAINTAIN SEDIMENT CONTROL DEVICES UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- 10. LOCATE PERIMETER CONTROL ON THE CONTOUR TO CAPTURE OVERLAND, LOW-VELOCITY SHEET FLOWS DOWN GRADIENT OF ALL EXPOSED SOILS AND PRIOR TO DISCHARGING TO SURFACE WATERS. PLACE J-HOOKS AT A MAXIMUM OF 100 FOOT INTERVALS.
- PROVIDE PERIMETER CONTROL AROUND ALL STOCKPILES. PLACE BMP A MINIMUM 5 FEET FROM THE TOE OF SLOPE WHERE FEASIBLE. DO NOT PLACE STOCKPILES IN NATURAL BUFFER AREAS, SURFACE WATERS OR STORMWATER CONVEYANCES.
- 12. FLOATING SILT CURTAIN IS ALLOWED AS PERIMETER CONTROL FOR IN WATER WORK ONLY. INSTALL THE FLOATING SILT CURTAIN AS CLOSE TO SHORE AS POSSIBLE. PLACE PERIMETER CONTROL BMP ON LAND IMMEDIATELY AFTER THE IN WATER WORK IS COMPLETED.
- 13. DITCH CHECKS WILL BE PLACED AS INDICATED ON THE PLANS DURING ALL PHASES OF CONSTRUCTION.
- 14. PLACE CONSTRUCTION EXITS, AS NECESSARY, TO PREVENT TRACKING OF SEDIMENT ONTO PAVED SURFACES BOTH ON AND OFF THE PROJECT SITE. PROVIDE CONSTRUCTION EXITS OF SUFFICIENT SIZE TO PREVENT TRACK OUT. MAINTAIN CONSTRUCTION EXITS WHEN EVIDENCE OF TRACKING IS DISCOVERED. REGULAR STREET SWEEPING IS NOT AN ACCEPTABLE ALTERNATIVE TO PROPER CONSTRUCTION EXIT INSTALLATION AND MAINTENANCE. CONSTRICTION EXITS ARE INCIDENTAL
- 15. DISCHARGE TURBID OR SEDIMENT LADEN WATER TO TEMPORARY SEDIMENT BASINS WHENEVER FEASIBLE. IN THE EVENT THAT IT IS NOT FEASIBLE TO DISCHARGE THE SEDIMENT LADEN WATER TO A TEMPORARY SEDIMENT BASIN. THE WATER MUST BE TREATED SO THAT IT DOES NOT CAUSE A NUISANCE CONDITION IN THE RECEIVING WATERS OR TO DOWNSTREAM LANDOWNERS. CLEAN OUT ALL PERMANENT STORMWATER BASINS REGARDLESS OF WHETHER USED AS TEMPORARY SEDIMENT BASINS OR TEMPORARY SEDIMENT TRAPS TO THE DESIGN CAPACITY AFTER ALL UP GRADIENT LAND DISTURBING ACTIVITY IS COMPLETED.
- 17. PROVIDE STABILIZATION IN ANY TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.

PROVIDE SCOUR PROTECTION AT ANY OUTFALL OF DEWATERING ACTIVITIES.

#### POLLUTION PREVENTION

- 1. PROVIDE A SPILL KIT AT EACH WORK LOCATION ON THE SITE.
- 2. STORE ALL BUILDING MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS, PESTICIDES, HERBICIDES, INSECTICIDES. FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS UNDER COVER WITH SECONDARY CONTAINMENT.
- PROVIDE A SECURE STORAGE AREA WITH RESTRICTED ACCESS FOR ALL HAZARDOUS MATERIALS AND TOXIC WASTE. RETURN ALL HAZARDOUS MATERIALS AND TOXIC WASTE TO THE DESIGNATED STORAGE AREA AT THE END OF THE BUSINESS DAY UNLESS INFEASIBLE STORE ALL HAZARDOUS MATERIALS AND TOXIC WASTE (INCLUDING BUT NOT LIMITED TO OIL DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT, PETROLEUM BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS WITH SECONDARY CONTAINMENT. CLEAN UP SPILLS IMMEDIATELY.
- 4. STORE, COLLECT AND DISPOSE OF ALL SOLID WASTE.
- POSITION ALL PORTABLE TOILETS SO THAT THEY ARE SECURE AND CANNOT BE TIPPED OR KNOCKED OVER. PROPERLY DISPOSE OF ALL SANITARY WASTE.
- 6. FUEL AND MAINTAIN VEHICLES IN A DESIGNATED CONTAINED AREA WHENEVER FEASIBLE. USE DRIP PANS OR ABSORBENT MATERIALS TO PREVENT SPILLS OR LEAKED CHEMICALS FORM DISCHARGING TO SURFACE WATER OR STORMWATER CONVEYANCES. PROVIDE A SPILL KIT AT EACH LOCATION THAT VEHICLES AND EQUIPMENT ARE FUELED OR MAINTAINED AT.
- 7. LIMIT VEHICLE AND EQUIPMENT WASHING TO A DEFINED AREA OF THE SITE. CONTAIN RUNOFF FROM THE WASHING AREA TO A TEMPORARY SEDIMENT BASIN OR OTHER EFFECTIVE CONTROL. PROPERLY DISPOSE OF ALL WASTE GENERATED BY VEHICLE AND EQUIPMENT WASHING. ENGINE DEGREASING IS NOT ALLOWED ON THE SITE.
- PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS. LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND. DESIGN THE CONTAINMENT SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR CONTAINMENT AREA.
- CREATE AND FOLLOW A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. INCLUDE IN THE PLAN HOW THE MATERIAL WILL BE DISPOSED OF AND THE LOCATION OF THE DISPOSAL SITE. SUBMIT PLAN TO THE ENGINEER.
- 10. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT DISCHARGE OR PLACEMENT OF BITUMINOUS GRINDINGS, CUTTING, MILLINGS, AND OTHER BITUMINOUS WASTES FROM AREAS OF EXISTING OR FUTURE VEGETATED SOILS AND FROM ALL WATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
- 11. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, PARTICLES, CONCRETE WASH OUT, AND OTHER CONCRETE WASTES FROM LEAVING SITE, DEPOSITING IN EXISTING OR FUTURE VEGETATED AREAS, AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS. INCLUDING INLETS. DITCHES AND CURB FLOW LINES. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT SAW CUT SLURRY AND PLANING WASTE FROM LEAVING SITE AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS INCLUDING DITCHES AND CULVERTS.

#### RECORD RETENTION

THE SWPPP. ALL CHANGES TO IT AND INSPECTION AND MAINTENANCE RECORDS MUST BE KEPT ON-SITE DURING CONSTRUCTION. THE OWNER MUST RETAIN A COPY OF THE SWPPP ALONG WITH THE FOLLOWING RECORDS FOR THREE (3) YEARS AFTER SUBMITTAL OF THE NOTICE OF TERMINATION (NOT).

- ANY OTHER PERMITS REQUIRED FOR THE PROJECT.
- RECORDS OF ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION
- 3. ALL PERMANENT OPERATIONS AND MAINTENANCE AGREEMENT THAT HAVE BEEN IMPLEMENTED INCLUDING ALL RIGHT OF WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE; AND
- 4. ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS.

#### SWPPP SCHEDULE OF INSTALLATION & MAINTENANCE

ITEM	INSTALLATION	INSPECTION & MAINTENANCE	REMOVAL
SILT FENCE	PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS.	INSPECT & MAINT. AFTER EACH RUN-OFF EVENT. REMOVE SEDIMENTS AS REQUIRED.	AFTER TRIBUTARY DRAINAGE AREA IS RESTORED.
ROCK CONST. ENTRANCE	PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS.	INSPECT REGULARLY. MAINTAIN AS NEEDED.	PRIOR TO PAVING.
OUTLET SKIMMER STRUCTURE	AFTER POND GRADING IS COMPLETED.	INSPECT REGULARLY. MAINTAIN AS NEEDED.	PERMANENT.
RIP-RAP & FILTER	UPON COMPLETION OF POND GRADING, CONC. SWALE CONST. AND OUTLET INSTALLATION.	INSPECT & MAINTAIN AT LEAST ANNUALLY AND AFTER HEAVY RAINFALL EVENT.	PERMANENT.
DETENTION POND	DURING EARTHWORK OPERATIONS.	AFTER HEAVY RAINFALL EVENTS. REMOVE SEDIMENTS AS NEEDED.	PERMANENT.
SEED & MULCH	AFTER POND GRADING IS COMPLETED.	INSPECT & MAINTAIN AFTER HEAVY RAINS. REPLACE WASH-OUT AREAS IMMEDIATELY	NO REMOVAL NECESSARY.
INLET PROTECTION	UPON INLET CONSTRUCTING	WHEN 1/3 CAPACITY OF BMP IS REACHED	AFTER TRIBUTARY AREAS ARE FULLY RESTORED

#### SITE CONSTRAINTS

THE EXISTING CLAYEY SOILS MAY COLLECT WATER DURING TIMES OF INCLEMENT WEATHER OR SNOW MELT. WATER SHOULD BE REMOVED FROM WITHIN EXCAVATION DURING CONSTRUCTION. THE SITE HAS AN EXISTING WETLAND TO THE NORTH.

LONG TERM MAINTENANCE & OPERATION OF PERMANENT STORMWATER MANAGEMENT AIRBORNE WOODHAVEN IS RESPONSIBLE FOR THE LONG TERM OPERATION & MAINTENANCE OF THE STORMWATER POND LOCATED IN THE SOUTHWEST CORNER OF THE PROPERTY AND ALL OTHER STORMWATER DEVICES ON SITE. AIRBORNE WOODHAVEN PLANS TO ENTER INTO A MAINTENANCE AGREEMENT WITH THE CITY OF MINNETONKA THAT IDENTIFIES THAT AIRBORNE WOODHAVEN IS RESPONSIBLE FOR ONGOING MAINTENANCE, AND HOW RESPONSIBILITY WILL BE TRANSFERRED TO OTHER AGENTS.

#### MINIMIZE SOIL COMPACTION & PRESERVE TOPSOIL

THE FOLLOWING ACTIONS CAN BE MADE TO MINIMIZE / PREVENT SOIL COMPACTION DURING CONSTRUCTION ACTIVITIES:

- REDUCE CONTACT AREA PRESSURE TO PROTECT TOPSOIL BY INCREASING THE CONTACT AREA OF THE WHEEL, USE WIDE TIRES OR FLOTATION TIRES, USE TIRE INFLATION PRESSURE CONTROL SYSTEM. USE CRAWLER TRACKS ON SENSITIVE SITES.
- 2. REDUCE WHEEL LOAD
- REDUCE WHEEL SLIP
- 4. REDUCE THE NUMBER ON PASSES

#### SOIL RIPPING / SUBSOILING NOTES

- 1. SOIL RIPPING CAN BE CONDUCTED PRIOR TO OR AFTER TOPSOIL PLACEMENT
- 2. SOIL SHOULD BE RIPPED TO A TARGET DEPTH OF 20 INCHES WITH AN EFFECTIVE DEPTH OF
- SPACING OF THE SHANKS SHOULD BE 30 INCHES
- CALL FOR LOCATES PRIOR TO DEEP SOUL RIPPING.

5.0 FEET PER SECOND TO PREVENT SCOURING.

SOIL RIPPING IS TO BE USED WHERE TOP SOIL HAS BECOME OVER COMPACTED AND WITHIN INFILTRATION/FILTRATION AREAS.

#### DESIGN OF TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL BMPS 1. THE EXPECTED FREQUENCY OF RAINFALL IS A 1-YEAR EVENT WITH AN INTENSITY OF 2.48 IN/HR

- FOR A 24 HOUR DURATION. 2. EXPECTED FLOW FROM IMPERVIOUS SURFACE IS APPROXIMATELY 1.18 CFS AT IT'S PEAK WITH
- A VOLUME OF 0.09 ACRE FEET
- RUNOFF WILL BE CAPTURED VIA STORM SEWER & ROUTED TO THE NEW FILTRATION POND. 4. PEAK DISCHARGE RATES WITHIN SWALES AND AT FLARED END SECTIONS ARE TO BE BELOW
- SOIL PARTICLE SIZES EXPECTED TO BE PRESENT ON SITE ARE SANDY CLEAN CLAY SILT OR SMALLER.

#### PERMANENT STORMWATER MANAGEMENT

#### FILTRATION BASIN:

A FILTRATION BASIN WILL BE CONSTRUCTED NEAR THE SOUTHWEST CORNER OF THE SITE AND WILL TREAT THE STORMWATER FOR THE SITE. SURFACE AREA OF THE POND WILL BE APPROXIMATELY 12,300 SF. A FILTRATION BENCH WITH A 6" PERFORATED PVC UNDERDRAIN WILL ALSO BE INSTALLED AROUND THE STORMWATER POND. DISCHARGE FROM THE POND WILL BE CONTROLLED BY AN OUTLET CONTROL STRUCTURE (OCS) LOCATED ON THE WEST SIDE OF THE STORMWATER POND AND OUTLETS WEST AND TIES INTO AN EXISTING 18" RCP STORM PIPE. A BROAD CRESTED RIP-RAP EMERGENCY SPILLWAY WILL BE LOCATED IN THE NORTHWEST CORNER OF THE STORMWATER POND. THE SPILLWAY WILL BE 25 FT LONG BY 5 FT WIDE AND 1 FOOT IN HEIGHT. THE BASIN HAS A PEAK DISCHARGE RATE OF 34.20 CFS.

