
M E M O R A N D U M

DATE: February 4, 2016

TO: Planning Commission (February 8 meeting)

FROM: Dan Olson, City Planner

SUBJECT: Public Hearing: Gardendale Subdivision Application to create 10 new single-family home lots, with variance request to reduce street width

A. **BACKGROUND**

SVK Development, owner of properties involved in the Gardendale Subdivision, is proposing a Preliminary Plat Application to create lots for 10 new single-family homes on two acres. The preliminary plat is located near the intersection of Georgia Avenue North and 32nd Avenue North, between Florida and Hampshire Avenues North. All of the properties involved in this application are zoned Low Density Residential (R-1). In addition to the preliminary plat, the applicant is also requesting a variance to reduce the required street pavement width from 30 feet to 28 feet. Notice of the February 8 public hearing was published in the Sun Post on January 28 and mailed to owners within 350 feet.

Attachments:

- A. 2012 site location map
- B. Existing zoning map
- C. 2030 Land Use Comprehensive Plan map
- D. Project narrative
- E. Proposed preliminary plat and civil drawings (11 sheets)

B. **PROPOSED PROPERTY SUBDIVISION**

Neighborhood Meeting

The applicant held a neighborhood meeting on January 27, 2016, which was attended by the City Planner, the City Engineer, the developer's engineer, and 18 area residents. The purpose of the meeting was to provide information on the proposed project to nearby property owners. Questions heard at the meeting related mostly to stormwater improvements and the impacts to the neighborhood during home construction.

Comprehensive Plan

According to the Comprehensive Plan, the 2030 planned land use for these properties is designated as Low Density Residential (LDR), with a maximum gross density of 5 units per acre. The proposed single-family development, with its proposed gross density of 4.96 units per acre, is consistent with this designation. The Redevelopment chapter of the Plan identified these properties as a potential redevelopment site:

“This is a possible infill site for new single-family houses or low density townhomes. The area does have challenges related to fragmented property ownership, wetlands and poor soils. The City’s EDA could take a leading role in assembling the property for development, but this must be weighed against the other priorities of the EDA at any given time. It is quite possible that this potential infill site will remain in more or less its current configuration for the foreseeable future” (page 43).

Subdivision Design Features

The subdivision (plat) is called Gardendale Subdivision. The following are the notable design features of this subdivision:

1. Zoning Requirements

- Building setbacks – The proposed homes will meet the setbacks for the R-1 district, which are 30 feet for the front and rear yards, and five feet for the side yard. For Lots 1 and 2, Block 2, the front setback is measured from the cul-de-sac easement line which functions as a right-of-way/property line. No part of the homes, including eaves, may be located within a drainage and utility easement.
- Lot size and area – The proposed lots meets the lot area, width, and depth requirements of the R-1 district.

2. Street and Pedestrian Access

- Street access – Four lots will have driveway access off of existing streets: Lots 1 and 2, Block 1 will be accessed off of Hampshire Avenue North, and Lots 5 and 6, Block 2 will be accessed off of Florida Avenue North. The remaining lots will be accessed off of a new public street, an extension of Georgia Avenue North. This street extension will extend northward to a cul-de-sac. Some of the right-of-way for this street extension exists already, and the rest will be dedicated through this platting process. The City will have the applicant convey an easement for the cul-de-sac through an easement agreement rather than a platted easement. Then if the street is extended northward for future development, it will simply be a matter of vacating the easement. Although the new street meets the City’s 60-foot right-of-way width requirement, the applicant is requesting a variance to the required street pavement width (see Section C, below).
- Pedestrian connections – There is an existing bituminous trail on the west side of Hampshire Avenue and an existing sidewalk on the south side of 32nd Avenue North. In 2016 Three Rivers Park District will reconstruct the sidewalk on 32nd to an 8-foot wide bituminous extension of the Bassett Creek Regional Trail.
- Traffic impacts – According to the Comprehensive Plan, Hampshire Avenue North and 32nd Avenue North are minor collector streets. These streets are designed to provide access for neighborhoods to busier arterial streets such as Douglas Drive and Winnetka Avenue. Traffic impacts to this area will be minimal.
- Curb cut for 6600 – 32nd Avenue North – The driveway access for this address is currently off of 32nd Avenue. With this new development, the property owner has indicated an interest in closing the 32nd Avenue access and instead accessing their property off of the new Georgia Avenue street extension. Staff has requested that SVK Development work with the property owner to install a new curb cut for 6600-32nd Avenue North while they are constructing Georgia Avenue North. Staff recommends this be made a condition of approval of the preliminary plat.