#### WATER QUALITY & DRAW DOWN TIME:

DUE TO THE POOR UNDERLYING SOILS, INFILTRATION OF THE 1.1" REQUIRED BY THE MINNEHAHA CREEK WATERSHED DISTRICT IS NOT FEASIBLE. PER WATERSHED RULE 6.1.2.1 OF APPENDIX A, FILTRATION WITH AN UNDERDRAIN WILL BE UTILIZED. A 8' WIDE SAND FILTER STRIP (MEDIA MIX D) WILL BE INSTALLED AROUND THE PERMANENT STORAGE OF THE STORMWATER POND. THE STORMWATER POND HAS BEEN SIZED TO TREAT THE FULL AMOUNT OF THE REQUIRED VOLUME ABSTRACTION. RELEASE OF STORMWATER FROM THE POND WILL BE CONTROLLED THROUGH A RECTANGULAR NOTCHED CONCRETE WEIR WITHIN OCS-2. THE NOTCH ELEVATION WILL BE THE LOWEST ELEVATION FOR THE POND AND WILL BE SET AT 969.60. THE REQUIRED ABSTRACTION IS CALCULATED FROM THE VOLUME BELOW THE LOWEST OUTLET ELEVATION AND ABOVE THE NWL ELEVATION OF 969.00. PER THE STORMWATER MANAGEMENT PLAN FOUND IN THE CONSTRUCTION DOCS, THE TOTAL VOLUME ABSTRACTION EQUALS 4.832 CF.

THE PROPOSED STORMWATER POND WITH FILTRATION BENCH HAS BEEN SIZED TO ALLOW A DRAWDOWN TIME OF LESS THAN 48 HOURS ACCORDING TO THE MINNEHAHA CREEK WATERSHED DISTRICT DESIGN CRITERIA. BY USING A DESIGN INFILTRATION RATE OF 1.63 IN/HR, THE FILTRATION BENCH SURFACE AREA. AND VOLUME BELOW THE LOWEST OUTLET THE DRAWDOWN TIME HAS BEEN CALCULATED AS FOLLOWS.

DRAWDOWN TIME (HR) =  $V/VA(\frac{1}{12}) = 4,832/(1.63 \times 2545)(\frac{1}{12}) = 13.98 HR$ 

#### TOTAL SUSPENDED SOLIDS (TSS) REMOVAL

THE PROPOSED STORMWATER POND HAS BEEN SIZED AND DESIGNED PER THE MINNEHAHA CREEK WATERSHED DISTRICT TO ENSURE NO NET INCREASE IN TOTAL PHOSPHORUS (TP) OR TOTAL SUSPENDED SOLIDS (TSS) FROM PRE-DEVELOPMENT LAND COVER TO POST-DEVELOPMENT LAND COVER. PER THE MIDS REPORT FOUND IN THE APPENDIX OF THE STORMWATER MANAGEMENT PLAN FOUND IN THE CONSTRUCTION DOCS, THE STORMWATER POND REMOVES 94% OF THE TOTAL ANNUAL TSS DIRECTED FROM THE WATERSHED AND 71% OF THE TOTAL PHOSPHORUS.

#### NOTICE OF TERMINATION NOTES

- 1. PRIOR TO SUBMITTING A NOTICE OF TERMINATION TO THE MPCA, THE PERMANENT STORMWATER TREATMENT SYSTEM HAS BEEN CONSTRUCTED. INSPECTED. AND IS OPERATING AS DESIGNED.
- 2. SUBMIT NOTICE OF TERMINATION TO THE MPCA ONCE PERMIT TERMINATION CONDITION ARE

#### **ESTIMATED BMPS QUANTITIES**

BMP	ORIGINAL ESTIMATE	MODIFICATION	DATE
TEMP. DIVERSION DIKES			
CHECK DAMS			
PERMANENT SEEDING	128,500 SF		
PERMANENT SODDING			
MULCHES (SPECIFY TYPES)			
BIO-ROLL			
SILT FENCING	2,400 LF		
EROSION CONTROL MATS			
STORM DRAIN INLET PROTECTION	4 EACH		
TEMPORARY OR PERMANENT SEDIMENTATION BASINS	1 EACH		
CONSTRUCTION ENTRANCE	1 EACH		
CONCRETE TRUCK WASHOUT	OFF SITE		



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#### WOODHAVEN AT **MINNETONKA**

2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN. LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

SUPERVISION AND THAT I AM A DULY LICENSEI PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

PRINT NAME: BRIAN J. FIELD, PE

NOT FOR CONSTRUCTION

DATE: 10/08/2021 LICENSE NO. 57224

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NO.	DATE	DESCRIPTION OF REVISIONS
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CITY SUBMITTAL 10/08/2021

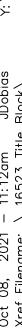
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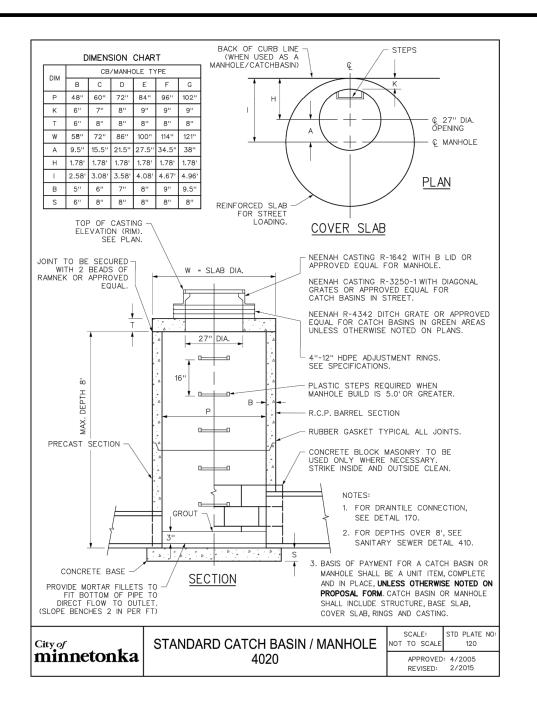
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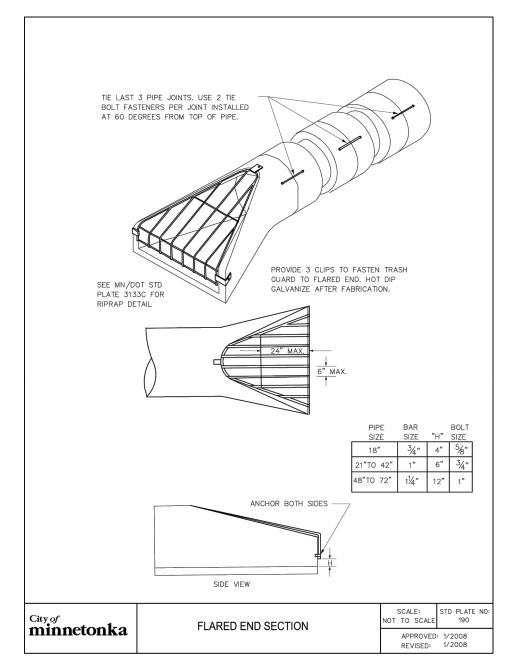
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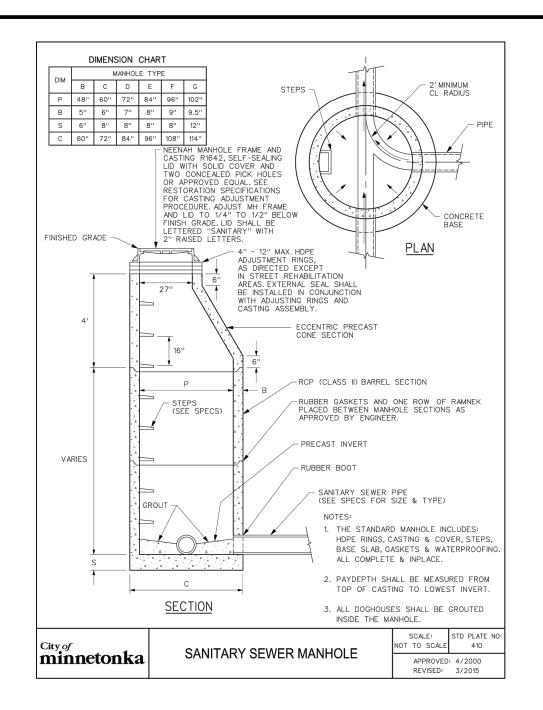
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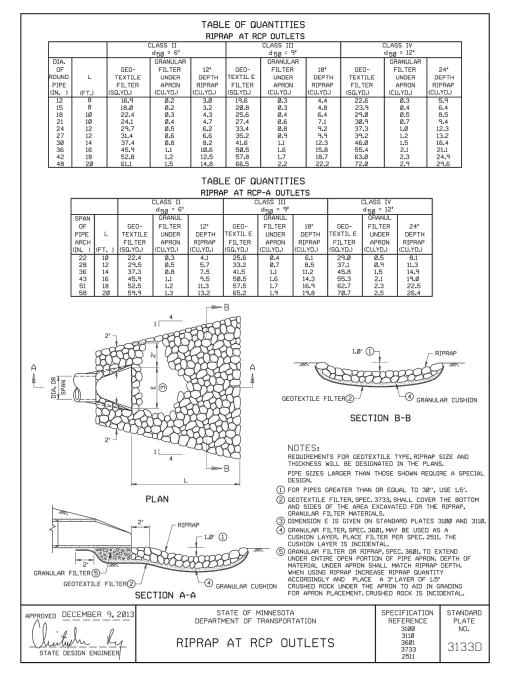
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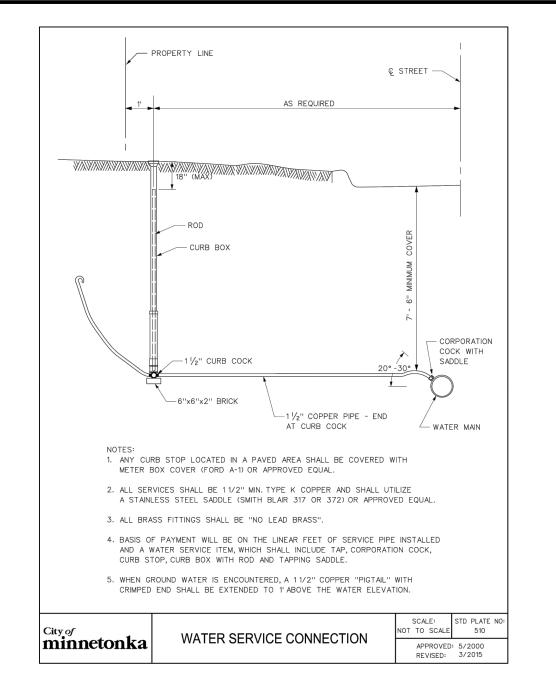


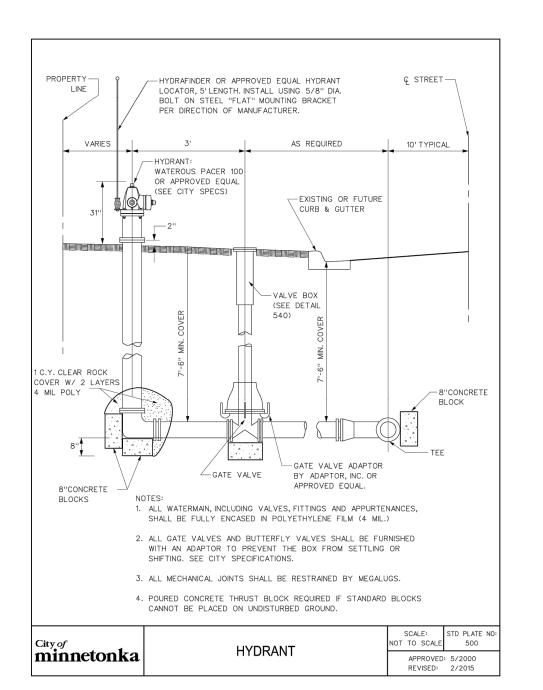


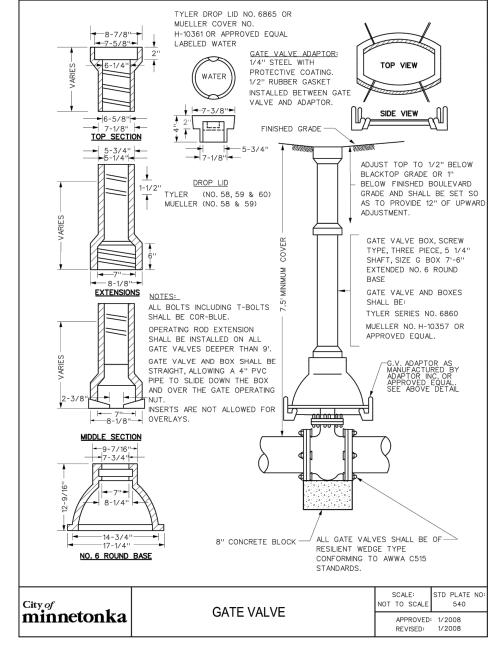


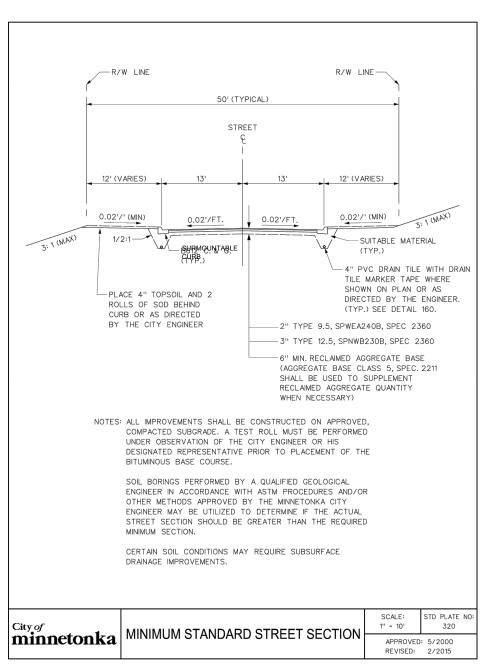


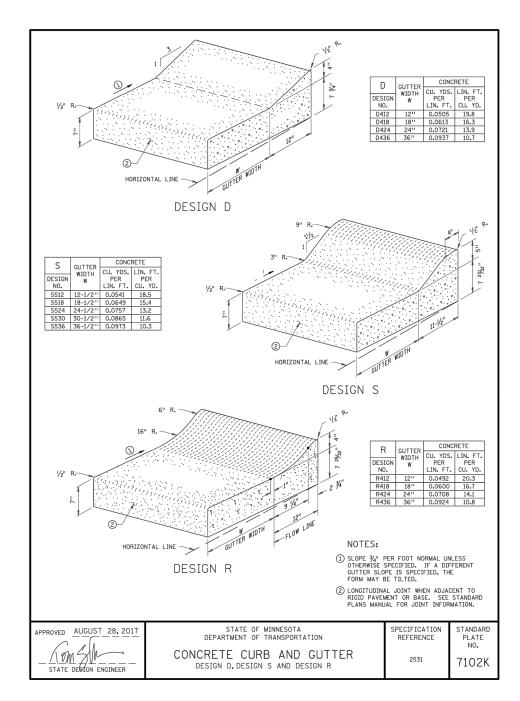


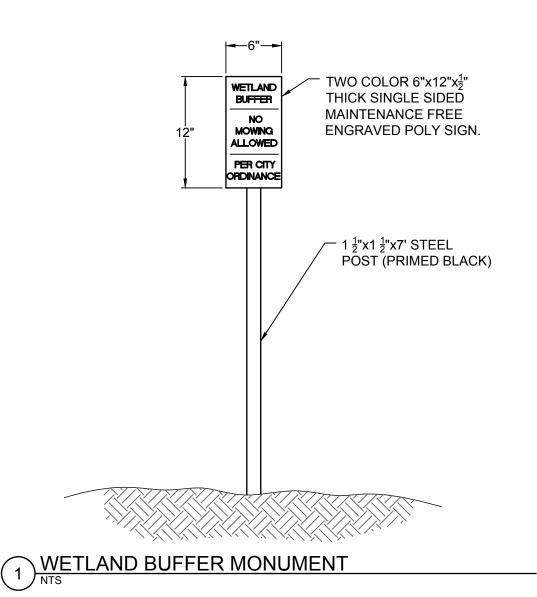


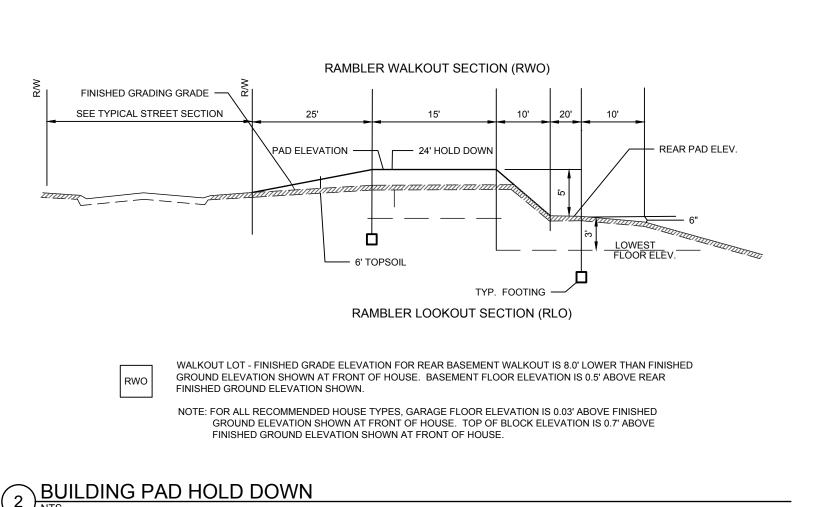


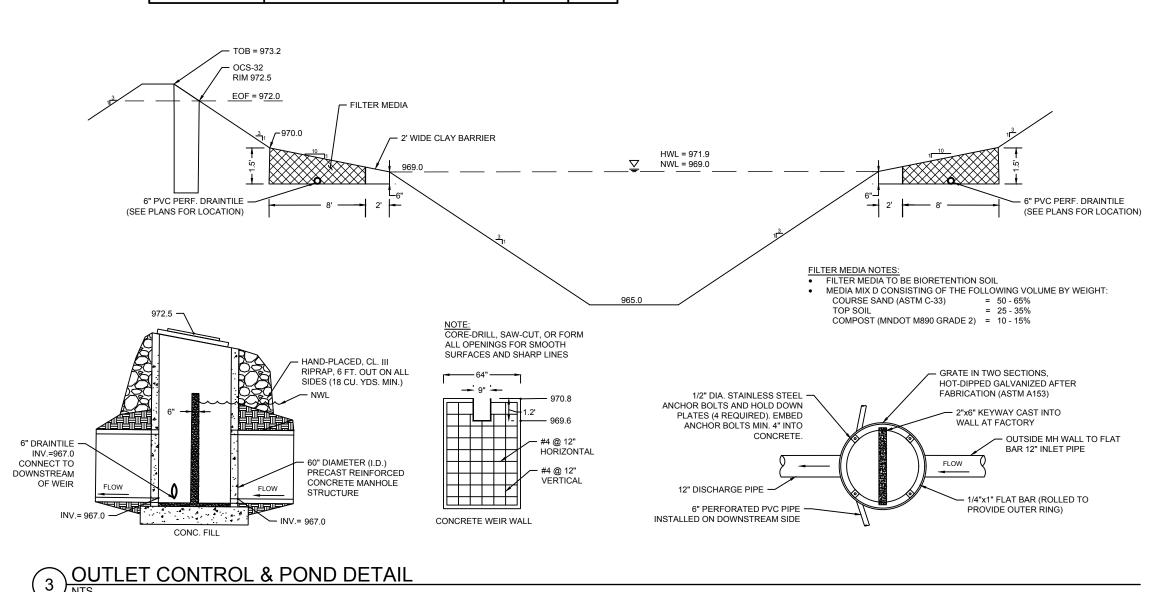


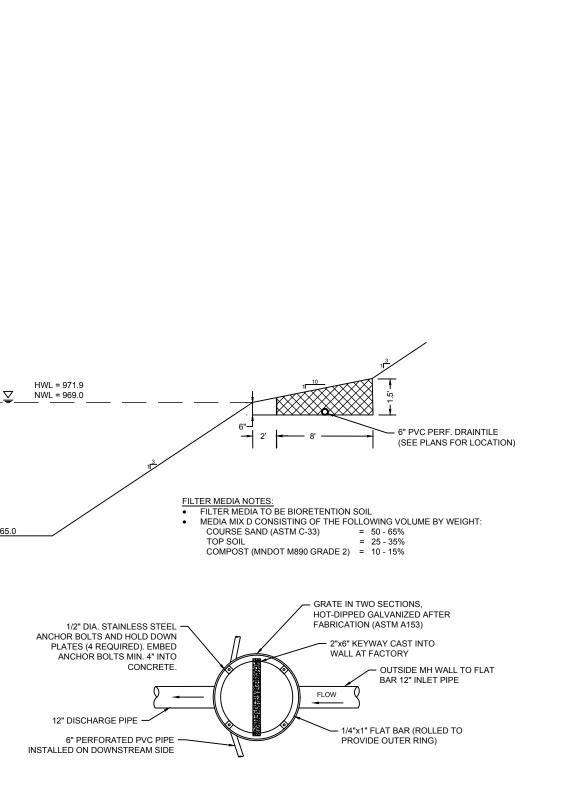














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#### WOODHAVEN AT **MINNETONKA**

2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, O REPORT 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.

PRINT NAME: BRIAN J. FIELD, PE

NOT FOR CONSTRUCTION

DATE: 10/08/2021 LICENSE NO. 57224

**REVISION LOG** DESCRIPTION OF REVISIONS

#### CITY SUBMITTAL 10/08/2021

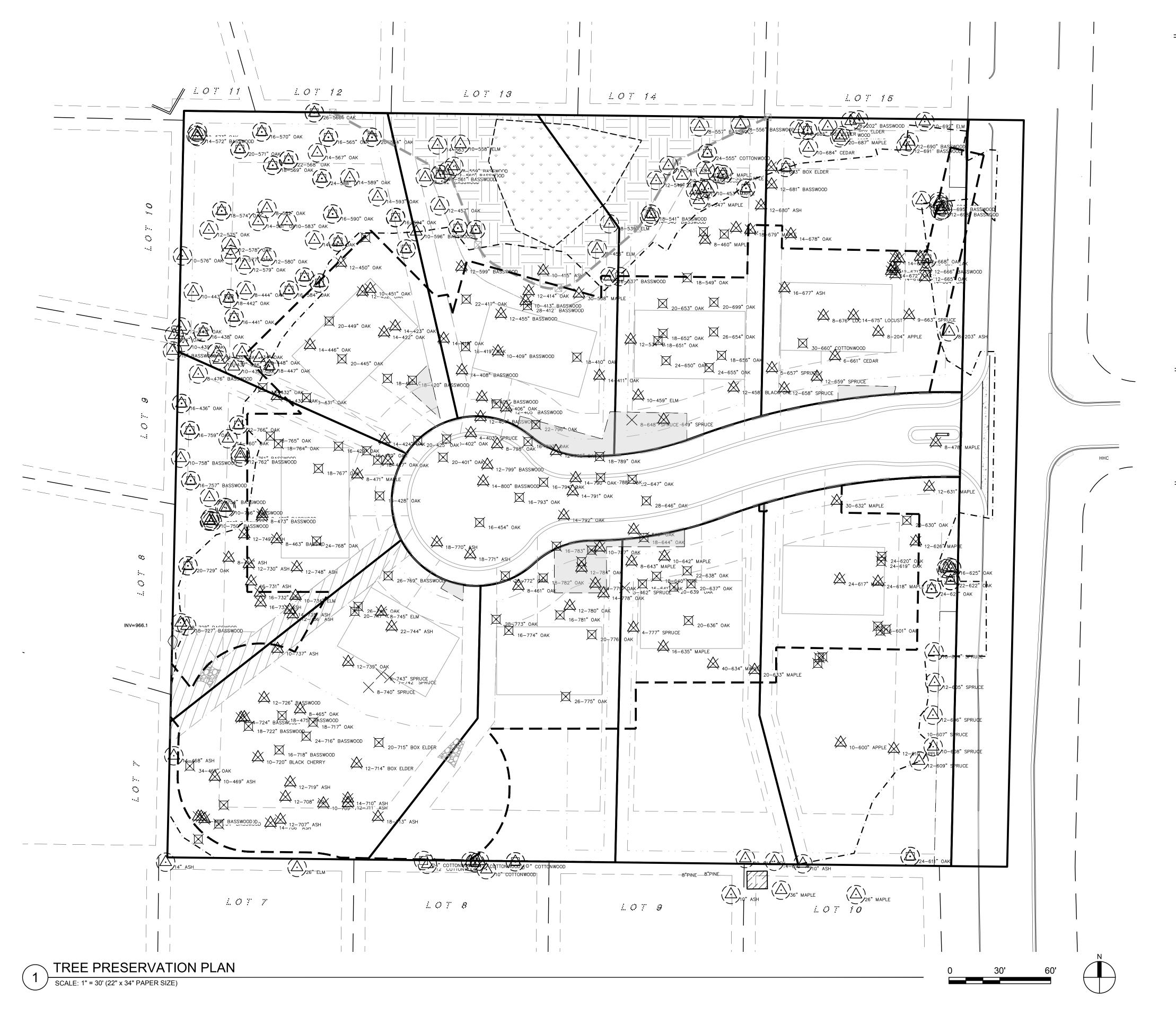
DESIGNED: DRAWN: CHECKED BY: BJF JPD BJF

DRAWING TITLE

SITE DETAILS

DRAWING NO.

PLOTTED: COMM. NO. 16523



PROPERTY LIMITS

CONSTRUCTION LIMITS

TREE PROTECTION

EXEMPT LIMITS:
(BASIC TREE REMOVAL AREA)

NON-EXEMPT:
(NOT INCLUDE IN THE BASIC TREE REMOVAL AREA)

SIGNIFICANT TREES TO REMAIN

SIGNIFICANT TREES TO REMOVE

HIGH PRIORITY TREES TO REMAIN

#### NOTES

1. INSTALL TREE PROTECTION AROUND EXISTING TREES TO REMAIN (TYP.). WHERE CLUSTERS OF TREES ARE TO BE PROTECTED, CONTRACTOR SHALL INSTALL PROTECTION FENCING AROUND THE OUTERMOST DRIPLINE OF THE CLUSTER. SEE 1/L2.

HIGH PRIORITY TREES TO REMOVE

TREE PROTECTION REQUIRED

(SEE DETAIL 1 / L2)

NON-SIGNIFICANT TREES TO REMOVE

#### TREE DATA SUMMARY

(ALSO SEE TREE DATA TYPE & STATUS TABLE ON L2)

- TOTAL TREES ON-SITE: 352
- TOTAL TREES ON-SITE REMOVED: 207
- TOTAL TREES ON-SITE TO REPLACE: 19
   OUAL IFYING NON-EXEMPT (NOT INCLUDED IN THE 'BASIC TREE REM
- TOTAL CAL. INCHES ON-SITE: 5275
- TOTAL CAL. INCHES ON-SITE REMOVED: 3188
- TOTAL CAL. INCHES ON-SITE TO REPLACE: 270
   QUALIFYING NON-EXEMPT (NOT INCLUDED IN THE 'BASIC TREE REMOVAL AREA')

\*EXEMPT TREES INCLUDE INVASIVE SPECIES SUCH AS BUCKTHORN AND HONEYSUCKLE. SIGNIFICANT TREES EXEMPT INCLUDE ASH, BOX ELDER, SILVER MAPLE, WILLOW, NORWAY MAPLE, AMUR MAPLE AND COLORADO SPRUCE.