3. Utilities

The proposed new homes on Hampshire and Florida Avenues North will connect with existing water, sanitary sewer and storm sewer mains. New service connections will need to be installed for the homes on Hampshire. The following is a description of these existing mains:

- Water main: Existing 6" main in Hampshire and Florida Avenues; 16" in 32nd Avenue
- Sanitary sewer main: Existing 15" main in Hampshire and 32nd ; 8" in Florida
- Storm sewer main: Existing 54" main in 32nd Avenue North

New mains will be installed in the extension of Georgia Avenue North to service the lots accessed off of that street. The following is a description of the new mains in Georgia Avenue:

- Water main: Proposed 6" main
- Sanitary sewer main: Proposed 8" main
- Storm sewer main: Proposed 15" main

An existing overhead utility line in the rear yard of lots 5 and 6, Block 2 would be located in a proposed 15-foot wide rear yard drainage and utility easement. Private utilities will be buried underground.

4. Grading, Drainage and Erosion Control – Engineering staff has reviewed the preliminary grading, drainage and erosion control plans and found them acceptable. Test pits were dug by the applicant in January, 2016 and found clay soils that the applicant determined are acceptable for the construction of single-family housing. The applicant will improve an existing drainage ditch to the rear of the lots in Block 2 to make it a more effective stormwater detention basin. This basin will then allow for drainage to new stormwater sewer infrastructure in Georgia Avenue North, with a 15-foot wide rear yard drainage and utility easement conveyed to the City on each lot. With the exception of this drainage basin easement, the typical drainage and utility easements for each lot are 10 feet along front and rear property lines and five feet along side yard property lines. The applicant will also request that the City Council vacate an existing drainage and utility easement on Outlot A, Professors Addition since this easement will be replaced with new easements. Erosion control techniques that will be used on-site include silt fences, inlet protection, and a gravel construction entrance. The applicant is required to have the Bassett Creek Watershed Management Commission review the erosion control plan, and this has been made a condition of approval of the preliminary plat.
5. Wetland Impacts – A wetland delineation report was completed for the applicant by Kjolhaug Environmental Services in November, 2015. One 385 SF wetland was identified on Lots 1 and 2, Block 2, adjacent to a drainage ditch that is to be improved as a stormwater detention basin. The City Engineer has reviewed the applicant's civil drawings, and determined that there will not be a negative impact on this wetland.
6. Landscaping – The applicant has completed a tree inventory of the properties (sheet L1.1 of Attachment F). Many of the trees removed are ash and elm trees, and these

removals are in conformance with City Code requirements. The landscape plan on sheet L2.1 shows that all ten lots will have at least one added tree. These additional trees are American larch, swamp white oak, river birch, ironwood, blue beech, prairiefire crabapple, and red jewel crabapple. These species are in conformance with the City's requirements.

7. Park dedication – This subdivision is subject to the City's park dedication requirements. Since Valley Place Park is located adjacent to this development, there is not a need for park land within this development. Therefore, the applicant will be required to make a cash payment in lieu of dedicating park land. In this case, the fee is \$11,340 which is 2% of the \$63,000 value of each lot, providing a credit for the existing home on the property. The payment of this park dedication fee will be a condition of approval of the final plat.

C. VARIANCE

According to City Code Section 505.21, Subd. 4, public improvements must comply with the City's subdivision regulations as well as other applicable sections of City Code. City Code Section 800.01 requires a street pavement width of at least 30 feet. The applicant is requesting a variance to the required public street pavement width by reducing the width for the proposed extension of Georgia Avenue North from 30 feet to 28 feet. Parking would be allowed on both sides of the street. The fire department and engineering staff have reviewed this variance request and found it acceptable. According to City Code Section 515.05, Subd. 2, the following are the relevant criteria to approve a variance, followed by staff response:

- a) Variances shall only be permitted when they are in harmony with the general purposes and intent of the official control and when the terms of the variances are consistent with the comprehensive plan.