\*EXEMPT TREES INCLUDE TREES OF POOR/DEAD HEALTH AND/OR EXTENSIVE DECAY OR HOLLOW; SUFFERS FROM A MAJOR INSECT OR PATHOLOGICAL PROBLEM THAT CANNOT BE RESOLVED.

\*EXEMPT TREES INCLUDE TREES TO ACCOMMODATE THE INSTALLATION OF PUBLIC STREETS, UTILITIES, OR STORM WATER PONDING AREAS NOTED UNDER THE 'BASIC TREE REMOVAL AREA' .



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2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT H. CLAEYS, PLA

SIGNATURE: NOT FOR CONSTRUCTION

DATE: <u>10/08/2021</u> LICENSE NO. <u>45613</u>

#### REVISION LOG

DESCRIPTION OF REVISIONS

#### CITY SUBMITTAL

DESIGNED: DRAWN: CHECKED BY:

CHC CHC

DRAWING TITLE

TREE PRESERVATION PLAN

DRAWING NO.

L

PLOTTED: COMM. NO. 16523

#### TREE DATA: TYPE & STATUS TABLE

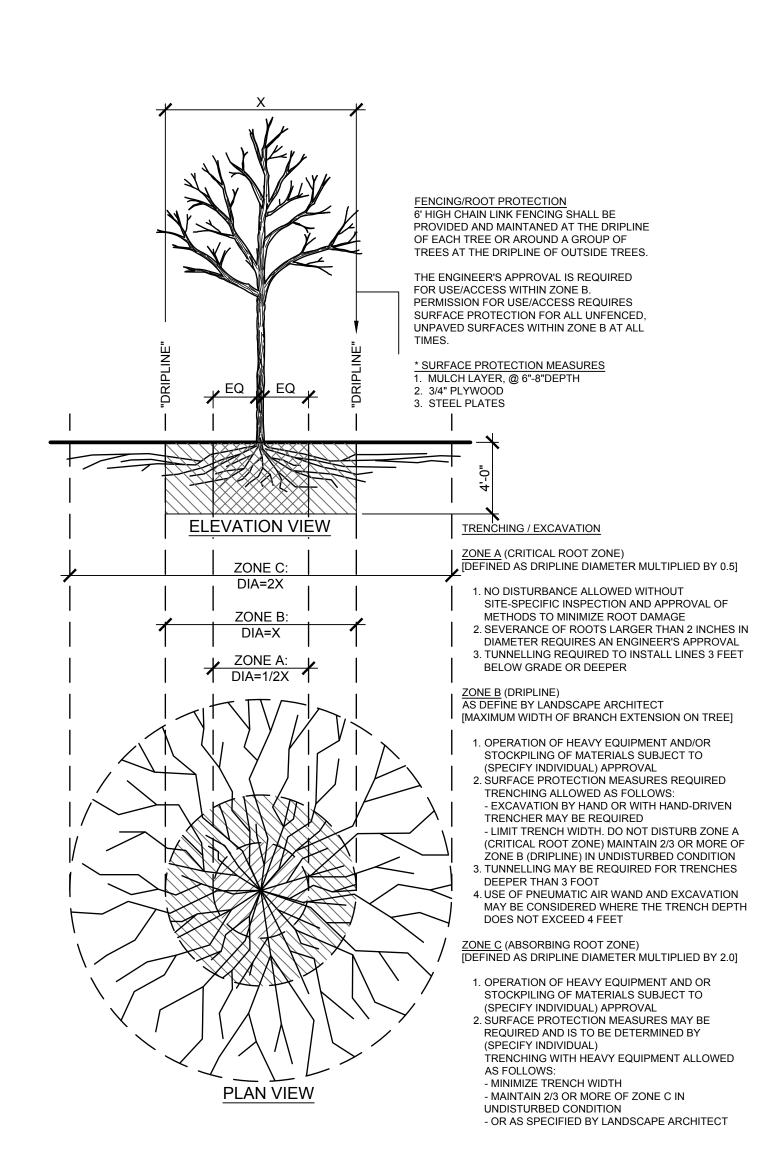
<b>TAG ID</b> 775	TYPE OAK	<b>CAL.</b> 26	CLASS HIGH PRIORITY	<b>HEALTH</b> HEALTHY	STATUS REMOVE	Inches Lost	"Non Exempt Inches Lost HIGH PRIORITY"	"Non Exempt Inches Lost SIGNIFICANT "
773	OAK	28	HIGH PRIORITY	HEALTHY	REMOVE	28	0	0
774 772	OAK OAK	16 28	HIGH PRIORITY HIGH PRIORITY	HEALTHY	REMOVE REMOVE /	16 28	0	0
771 <b>454</b>	ASH OAK	18 16	SIGNIFICANT HIGH PRIORITY	HEALTHY	EXEMPT REMOVE	18 16	0	0
770	ASH	18	SIGNIFICANT	HEALTHY	REMOVE / EXEMPT	18	0	0
534 411	BAS OAK	12 14	SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	12 14	0	0
<b>410</b> 412	OAK BAS	18 28	HIGH PRIORITY HIGH PRIORITY	POOR	REMOVE REMOVE	18 28	0	0
413 414	DAK OAK	10 12	SIGNIFICANT SIGNIFICANT	POOR HEALTHY	REMOVE REMOVE	10 12	0	0
455 417	BAS OAK	12 22	SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	12 22	0	0
418 419	OAK OAK	14 16	SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	14 16	0	0
409 423	BAS OAK	10 14	SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	10 14	0	0
422 595	OAK OAK	14 18	HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMAIN	14 0	0	0
<b>596</b> 597	BAS OAK	10 18	SIGNIFICANT HIGH PRIORITY	<b>HEALTHY</b> POOR	REMAIN REMAIN	0	0	0
598 599	OAK BAS	18	HIGH PRIORITY SIGNIFICANT	HEALTHY	REMOVED / NON-EXEMPT REMOVED /	12	0	2
415 538	ASH MAP	10 30	SIGNIFICANT HIGH PRIORITY	POOR	NON-EXEMPT REMOVE	10 30	0	0
<b>537</b> 456	BAS ELM	16 8	SIGNIFICANT SIGNIFICANT	<b>HEALTHY</b> DEAD	REMAIN /	0	0	0
539	ELM	18	SIGNIFICANT	HEALTHY	EXEMPT REMAIN / EXEMPT	0	0	0
540 541	BAS BAS	14 18	SIGNIFICANT HIGH PRIORITY	POOR POOR	REMAIN REMAIN	0	0	0
542	ELM	12	SIGNIFICANT	HEALTHY	REMAIN / EXEMPT REMAIN /	0	0	0
543 544 <b>545</b>	BAS MAP	12 10 26	SIGNIFICANT SIGNIFICANT SIGNIFICANT	POOR POOR HEALTHY	EXEMPT REMAIN REMAIN	0 0	0 0	0
547 546	MAP MAP	8	SIGNIFICANT SIGNIFICANT	POOR HEALTHY	REMAIN REMAIN	0	0	0
<b>453</b> 553	MAP MAP	10 12 12	SIGNIFICANT SIGNIFICANT	HEALTHY POOR	REMAIN REMAIN	0 0	0 0	0
554 555 557	MAP COT BAS	24	SIGNIFICANT SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0	0	0
<b>549</b> 653 652	OAK OAK	18 20 18	HIGH PRIORITY HIGH PRIORITY HIGH PRIORITY	HEALTHY POOR POOR	REMOVE REMOVE	18 20 18	0 0	0 0
<b>651</b> 650	OAK OAK	<b>18</b> 24	HIGH PRIORITY HIGH PRIORITY	HEALTHY POOR	REMOVE REMOVE	<b>18</b> 24	0	0
655 656	OAK OAK	24 18 26	HIGH PRIORITY HIGH PRIORITY HIGH PRIORITY	POOR HEALTHY	REMOVE REMOVE	24 18 26	0 0	0 0
699 548	OAK	20 22	HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVED /	20	0 22	0
460	SVR MAP	8	SIGNIFICANT	HEALTHY	NON-EXEMPT  REMOVED /	8	0	2
550	СОТ	18	SIGNIFICANT	HEALTHY	NON-EXEMPT REMOVED / NON-EXEMPT	18	18	0
551	SVR MAP	10	SIGNIFICANT	HEALTHY	REMOVED / NON-EXEMPT	10	0	2
679 680	SVR MAP ASH	18	SIGNIFICANT SIGNIFICANT	POOR	REMOVE /	18	0	0
681	BAS	12	SIGNIFICANT	HEALTHY	REMOVED / NON-EXEMPT	12	0	2
682	COT	22	SIGNIFICANT	HEALTHY	REMAIN REMOVED /	0	0	0
553	COT	10	SIGNIFICANT	HEALTHY	NON-EXEMPT REMAIN	0	0	0
552 459	COT	10	SIGNIFICANT SIGNIFICANT	HEALTHY	REMAIN REMOVE / EXEMPT	10	0	0
649	SPR	10	SIGNIFICANT	HEALTHY	REMOVED / NON-EXEMPT	10	0	2
648	SPR	8	COMMON	DEAD	REMOVED / NON-EXEMPT	8	0	2
789 788	OAK OAK	18 22	HIGH PRIORITY	HEALTHY	REMOVED / NON-EXEMPT	18 22	18 0	0
790 791	OAK	14	SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE	14	0	0
795	OAK	12	SIGNIFICANT SIGNIFICANT	HEALTHY	REMOVE REMOVED / NON-EXEMPT	12	0	2
796	OAK	22	HIGH PRIORITY	HEALTHY	REMOVED / NON-EXEMPT	22	22	0
797 405	OAK BAS	16 12	HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE	16 12	0	0
406 407	OAK BAS	16 10	HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE	16 10	0	0
404 408	BAS BAS	12 14	SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE	12 14	0	0
461 635	OAK MAP	8 16	SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE	8 16	0	0
<b>777</b> 462	SPR SPR	<b>4</b> 3	SIGNIFICANT COMMON	<b>HEALTHY</b> DEAD	REMOVE REMOVE	<b>4</b> 3	0	0
778	OAK	14	SIGNIFICANT	HEALTHY	REMOVED / NON-EXEMPT	14	0	2
779 780	OAK OAK	14 12	SIGNIFICANT SIGNIFICANT	HEALTHY	REMOVED / NON-EXEMPT REMOVE	14 12	0	2
780 781 776	OAK OAK	16 20	HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	12 16 20	0	0
643	MAP	8	SIGNIFICANT	HEALTHY	REMOVE REMOVED /	8	0	0
787 786	OAK OAK	10	SIGNIFICANT HIGH PRIORITY	HEALTHY	NON-EXEMPT REMOVED /	10 16	0 16	0
785	OAK	16	HIGH PRIORITY	HEALTHY	NON-EXEMPT  REMOVED / NON-EXEMPT	16	16	0
784	OAK	12	SIGNIFICANT	HEALTHY	REMOVED / NON-EXEMPT	12	0	2
783 782	OAK OAK	16 18	HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	16 18	0	0
458	BLA	12	SIGNIFICANT	HEALTHY	REMOVE / EXEMPT	12	0	0
794 793	OAK OAK	16 16	HIGH PRIORITY HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE	16 16	0	0
792 800 799	BAS BAS	14 14 12	SIGNIFICANT SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE REMOVE	14 14 12	0 0 0	0 0
798 403	OAK SPR	8	SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE	8	0	0
402 401 425	OAK OAK	20 20 20	HIGH PRIORITY HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMOVE REMOVE REMOVE	20 20 20	0 0 0	0 0 0
424 426 427	OAK OAK OAK	14 14 18	SIGNIFICANT SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMOVE REMOVE	14 14 18	0 0 0	0 0 0
428 470	OAK OAK	16 16	HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	16 16	0	0
471 429	MAP OAK	8 16	SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	8 16	0	0
767 764 761	OAK OAK BAS	18 18 14	HIGH PRIORITY HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY HEALTHY	REMOVE REMOVE REMAIN	18 18 0	0 0 0	0 0 0
762 <b>757</b>	BAS BAS	12 16	SIGNIFICANT HIGH PRIORITY	DEAD HEALTHY	REMAIN REMAIN	0	0	0
754	BAS	10	SIGNIFICANT	HEALTHY	REMAIN	0	0	0