Response: The intent of both City Codes and the Comprehensive Plan is to improve stormwater management by reducing the amount of impervious surface in the city. Therefore, the request to reduce the street pavement width for the Gardendale Subdivision is in conformance with City policies.

- b) Variances shall only be permitted when the City Council finds that strict enforcement of specific provisions of this section would create practical difficulties due to circumstances unique to a particular property under consideration. Practical difficulties, as used in connection with the granting of a variance, means that the property owner:
 - 1) proposes to use the property in a reasonable manner not permitted by an official control; and
 - 2) the plight of the landowner is due to circumstances unique to the property not created by the landowner; and
 - 3) the variance, if granted, will not alter the essential character of the locality.

Response: The use of this land area for a public street is a reasonable use permitted by the City's subdivision and zoning codes. The Georgia Avenue street extension is located in an existing public right-of-way approved by the City, and since this street is located in an established neighborhood it is preferable to lessen the impact of the street on neighboring residential properties by allowing for a smaller street. Since the street is only proposed to be reduced in width by two feet, the essential character of this area is not proposed to change.

c) Economic considerations alone do not constitute practical difficulties.

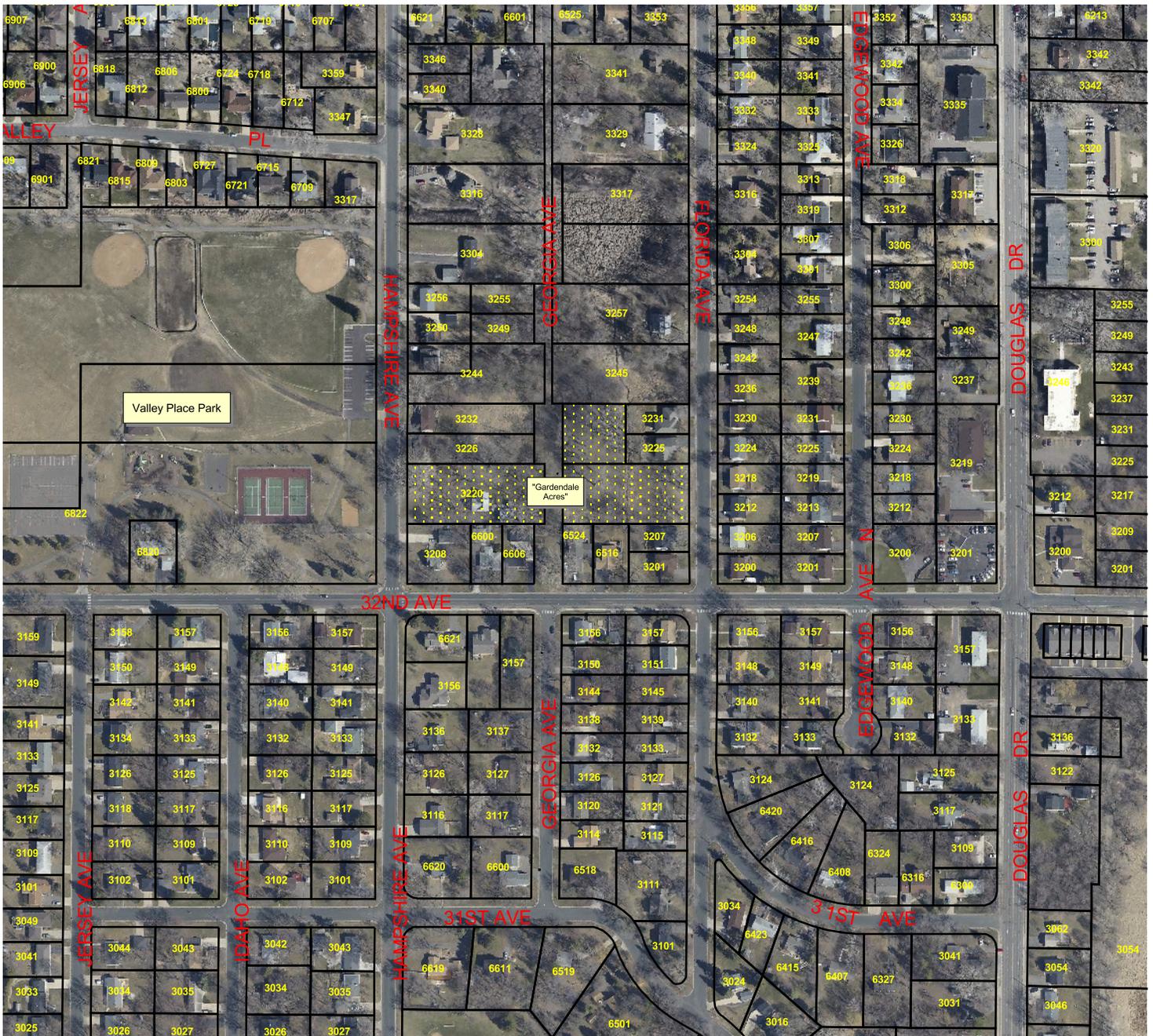
Response: Since the goal of a reduced street width is to improve drainage in the area by reducing the amount of impervious surface, economic considerations alone are not considered to be the sole reason for requesting this variance.