756 753 752	BAS BAS BAS	10 8 8	SIGNIFICANT SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0 0	0 0 0
751 750	BAS BAS	10 10	SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMAIN REMAIN	0	0	0
749 <b>472</b>	ASH BAS	12 8	SIGNIFICANT  SIGNIFICANT	DEAD HEALTHY	REMOVED / NON-EXEMPT REMOVE	12 8	0	0
473 729 464	DAK OAK	8 20 8	SIGNIFICANT HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY POOR	REMOVE REMAIN REMOVED /	8 0	0	0 0
730	ASH	12	SIGNIFICANT	POOR	NON-EXEMPT  REMOVE /  EXEMPT	12	0	0
<b>463</b> 731	<b>BAS</b> ASH	16	SIGNIFICANT HIGH PRIORITY	POOR	REMOVE / REMOVE / EXEMPT	16	0	0
732 733	ASH ASH	16 16	HIGH PRIORITY SIGNIFICANT	POOR	REMOVE / EXEMPT REMOVED /	16 16	0	0
737	ASH	10	SIGNIFICANT	HEALTHY	NON-EXEMPT  REMOVE /  EXEMPT	10	0	0
736 735	ASH ASH	12 14	SIGNIFICANT SIGNIFICANT	HEALTHY	REMOVED / NON-EXEMPT REMOVED /	12 14	0	2
734	ELM	10	SIGNIFICANT	HEALTHY	NON-EXEMPT REMOVED / NON-EXEMPT	10	0	2
748 <b>768</b>	ASH OAK	12 24	SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY	REMOVE / EXEMPT REMOVE	12 24	0	0
769 746 747	OAK OAK	26 26 20	HIGH PRIORITY HIGH PRIORITY HIGH PRIORITY	POOR POOR POOR	REMOVE REMOVE REMOVE	26 26 20	0 0	0 0
745 <b>728</b>	ELM BAS	8	SIGNIFICANT HIGH PRIORITY	HEALTHY	REMOVE / EXEMPT REMAIN	8	0	0
<b>727</b> 739	BAS OAK	18 12	HIGH PRIORITY SIGNIFICANT	<b>HEALTHY</b> POOR	REMAIN REMOVE	0 12	0	0
744 742	ASH SPR	7	SIGNIFICANT	POOR	REMOVE / EXEMPT REMOVE	7	0	0
743 740 715	SPR SPR BOX	8 8	COMMON COMMON HIGH PRIORITY	POOR POOR	REMOVE REMOVE /	8 8 20	0	0 0
717	OAK OAK	18	HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE	18	0	0
475 726	BAS BAS	18 12	HIGH PRIORITY SIGNIFICANT	POOR HEALTHY	REMOVE REMOVE	18	0	0
<b>421</b> 420	BAS	18	HIGH PRIORITY HIGH PRIORITY	POOR	REMOVE / REMOVED / NON-EXEMPT	18	18	0
452 451 446	OAK OAK	12 10 14	HIGH PRIORITY HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE REMOVE	12 10 14	0 0	0 0
445 431 765	OAK OAK	20 16 18	HIGH PRIORITY HIGH PRIORITY	HEALTHY POOR HEALTHY	REMOVE REMOVE	20 16 18	0 0	0 0
766 760	OAK OAK	22 14	HIGH PRIORITY HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMAIN REMAIN	0 0	0	0 0
758 759 436	BAS OAK OAK	10 16 16	SIGNIFICANT HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0 0	0 0
432	OAK OAK	18	HIGH PRIORITY SIGNIFICANT	HEALTHY	REMOVE /	18	0	0
447 448	OAK OAK	18	HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	NON-EXEMPT REMAIN REMAIN	0 0	0	0
434 433 437	OAK OAK	12 10 10	SIGNIFICANT SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0	0 0
435 476	OAK BAS	14 8	SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMAIN REMAIN	0	0	0
439 440 438	OAK OAK	10 12 16	SIGNIFICANT SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0	0 0
443 576	OAK OAK	10	SIGNIFICANT SIGNIFICANT	HEALTHY	REMAIN REMAIN	0	0	0
575 574 578	OAK OAK	12 18 12	SIGNIFICANT HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMAIN REMAIN	0 0	0 0	0 0
577 579 444	OAK OAK	12 12 8	SIGNIFICANT SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0 0	0 0
442 441	OAK OAK	18 16	HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY	REMAIN REMAIN	0 0	0	0
584 585 586	OAK OAK	16 16 18	HIGH PRIORITY HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0	0 0
449 580	OAK	20	HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMAIN	20	0	0
581 582 583	OAK OAK	14 8 10	SIGNIFICANT SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY POOR	REMAIN REMAIN	0 0	0 0	0 0
587 591 450	OAK OAK	14 20 12	SIGNIFICANT HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMOVE	0 0 12	0 0 0	0 0
569 571	OAK OAK	18 20	HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY	REMAIN REMAIN	0 0	0	0
564 565 566	OAK OAK	20 16 26	HIGH PRIORITY HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0	0 0
567 588	OAK OAK	14 24	SIGNIFICANT HIGH PRIORITY	HEALTHY	REMAIN REMAIN	0	0	0
568 573 477	OAK OAK BAS	22 12 8	HIGH PRIORITY SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMAIN REMAIN	0 0	0 0	0 0
572 570 589	BAS OAK OAK	14 16 14	SIGNIFICANT HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0 0	0 0
593 594	OAK OAK	14 14 16	SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY	REMAIN REMAIN	0 0	0	0
592 590 562	OAK OAK BAS	16 16 8	HIGH PRIORITY HIGH PRIORITY SIGNIFICANT	HEALTHY HEALTHY HEALTHY	REMOVE REMAIN REMAIN	16 0 0	0 0	0 0
563 558	BAS ELM	14	SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMAIN / EXEMPT	0 0	0	0
559 560	BAS BAS	8 14	SIGNIFICANT SIGNIFICANT	POOR POOR	REMAIN REMAIN	0	0	0
561 457 658	DAK OAK SPR	18 12	SIGNIFICANT COMMON	HEALTHY HEALTHY POOR	REMAIN REMAIN REMOVE	0 0 12	0 0	0 0
657 660	SPR COT	5 30	COMMON SIGNIFICANT	POOR HEALTHY	REMOVE REMOVE	5 30	0	0
659 661 676	SPR CED LOC	6 8	SIGNIFICANT SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMOVE REMOVE /	6 8	0	0 0
675	LOC	14	SIGNIFICANT	HEALTHY	EXEMPT REMOVE / EXEMPT	14	0	0
478 663 674	MAP SPR OAK	8 9 14	SIGNIFICANT SIGNIFICANT HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMOVE REMOVE	8 9 14	0 0 0	0 0
673 671	OAK OAK	14 12	HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	14 12	0	0
672 670 669	OAK OAK	14 14 14	HIGH PRIORITY HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMOVE REMOVE REMOVE	14 14 14	0 0 0	0 0
664 665	OAK OAK	14 12	HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY	REMOVE REMOVE	14 12	0	0
666	BAS	12	HIGH PRIORITY	HEALTHY	REMOVE	12	0	0

Sept	696 698 697 695 204 692 203	BAS BAS BAS BAS	12 12 20 14	HIGH PRIORITY HIGH PRIORITY HIGH PRIORITY	HEALTHY HEALTHY HEALTHY	REMAIN REMAIN REMAIN	0 0	0 0 0	0 0 0 0
Sept	697 695 204 692 203 691	BAS BAS	20 14	HIGH PRIORITY	HEALTHY	REMAIN	0	0	0
2014	204 692 203 691			HIGH PRIORITY	HEALTHY	REMAIN	0		
	692 203 691	APP	8				<b>⊢</b>	0	0
DOCK	203 691			SIGNIFICANT	HEALTHY	EXEMPT	0	0	0
DOT   DOT	691	ELM	10	SIGNIFICANT	HEALTHY	,	0	0	0
SPANS		ELM	8	HIGH PRIORITY	HEALTHY		0	0	0
BORD			_			1	<del></del>		0
SSSS						<del> </del>	<del></del>		0
Sept						<b> </b>			0
BOOK   10   SIGNIFICANT   POOR   BEADINE   0   0						<b> </b>			0
SES	201	ВОХ	10	SIGNIFICANT	POOR		0	0	0
SSA						<b>!</b>			0
678						EXEMPT			0
8684   C.E.D.   10   SIGNIFICANT   NON-EXEMPT   34   0   0   0   0   0   0   0   0   0						<b>!</b>			0
BOAL   SPR   10   HIGH PRIORITY   HEALTHY   BENAMN   0   0   0   0   0   0   0   0   0	678	OAK	14	HIGH PRIORITY	HEALTHY		14	0	2
BOS						<b>!</b>	_		0
BOOK   SPR   10   COMMON   POOR   BEMAIN   0   0   0   0   0   0   0   0   0						<b>†</b>			0
BEMAIN   O			_			<del> </del>			0
620	608	SPR	10	HIGH PRIORITY	HEALTHY	REMAIN	0	0	0
								-	0
601   OAK   16									0
			_			<b>+</b>			0
616 OAK									0
615   OAK   16   HIGH PRIORITY   HEALTHY   REMOVE   16   16   16   16   16   16   16   1						NON-EXEMPT			0
633   MAP   20   SIGNIFICANT   HEALTHY   REMOVE   20   0   0   0   0   0   0   0   0						NON-EXEMPT			0
634						NON-EXEMPT			0
639									0
640									0
G11	640	OAK	18	HIGH PRIORITY	HEALTHY	REMOVE	18	0	0
ASH   14   SIGNIFICANT   HEALTHY   REMAIN   0   0   0   0   0   0   0   0   0						<del> </del>			0
617   MAP   24   SIGNIFICANT   HEALTHY   REMOVE   24   0									0
618	613	ASH	10	SIGNIFICANT	DEAD	REMAIN	0	0	0
619	617	MAP	24	SIGNIFICANT	HEALTHY	REMOVE	24	0	0
620									0
G30	620	OAK		HIGH PRIORITY					0
626   MAP   12   HIGH PRIORITY   HEALTHY   REMOVE   12   0			_			<b>+</b>	_		0
622	626	MAP	12	HIGH PRIORITY	HEALTHY	REMOVE			0
624   OAK   14   HIGH PRIORITY   HEALTHY   REMAIN   0   0   0   0   0   0   0   0   0						<u> </u>			0
G25									0
MAP   12   SIGNIFICANT   POOR   REMOVED   10   0   0   0   0   0   0   0   0									0
Correction	631	MAP	12	SIGNIFICANT	HEALTHY		12	0	2
G37	600	APP	10	SIGNIFICANT	POOR	,	10	0	2
G42   MAP   10   SIGNIFICANT   HEALTHY   REMOVE   10   0   0   0   0   0   0   0   0			_						0
SACTOR   STATE   STA			_			REMOVE	_		0
G46	644	OAK	18	HIGH PRIORITY	HEALTHY		18		0
713						<b>-</b>			0
Tool	647	OAK	22	HIGH PRIORITY	HEALTHY		22	0	0
702         OAK         16         HIGH PRIORITY         POOR         NON-EXEMPT         16         16           704         BAS         12         SIGNIFICANT         HEALTHY         REMOVE         12         0           703         BAS         12         SIGNIFICANT         HEALTHY         REMOVE         12         0           466         BAS         8         SIGNIFICANT         HEALTHY         REMOVE         20         0           705         ASH         20         HIGH PRIORITY         HEALTHY         REMOVE         20         0           700         BAS         20         HIGH PRIORITY         HEALTHY         REMOVE / EXEMPT         14         0           706         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           707         ASH         12         SIGNIFICANT         POOR         REMOVE / EXEMPT         12         0           709         ASH         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         12         0           711         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           <	713	ASH	18	HIGH PRIORITY	POOR	EXEMPT	18	0	0
703         BAS         12         SIGNIFICANT         HEALTHY         REMOVE         12         0           466         BAS         8         SIGNIFICANT         HEALTHY         REMOVE         8         0           705         ASH         20         HIGH PRIORITY         HEALTHY         REMOVE         20         0           700         BAS         20         HIGH PRIORITY         HEALTHY         REMOVE         20         0           706         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           707         ASH         12         SIGNIFICANT         POOR         REMOVE / EXEMPT         12         0           709         ASH         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           711         ASH         12         SIGNIFICANT         POOR         REMOVE / EXEMPT         12         0           710         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           714         BOX         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0	702	OAK	16	HIGH PRIORITY	POOR	NON-EXEMPT	16	16	0
705         ASH         20         HIGH PRIORITY         HEALTHY         REMOVE         20         0           700         BAS         20         HIGH PRIORITY         HEALTHY         REMOVE         20         0           706         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           707         ASH         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           709         ASH         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           711         ASH         12         SIGNIFICANT         POOR         REMOVE / EXEMPT         12         0           710         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           714         BOX         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           716         BAS         24         HIGH PRIORITY         POOR         REMOVE / EXEMPT         12         0           718         BAS         16         HIGH PRIORITY         HEALTHY         REMOVE / EXEMPT         10         0						<del> </del>	_		0
700         BAS         20         HIGH PRIORITY         HEALTHY         REMOVE / EXEMPT         20         0           706         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           707         ASH         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           709         ASH         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           711         ASH         12         SIGNIFICANT         POOR         REMOVE / EXEMPT         12         0           710         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           714         BOX         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           716         BAS         24         HIGH PRIORITY         POOR         REMOVE / EXEMPT         12         0           718         BAS         16         HIGH PRIORITY         HEALTHY         REMOVE / EXEMPT         10         0           720         BLA         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         <				<u> </u>			_		0
706									0
707         ASH         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           709         ASH         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           711         ASH         12         SIGNIFICANT         POOR         REMOVE / EXEMPT         12         0           710         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           714         BOX         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           716         BAS         24         HIGH PRIORITY         POOR         REMOVE         24         0           718         BAS         16         HIGH PRIORITY         HEALTHY         REMOVE         16         0           720         BLA         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           722         BAS         18         HIGH PRIORITY         HEALTHY         REMOVE         18         0	706	ASH	14	SIGNIFICANT	HEALTHY	'	14	0	0
709         ASH         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           711         ASH         12         SIGNIFICANT         POOR         REMOVE / EXEMPT         12         0           710         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           714         BOX         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           716         BAS         24         HIGH PRIORITY         POOR         REMOVE / EXEMPT         16         0           718         BAS         16         HIGH PRIORITY         HEALTHY         REMOVE / EXEMPT         10         0           720         BLA         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           722         BAS         18         HIGH PRIORITY         HEALTHY         REMOVE         18         0	707	ASH	12	SIGNIFICANT	HEALTHY	REMOVE /	12	0	0
711	709	ASH	10	SIGNIFICANT	POOR	REMOVE /	10	0	0
710         ASH         14         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         14         0           714         BOX         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           716         BAS         24         HIGH PRIORITY         POOR         REMOVE         24         0           718         BAS         16         HIGH PRIORITY         HEALTHY         REMOVE         16         0           720         BLA         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           722         BAS         18         HIGH PRIORITY         HEALTHY         REMOVE         18         0	711	ASH	12	SIGNIFICANT	POOR	REMOVE /	12	0	0
714         BOX         12         SIGNIFICANT         HEALTHY         REMOVE / EXEMPT         12         0           716         BAS         24         HIGH PRIORITY         POOR         REMOVE         24         0           718         BAS         16         HIGH PRIORITY         HEALTHY         REMOVE         16         0           720         BLA         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           722         BAS         18         HIGH PRIORITY         HEALTHY         REMOVE         18         0	710	ASH	14	SIGNIFICANT	HEALTHY	REMOVE /	14	0	0
716   BAS   24   HIGH PRIORITY   POOR   REMOVE   24   0     718   BAS   16   HIGH PRIORITY   HEALTHY   REMOVE   16   0     720   BLA   10   SIGNIFICANT   POOR   REMOVE / EXEMPT   10   0     722   BAS   18   HIGH PRIORITY   HEALTHY   REMOVE   18   0	714	ВОХ	12	SIGNIFICANT	HEALTHY	REMOVE /	12	0	0
720         BLA         10         SIGNIFICANT         POOR         REMOVE / EXEMPT         10         0           722         BAS         18         HIGH PRIORITY         HEALTHY         REMOVE         18         0						REMOVE		0	0
720 BLA 10 SIGNIFICANT POOR EXEMPT 10 0  722 BAS 18 HIGH PRIORITY HEALTHY REMOVE 18 0						<u> </u>		-	0
						EXEMPT			0
	723	BAS	12	HIGH PRIORITY	HEALTHY	REMOVE	12	0	0
724 BAS 14 HIGH PRIORITY HEALTHY REMOVE 14 0									0
469 ASH 10 SIGNIFICANT HEALTHY EXEMPT 10 0  467 OAK 34 HIGH PRIORITY HEALTHY REMOVE 34 0						EXEMPT			0
468 ASH 14 SIGNIFICANT HEALTHY REMAIN/ 0 0	1					REMAIN /			0
719 ASH 15 SIGNIFICANT HEALTHY REMOVE/ 12 0						REMOVE /			0
708 ASH 12 SIGNIFICANT HEALTHY REMOVE / 12 0						REMOVE /			0
0 PIN 8 COMMON HEALTHY REMAIN 0 0									0
0 PIN 8 COMMON HEALTHY REMAIN 0 0	0	PIN	8	COMMON	HEALTHY	REMAIN	0	0	0
O ASH 10 SIGNIFICANT HEALTHY EXEMPT 0 0						EXEMPT			0
0         MAP         36         HIGH PRIORITY         HEALTHY         REMAIN         0         0           0         ASH         10         SIGNIFICANT         HEALTHY         REMAIN / RE						REMAIN /			0
0 MAP 26 HIGH PRIORITY HEALTHY REMAIN 0 0						<b>†</b>			0
0 COT 26 HIGH PRIORITY HEALTHY REMAIN 0 0	0	COT	26	HIGH PRIORITY	HEALTHY	REMAIN	0	0	0
0 COT 10 SIGNIFICANT HEALTHY REMAIN 0 0	0	COT	10	SIGNIFICANT SIGNIFICANT	HEALTHY HEALTHY	REMAIN REMAIN	0	0	0
	0	COT	16	HIGH PRIORITY	HEALTHY	REMAIN	0	0	0
0         COT         10         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         16         HIGH PRIORITY         HEALTHY         REMAIN         0         0	0	COT	12 12	SIGNIFICANT SIGNIFICANT	HEALTHY	REMAIN REMAIN	0	0	0
0         COT         10         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         16         HIGH PRIORITY         HEALTHY         REMAIN         0         0           0         COT         12         SIGNIFICANT         HEALTHY         REMAIN         0         0		COT	24	HIGH PRIORITY	HEALTHY	REMAIN /	0	0	0
0         COT         10         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         16         HIGH PRIORITY         HEALTHY         REMAIN         0         0           0         COT         12         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         12         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         24         HIGH PRIORITY         HEALTHY         REMAIN         0         0				· ···CII DDIODITY	THE ALTERIA			0	
0         COT         10         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         16         HIGH PRIORITY         HEALTHY         REMAIN         0         0           0         COT         12         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         12         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         24         HIGH PRIORITY         HEALTHY         REMAIN         0         0           0         ELM         26         HIGH PRIORITY         HEALTHY         REMAIN / EXEMPT         0         0	0					EXEMPT	-		0
0         COT         10         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         16         HIGH PRIORITY         HEALTHY         REMAIN         0         0           0         COT         12         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         12         SIGNIFICANT         HEALTHY         REMAIN         0         0           0         COT         24         HIGH PRIORITY         HEALTHY         REMAIN         0         0           0         FIM         26         HIGH PRIORITY         HEALTHY         REMAIN /         0         0	0	ASH	14	SIGNIFICANT	HEALTHY	EXEMPT REMAIN / EXEMPT	0	0	0

#### TREE LEGEND

APP	APPLE
ASH	ASH
BAS	BASSWOOD
BLA	BLACK CHERRY
вох	BOXELDER
CED	CEDAR
COT	COTTONWOOD
ELM	ELM
LOC	LOCUS
MAP	MAPLE
OAK	OAK
PIN	PINE
SPR	SPRUCE
SVR MAP	SILVER MAPLE







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#### WOODHAVEN AT MINNETONKA

2424-2440 PLYMOUTH RD MINNETONKA, MN 55305

AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: <u>CURT H. CLAEYS, PLA</u>

OT FO	R CONS	STRUCTIC
•	OF TC	OT FOR CONS

DATE: <u>10/08/2021</u> LICENSE NO. <u>45613</u>

REVISION LOG

NO.	DATE	DESCRIPTION OF REVISIONS
_		

#### CITY SUBMITTAL 10/08/2021

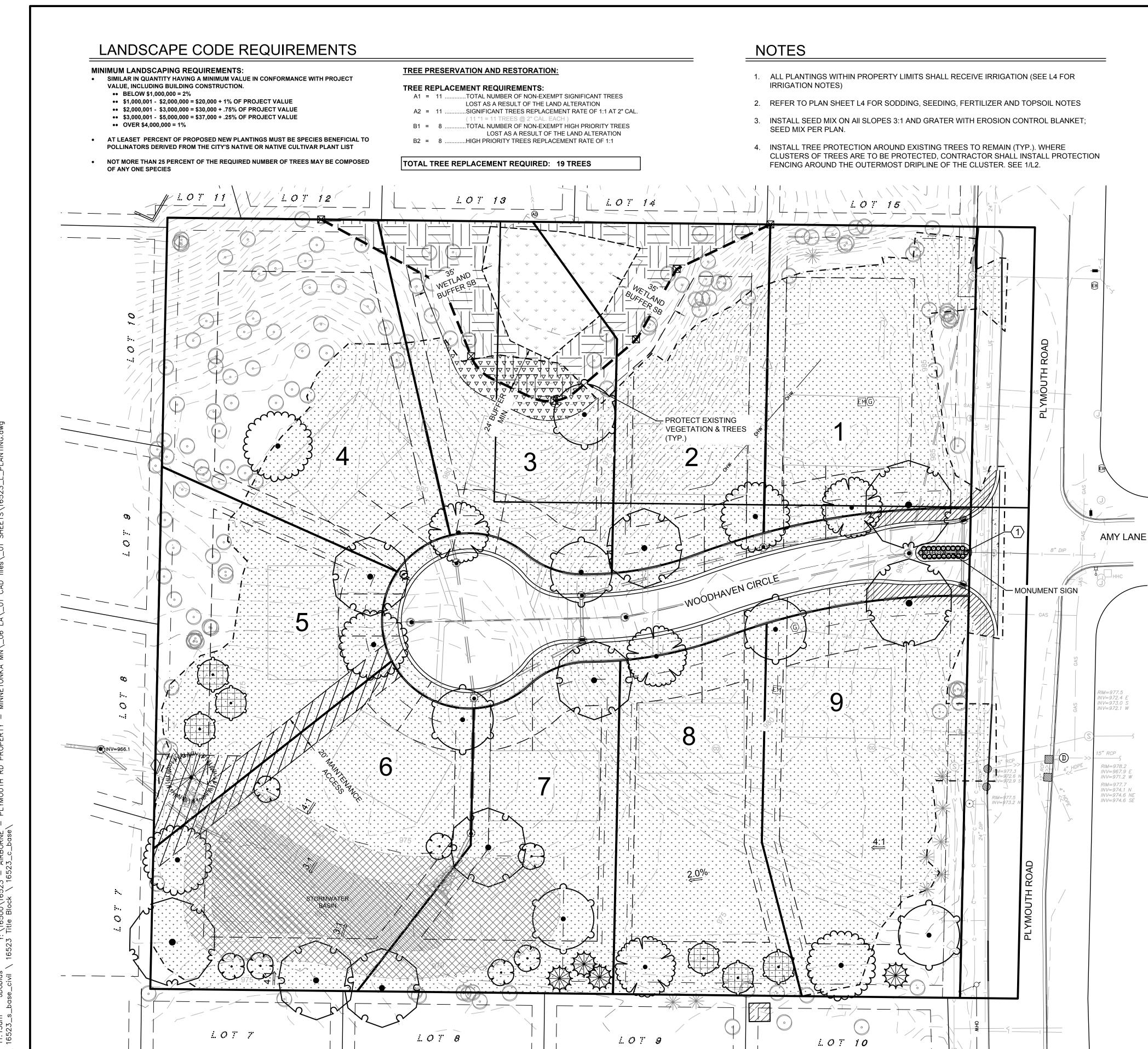
DESIGNED: DRAWN: CHECKED BY: CHC CHC

DRAWING TITLE

TREE PRESERVATION NOTES

DRAWING NO.

PLOTTED: COMM. NO. 16523



PLANTING PLAN

SCALE: 1" = 30' (22" x 34" PAPER SIZE)

#### LEGEND

PROPERTY LIMITS CONSTRUCTION LIMITS

NEW SOD w/IRRIGATION

MESIC PRAIRIE MIX MN 35-241

ZONE 4 - FLOODPLAIN ZONE SEED MIX PER MINNESOTA STORMWATER MANUAL VARIETY SHALL BE AN EQUAL PERCENTAGE OF: BOTTLEBRUSH SEDGE, VIRGINIA WILD RYE, RICE-CUT GRASS, SWITCHGRASS, GREEN BULRUSH, PRAIRIE CORD GRASS

2" PLUGS PLANTED AT 24" O.C. VARIETY SHALL BE AN EQUAL PERCENTAGE OF: BOTTLEBRUSH SEDGE, VIRGINIA WILD RYE, RICE-CUT GRASS, SWITCHGRASS, GREEN BULRUSH, PRAIRIE CORD GRASS

RIPARIAN SOUTH AND WEST MIX - MN 34-261 - PER MNDOT RECOMMENDATIONS.

3" DP SHREDDED HARDWOOD MULCH w/OUT FABRIC

COMMERCIAL GRADE POLY **EDGER** 

#### PLANTING SCHEDULE

PLANTING SCHEDULE						
CONIFEROUS TREES	CODE	<u>QTY</u>	COMMON / BOTANICAL NAME	CONT	<u>HT</u>	
	JVE	5	EASTERN RED CEDAR JUNIPERUS VIRGINIANA	B&B	6` HT.	
THE PART OF THE PA	LLA	1	AMERICAN LARCH LARIX LARICINA	В&В	6` HT.	
	PGD	4	BLACK HILLS WHITE SPRUCE PICEA GLAUCA 'DENSATA'	B&B	6` HT.	
CONIFEROL	JS TOTAL:	10				
DECIDUOUS TREES	CODE	QTY	COMMON / BOTANICAL NAME	CONT	CAL	
	AGA	7	AUTUMN BRILLIANCE SERVICEBERRY AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	B&B	2" CAL.	
	COC	5	COMMON HACKBERRY CELTIS OCCIDENTALIS	В&В	2" CAL.	
	GTS	4	SKYLINE HONEY LOCUST GLEDITSIA TRIACANTHOS 'SKYLINE'	B&B	2" CAL.	
$\bigcirc$	GDO	6	KENTUCKY COFFEETREE GYMNOCLADUS DIOICA	B&B	2" CAL.	
	QBI	3	SWAMP WHITE OAK QUERCUS BICOLOR	B&B	2" CAL.	
	TAR	6	REDMOND AMERICAN LINDEN TILIA AMERICANA 'REDMOND'	B&B	2" CAL.	
DECIDUOL	JS TOTAL:	31				
ORNAMENTAL GRASS	CODE	QTY	COMMON / BOTANICAL NAME	CONT	SIZE	
	SH	20	PRAIRIE DROPSEED SPOROBOLUS HETEROLEPIS	CONT.	3 GAL.	
PERENNIALS	CODE	QTY	COMMON / BOTANICAL NAME	CONT	SIZE	
<b>(.)</b>	VS	5	HOARY VERVAIN VERBENA STRICTA	CONT.	3 GAL.	



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PRINT NAME: CURT H. CLAEYS, PLA

SIGNATURE: NOT FOR CONSTRUCTION

DATE: <u>10/08/2021</u> LICENSE NO. <u>45613</u>

**REVISION LOG** 

DESCRIPTION OF REVISIONS

CITY SUBMITTAL

10/08/2021 CHECKED BY: DESIGNED:

DRAWING TITLE

PLANTING PLAN

DRAWING NO.