D. REQUESTED ACTION

The Planning Commission is being asked to make a recommendation to the City Council to either deny or approve the preliminary plat and variance application and to create lots for ten new single-family homes near the intersection of Georgia Avenue North and 32nd Avenue North. This recommendation should include findings of fact either for or against the proposal. The Commission may reference the findings for approval in Sections B and C, above. Staff is recommending approval of the preliminary plat and variance request, subject to the following conditions:

1. The following information must be submitted prior to the City Council meeting where the Final Plat is considered for approval:
 - a) An Abstract of Title or Title Certificate for the land included in the subdivision;
 - b) Special Land Use Application to vacate the drainage and utility easement in Outlot A, Professors Addition
 - c) An easement agreement with a legal description conveying the cul-de-sac street easement to the City.
2. The minimum building setbacks for the new homes are 30 feet to the front and rear yards, and 5 feet to the side yards. No part of the home, including eaves, may be located in a drainage and utility easement. For lots 1, and 2, Block 2, the front setback is measured from the cul-de-sac easement line.
3. Applicant will submit plans for the construction of public infrastructure for review and approval by the City Engineer.
4. An erosion control plan shall be submitted to the Bassett Creek Watershed Management Commission for their review and approval.
5. If desired by the property owner of 6600 - 32nd Avenue North, the applicant will construct a new curb cut for that property off of the extension of Georgia Avenue North.

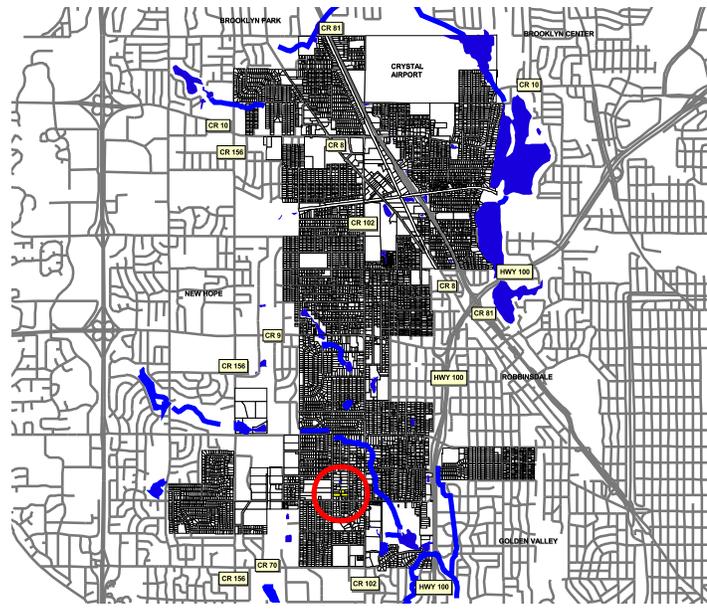
City Council action is anticipated on February 16, 2016.