- 2. NO PLANTING WILL BE INSTALLED UNTIL ALL 12. LANDSCAPE CONTRACTOR SHALL ENSURE GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN IMMEDIATE AREA.
- 3. IT IS THE RESPONSIBILITY OF THE OWNER & CONTRACTOR TO IDENTIFY ALL UNDERGROUND CABLES, CONDUITS, WIRES, ETC., ON THE PROPERTY.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETE MAINTENANCE OF THE PLANT MATERIAL (WATERING, SPRAYING, FERTILIZING, MOWING, ETC.) UNTIL THE WORK HAS BEEN ACCEPTED, BY THE OWNER.
- 5. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN THE 14. BREATHABLE SYNTHETIC FABRIC TREE PLANT SCHEDULE, THE NUMBER OF PLANTS SHOWN ON THE PLAN WILL TAKE PRECEDENCE.
- 6. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER A MINIMUM OF 6 MONTHS.
- 7. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMEN.
- REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.
- **GUARANTEE NEW PLANT MATERIAL** THROUGH ONE CALENDAR YEAR. DECIDUOUS TREES WILL BE GUARANTEED FOR TWO CALENDAR YEARS FROM TIME OF PROVISIONAL ACCEPTANCE.
- 10. ALL PROPOSED PLANTS SHALL BE LOCATED CAREFULLY AS SHOWN ON THE PLANS AND SHALL BE APPROVED BY OWNERS REPRESENTATIVE BEFORE THEY ARE INSTALLED.

PREVAILING

**HARDWOOD** 

MULCH

- MOVED MATERIAL USING APPROPRIATE SIZE TREE SPADE FOR B & B WITH OWNERS REPRESENTATIVE APPROVAL.
- THAT NEW TREES MOVED ONTO THE SITE ARE DUG FROM SIMILAR SITES WITH SIMILAR SOILS TO THE SOILS OF THIS PROJECT (HEAVY TO HEAVY, LIGHT TO LIGHT. HEAVY TO LIGHT SOILS).
- 13. LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE OWNER WITH MAINTENANCE INFORMATION DURING GUARANTEE PERIOD RELATING TO WATERING, FEEDING, PRUNING, PEST CONTROL, AND RELATED ITEMS. THIS WILL BE PREPARED AND DELIVERED TO OWNER AFTER PROVISIONAL INSPECTION APPROVAL HAS BEEN GIVEN BY OWNERS REPRESENTATIVE.
- WRAP: WHITE IN COLOR, IN 3 INCH WIDE ROLLS. MATERIAL SHALL BE SPECIFICALLY MANUFACTURED FOR TREE WRAPPING. TREE WRAP SHALL BE SECURED TO THE TRUNK USING BIO-DEGRADABLE TAPE SUITABLE FOR NURSERY USE AND WHICH IS EXPECTED TO DEGRADE IN SUNLIGHT IN LESS THAN 2 YEARS AFTER INSTALLATION. WRAP ALL TREES, EXCEPT HACKBERRY TREE SHALL BE PROTECTED PRIOR TO 12/1.
- 15. POLY EDGER UNLESS SPECIFIED OTHERWISE, SHALL BE BLACK VINYL STYLE EDGER.
- 16. ALL PLANTING AREAS SPECIFIED SHALL RECEIVE 3" DEPTH 1"TO 1-1/2" SHREDDED HARDWOOD MULCH BE INSTALLED WITHOUT LANDSCAPED FABRIC AS INDICATED ON THE PANS & DETAILS.
- 17. ALL TREES PLANTED INDEPENDENTLY OF SPECIFIED BEDS SHALL RECEIVE 3" DEEP SHREDDED HARDWOOD MULCH WITHOUT FABRIC.

TREE TIE SECURED TO **DUCKBILL ANCHOR WITH** TURNBUCKLE. SECURE TO TREE WITH ANTI-CHAFFING

MATERIAL. ALLOW FOR

3" DP. SHREDDED HARDWOOD MULCH

PLANTINGS AREAS AND UNDER TREES

SHALL BE USED IN ALL LANDSCAPE

ISOLATED FROM PLANTING AREAS

- CENTER TREE IN HOLE, UPRIGHT

SINGLE STRAIGHT LEADER

- 3" DEPTH HARDWOOD MULCH

TREE TIE SECURED TO DUCKBILL

TO TREE WITH ANTI-CHAFFING

EDGE OF EARTH SAUCER

— 6' MIN. DIA. EARTH SAUCER

EDGE IN ALL LAWN AREAS)

 REMOVE BURLAP, TWINE, ROPE AND WIRE FROM

TOP HALF OF ROOTBALL

UNDISTURBED OR COMPACTED SOIL

- FINISHED GRADE

MOUND MIN. 6"

OF TREE.

ANCHOR WITH TURNBUCKLE. SECURE

MATERIAL. ALLOW FOR MOVEMENT

- 3" HEIGHT TAMPED WATER BASIN AT

LAWN OR PLANTING BED EDGE (SPADE)

UNLESS IDENTIFIED OTHERWISE.

MOVEMENT OF TREE.

SOUTHEAS? \ PREVAILING

WINDS

- 18. ALL PLANTINGS SHALL RECEIVE FERTILIZER AND APPLIED AT THE RATE INDICATED BY THE MANUFACTURER. FERTILIZER SHALL BE GENERAL PURPOSE 10-10-10.
- 19. DECIDUOUS SHRUBS SHALL HAVE MINIMUM OF FIVE (5) CANES AT SPECIFIED HEIGHT NOTED IN PLANT SCHEDULE.
- 20. IF THE CONTRACTOR FEELS AN ERROR HAS BEEN MADE REGARDING SPACING OR HARDINESS OF A SPECIES OF PLANT MATERIAL INDICATED ON THE PLAN. NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO THE INSTALLATION OF PLANT MATERIAL.
- 21. ALL NEWLY INSTALLED PLANT MATERIAL SHALL BE PLANTED IN WELL-DRAINED AREAS. CONTRACTOR SHALL AVOID INSTALLING ANY PLANT MATERIAL IN DRAINAGE SWALES OR WET & POORLY DRAINED AREAS.
- 22. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ALL TREE STAKES, GUYS, STRAPS AND TRUNK PROTECTION MEASURES FOLLOWING THE COMPLETION OF THE WARRANTEE PERIOD OR AS DIRECTED BY THE OWNER.
- 23. THE PRACTICE OF STAKING SHOULD NOT ALLOW NAILS, SCREWS, WIRES, ETC. TO PENETRATE THE OUTER SURFACE OF THE TREES.
- 24. THE CONTRACTOR SHALL MEET WITH THE OWNER ON SITE WHEN THEY FEEL THE PROJECT IS COMPLETE ACCORDING TO THE CONTRACT DOCUMENTS. IF ALL WORK IS SATISFACTORY AND COMPLETE ACCORDING TO THE CONDITIONS OF THE CONTRACT DOCUMENTS, THEN THE OWNER MUST DECLARE THE PROJECT COMPLETE. THIS DECLARATION WILL CONSTITUTE AS THE BEGINNING OF THE WARRANTEE PERIOD FOR ALL PLANT MATERIAL. THE OWNER SHALL PROVIDE A LETTER WITH SIGNATURE STATING THE DATE OF ACCEPTANCE.

1. PRIOR TO CONSTRUCTION, VERIFY WITH THE GENERAL CONTRACTOR AND ALL LOCAL UTILITY

COMPANIES TO LOCATE EXACT LOCATIONS OF

IRRIGATION NOTES

UNDERGROUND UTILITIES.

INSTALLATION.

- 2. THE IRRIGATION SHALL BE DESIGN/BUILD SYSTEM BY THE CONTRACTOR. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN IRRIGATION LAYOUT PLAN AND SPECIFICATIONS AS PART OF THE SCOPE OF WORK WHEN BIDDING. THESE SHALL BE APPROVED BY THE OWNER PRIOR TO ORDER AND/OR
- 3. VALVE AND CIRCUITS SHALL BE SEPARATED BASED ON WATER USE, SO THAT TURF AREAS ARE WATERED SEPARATELY FROM SHRUB AND GROUND COVER AREAS. IRRIGATION HEADS IN TURF AREAS GROUND COVER AREAS. IT IS RECOMMENDED THAT FULL SUN AND SHADY AREAS TO BE VALVED SEPARATELY AS WELL AS HIGH RUN-OFF AND LOW 12. DO NOT TRENCH THROUGH THE ROOT BALLS OF RUN-OFF AREAS TO BE VALVED SEPARATELY.
- 4. CONFIRM LIMITS OF IRRIGATION, EXISTING AND FUTURE HARDSCAPE AND BUILDING LOCATIONS PRIOR TO THE DESIGN OF THE IRRIGATION SYSTEM.
- 5. CONTRACTOR SHALL VERIFY WATER SOURCE LOCATION AND PRESSURE AND SUPPLY A SYSTEM THAT PROVIDES FULL AND COMPLETE COVERAGE TO ALL AREAS TO BE IRRIGATED.
- 6. SYSTEM SHOULD BE DESIGNED TO OPERATE AT UP TO 300 GPM @ 90 PSI TO COMPLETE WATER SCHEDULES WITHIN 12-HOURS MAXIMUM.
- 7. RAIN SENSORS AND OTHER WATER SAVING TECHNOLOGIES SHALL BE INCLUDED WITHIN THE IRRIGATION DESIGN.
- 8. PROVIDE THE OWNER WITH AN OPERATING SCHEDULE THAT WORKS WITH THE APPROVED LAYOUT PLAN AND IDENTIFY ANY FIELD ADJUSTMENTS PRIOR TO PROJECT COMPLETION.

- 9. AVOID OVER-SPRAY ONTO ROADS, SIDEWALKS. SIGNS AND PARKING AREAS. SPRINKLER ARCS SHALL BE DETERMINED ON SITE BY THE IRRIGATION INSTALLER TO PROVIDE THE MAXIMUM COVERAGE POSSIBLE. CAREFULLY ADJUST THE ARCS AND RADIUS OF EACH SPRINKLER TO PROVIDE HEAD-TO-HEAD COVERAGE.
- 10. WITHIN EXTREME SLOPED AREAS: 10.1. INSTALL STATIONS SEPARATELY FOR TOP AND **BOTTOM OF SLOPED AREAS**
- 10.2. INSTALL LATERAL PIPES PARALLEL TO SLOPE 10.3. IF SLOPE IS TOO EXTREME FOR MACHINERY INSTALL LATERAL PIPES SAFELY AND TEE-FEED 21. CONNECT ALL ELECTRICAL WIRING IN ACCORDANCE INDIVIDUAL SPRINKLERS VIA DOWNHILL PIPING PERPENDICULAR TO FEED LINE
- SHALL BE VALVED SPEARATELY FROM SHRUB AMD 11. LOCATE VALVE BOXES AWAY FROM ROAD/CURB SO THEY ARE LESS VISUAL WHERE APPLICABLE.
  - **NEW PLANTINGS.**
  - 13. MAINLINE PIPING BENEATH TRAFFIC AREAS SHALL BE INSTALLED WITH A MINIMUM EARTH COVER OF 30-INCHES FROM BOTTOM OF ROAD SUB-GRADE AND CONTAIN SLEEVES NOT LESS THAN TWO NOMINAL DIMENSIONS GREATER THAT THE PIPE PASSING THROUGH.
  - 14. IRRIGATION INSTALLER SHALL FURNISH AND WALKS AND DRIVEWAYS WHERE NECESSARY
  - 15. TOP OF MAINLINES SHALL BE AT LEAST 30-INCHES BELOW GRADE IN TURF AREAS.
  - 16. TOP OF LATERAL LINES SHALL BE AT LEAST 18-INCHES BELOW GRADE.
  - 17. MAINLINE PRESSURE PIPE FITTINGS 3-INCHES AND LARGER SHALL BE PUSH ON GASKET JOINED AND SHALL HAVE MECHANICAL JOINT RESTRAINTS. MAINLINE PRESSURE PIPE FITTINGS 2.5-INCHES AND 22. SCHEDULE AND PROGRAM CONTROLLER AND SMALLER SHALL BE GLUED AND SHALL HAVE CONCRETE THRUST BLOCKS AT FITTINGS THAT

- COMPRISE CHANGE IN DIRECTION 18. OTHERS SHALL FURNISH, INSTALL AND BRING 24-INCHES ABOVE GRADE A MUNICIPAL POTABLE STUB FOR IRRGATION, COORDINATE WITH GENERAL CONTRACTOR.
- 19. INSTALLER IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE BACKFLOW PREVENTOR, WATER METER AND BOOSTER PUMP, IF APPLICABLE.
- 20. IRRIGATION CONTROL WIRE SHALL BE DIGITAL TWO-WIRE, UL LISTED FOR DIRECT BURIAL.
- WITH THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES INCLUDING:
- 21.1. ALL LOW VOLTAGE IRRIGATION CONTROL WIRE SHALL BE INSTALLED WITH THE MAINLINE PIPE WHERE POSSIBLE
- 21.2. DO NOT LOOP THE LOW VOLTAGE IRRIGATION CONTROL WIRE PATH. 21.3. SNAKE WIRE AT BOTTOM OF TRENCH BENEATH
- MAINLINE. 21.4. PROVIDE 18-INCH OF SLACK CONTROL WIRE AT
- ALL CHANGES IN DIRECTION. 21.5. PROVIDE 24-INCH OF SLACK CONTROL WIRE AT EACH REMOTE CONTROL VALVE COILED INSIDE
- VALVE BOX. 21.6. ALL WIRE SPLICES SHALL BE WATERTIGHT CONNECTORS AND CONTAINED IN VALVE BOX. INSTALL SLEEVE MATERIAL UNDER ALL ROADWAYS, 21.7. ALL WIRING BENEATH HARDSCAPES SHALL BE
  - CONTAINED IN SLEEVING, SEPARATE FROM PIPING. ELECTRICAL SLEEVES ARE TO BE SIZED APPROPRIATELY FOR EASE OF WIRE INSTALLATION AND REPAIR. 21.8. ALL WIRING SHALL BE INDENTIFIED AT EACH

END TO PROVIDE INDICATION AS TO WHICH

- LOCATION THE WIRE IS CONNECTED. 21.9. GROUNDING PER MANUFACTURER'S RECOMMENDATION OR LOCAL ELECTRICAL CODE.
- VALVES FOR APPROPRIATE LANDSCAPE WATER REQUIREMENTS.

#### GENERAL SODDING, **SEEDING & TOPSOIL**

- 1. SOD SHALL BE HIGHLAND SOD, 30" X 100' ROLLS PREFERRED WHERE APPLICABLE, TO BE LAID PARALLEL TO THE CONTOURS AND HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR DRAINAGE SWALES, THE SOD SHALL BE STAKED INTO THE GROUND. SCARIFY THE EXISTING GRADES WITH FIELD CULTIVATOR TO A MIN. DEPTH OF 12" PRIOR TO PLACING OF TOPSOIL AND FINISH GRADING FOR SOD. IMMEDIATELY PRIOR TO PLACING SOD, CONTRACTOR SHALL APPLY 10-6-4 FERTILIZER AT THE RATE OF 10 POUNDS PER 1000 SQ. FT.
- 2. PLANTING SOIL REQUIRED: MIXTURE TO INCLUDE 45% TOPSOIL. 45% PEAT OR MANURE AND 10% SAND. ALL TREE, SHRUB AND PERENNIAL PLANTINGS SHALL RECEIVE 8" DEPTH OF PLANTING SOIL MIXTURE. ALL SODDED AREAS TO RECEIVE 4" DEPTH OF PLANTING SOIL MIXTURE. ALL SEEDED AREAS TO RECEIVE 2" DEPTH OF PLANTING SOIL MIXTURE.
- 3. ALL SODDED AREAS SHALL HAVE 6" MINIMUM DEPTH OF TOPSOIL
- 4. ALL AREAS SPECIFIED AS MESIC PRAIRIE MIX TO BE SEEDED WITH MN DOT 35-241 MESIC PRAIRIE GENERAL MIX. BROAD CAST AT A RATE OF 37 LBS./AC. (INCLUDES COVER CROP). EROSION CONTROL MEASURES AS REQUIRED PER CIVIL.
- 5. ALL AREAS SPECIFIED AS 'NATIVE SEED MIX' TO BE SEEDED WITH MNDOT MIX 33-262. BROAD CAST, DRILL AND/OR HYDROSEED AT A RATE OF 44 LBS./AC. WITH 2 TONS SHREDDED AND PUNCHED IN PLACE STRAW PER ACRE. SEED MIX SHALL BE ABLE TO WITHSTAND PERIODIC FLOODING.
- 6. ALL AREAS SPECIFIED AS 'WET PRAIRIE MIX" TO BE SEEDED WITH MN DOT 34-262 WET PRAIRIE MIX. BROAD CAST AT A RATE OF 15 LBS./AC. (INCLUDES COVER CROP) WITH EROSION CONTROL BLANKET AS REQUIRED PER CIVIL. SEE CIVIL FOR NORMAL WATER LEVEL.



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SIGNATURE:	NOT FOR	CONSTRUCTION
SIGNATURE.		

DATE: 10/08/2021 LICENSE NO. 45613

**REVISION LOG** 

DESCRIPTION OF REVISIONS

CITY SUBMITTAL 10/08/2021

DESIGNED: DRAWN: CHECKED BY: CHC CHC

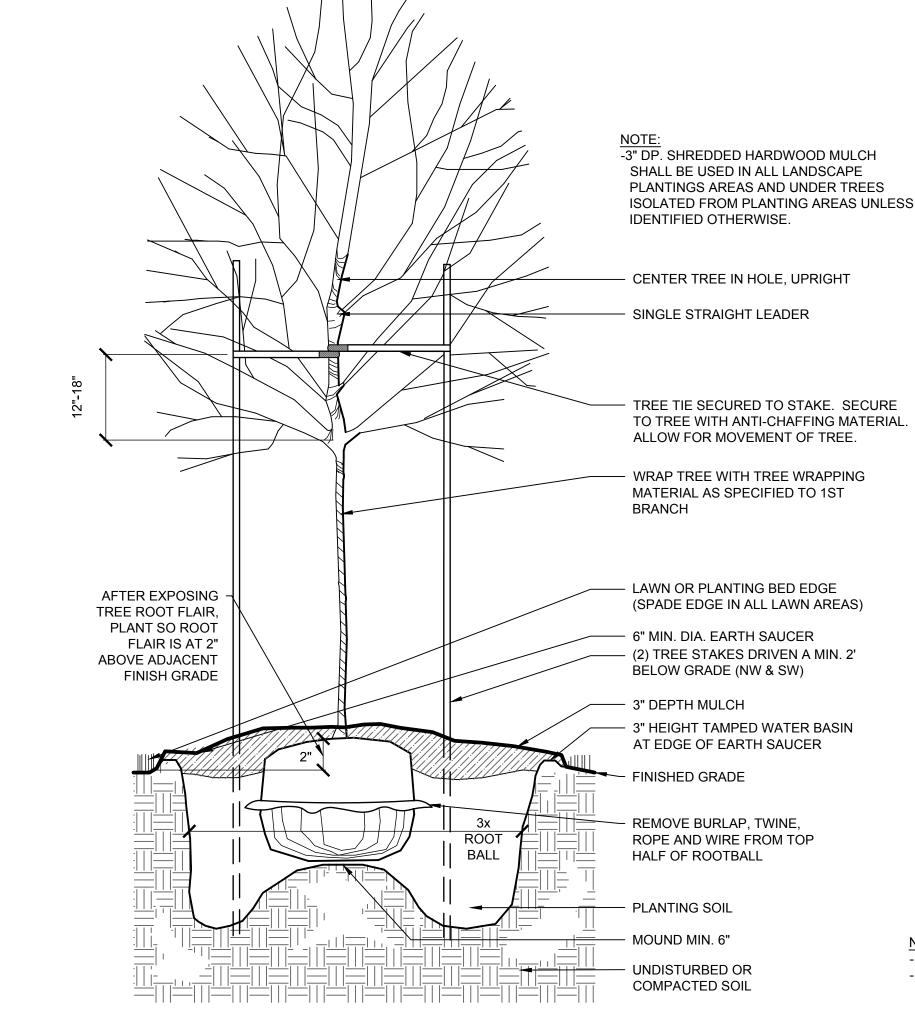
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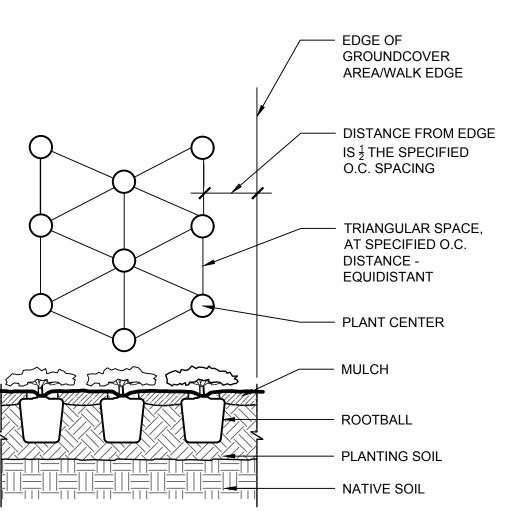
PLANTING NOTES & **DETAILS** 

DRAWING NO.

\_4

COMM. NO. PLOTTED: 16523





- KEEP MULCH APPX. 2" OFF PLANT TRUNK OR STEM - SEE PLANT SCHEDULE FOR EACH PLANT'S APPROPRIATE O.C. SPACING

DECIDUOUS TREE PLANTING (TYP.)

SCALE: N.T.S.

SHRUB BED SPACING (TYP.) SCALE: N.T.S.

**EXPOSING** 

TREE ROOT

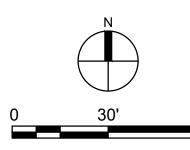
**ADJACENT** 

FLAIR, PLANT SO ROOT FLAIR

IS AT 2" ABOVE

**FINISH GRADE** 







DRAINAGE ARROW DIRECTION



DRAINAGE AREA BOUNDARY



SUB-DRAINAGE AREA

EXISTING CONDITIONS							
DRAINAGE		SQUARE FEET			DRAINAGE		
AREA	IMPERVIOUS	PERVIOUS	TOTAL	IMPERVIOUS PERVIOUS	PERVIOUS	TOTAL	AREA
<b>1</b> S	0	11,360	11,360	0.000	0.261	0.261	Northwest
2S	392	51,646	52,038	0.009	1.186	1.195	North
3S	9,077	36,619	45,696	0.208	0.841	1.049	East
4S	1,251	72,438	73,689	0.029	1.663	1.692	Southwest
5S	217	20,295	20,512	0.005	0.466	0.471	South
TOTAL	10,937	192,358	203,295	0.251	4.416	4.667	TOTAL



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<u>RE</u>	VISIO	N LOG
NO.	DATE	DESCRIPTION OF REVISIONS
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I		10/08/2021

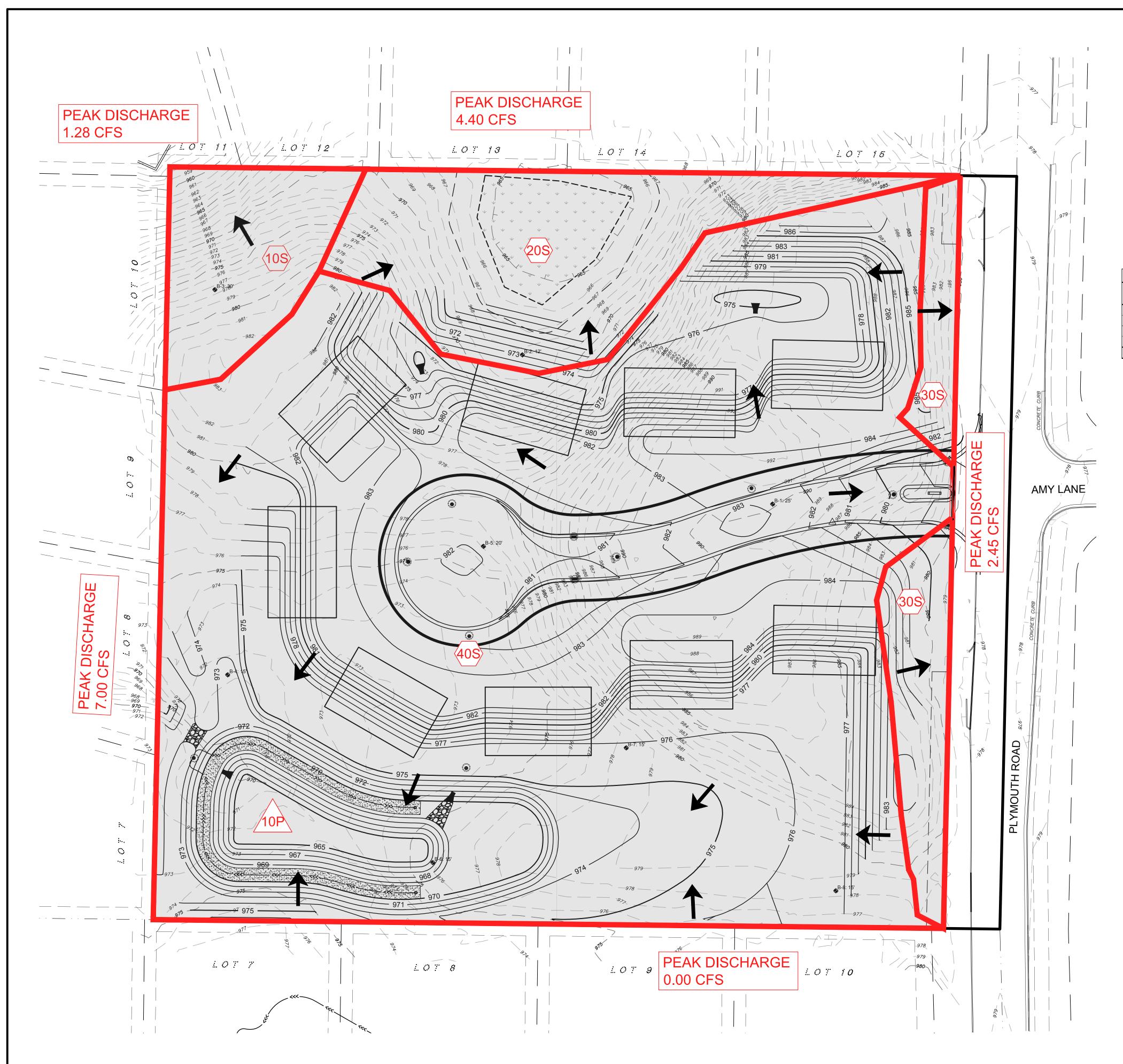
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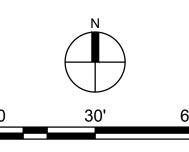
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EXISTING DRAINAGE AREA MAP

DRAWING NO.

PLOTTED:







DRAINAGE ARROW DIRECTION





SUB-DRAINAGE AREA

PROPOSED CONDITIONS							
DRAINAGE	Ç	QUARE FEET			DRAINAGE		
AREA	IMPERVIOUS	PERVIOUS	TOTAL	IMPERVIOUS	PERVIOUS	TOTAL	AREA
10S	0	11,360	11,360	0.000	0.261	0.261	Northwest
20S	202	22,202	22,404	0.005	0.510	0.514	North
30S	0	10,377	10,377	0.000	0.238	0.238	East
40S	43,396	115,758	159,154	0.996	2.657	3.654	POND
TOTAL	43,598	159,697	203,295	1.001	3.666	4.667	TOTAL



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AIRBORNE WOODHAVEN, LLC 13605 1ST AVE N #100 PLYMOUTH, MN 55441

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NO.	DATE	DESCRIPTION OF REVISIONS
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		-
		CITY SUBMITTAL
		10/08/2021

PROPOSED DRAINAGE MAP

CHECKED BY:

DRAWING NO.

DESIGNED:

DRAWING TITLE

16523

PLOTTED: COMM. NO.