**Site Addresses:
3200 Georgia**

□ Parcel Bounds

Attachment A



0 2500 5000 7500 Feet



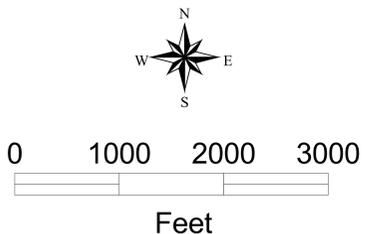
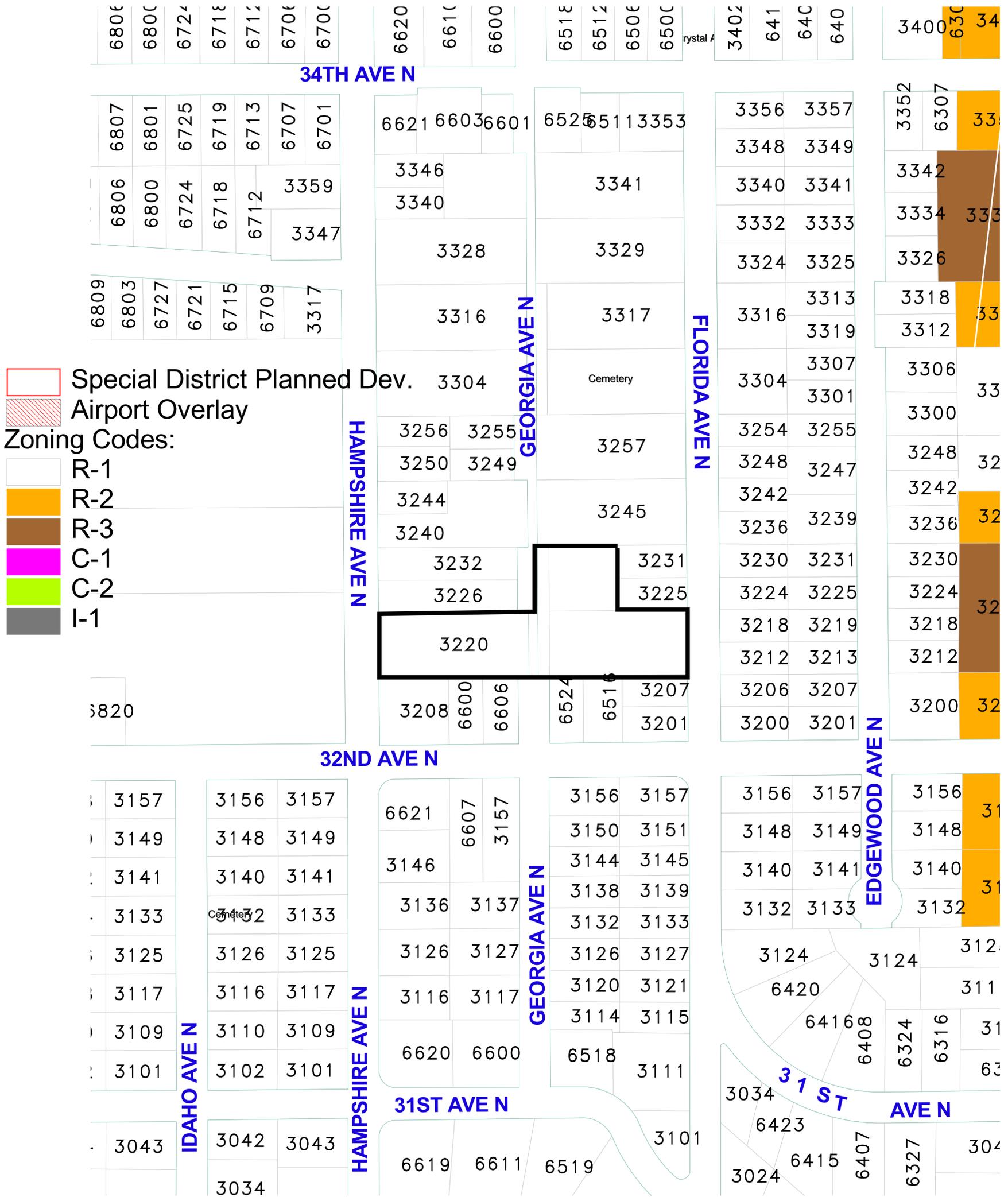
**City of Crystal
4141 Douglas Drive N.
Crystal, MN 55422**



0 0.5 1 1.5 Miles

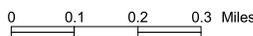
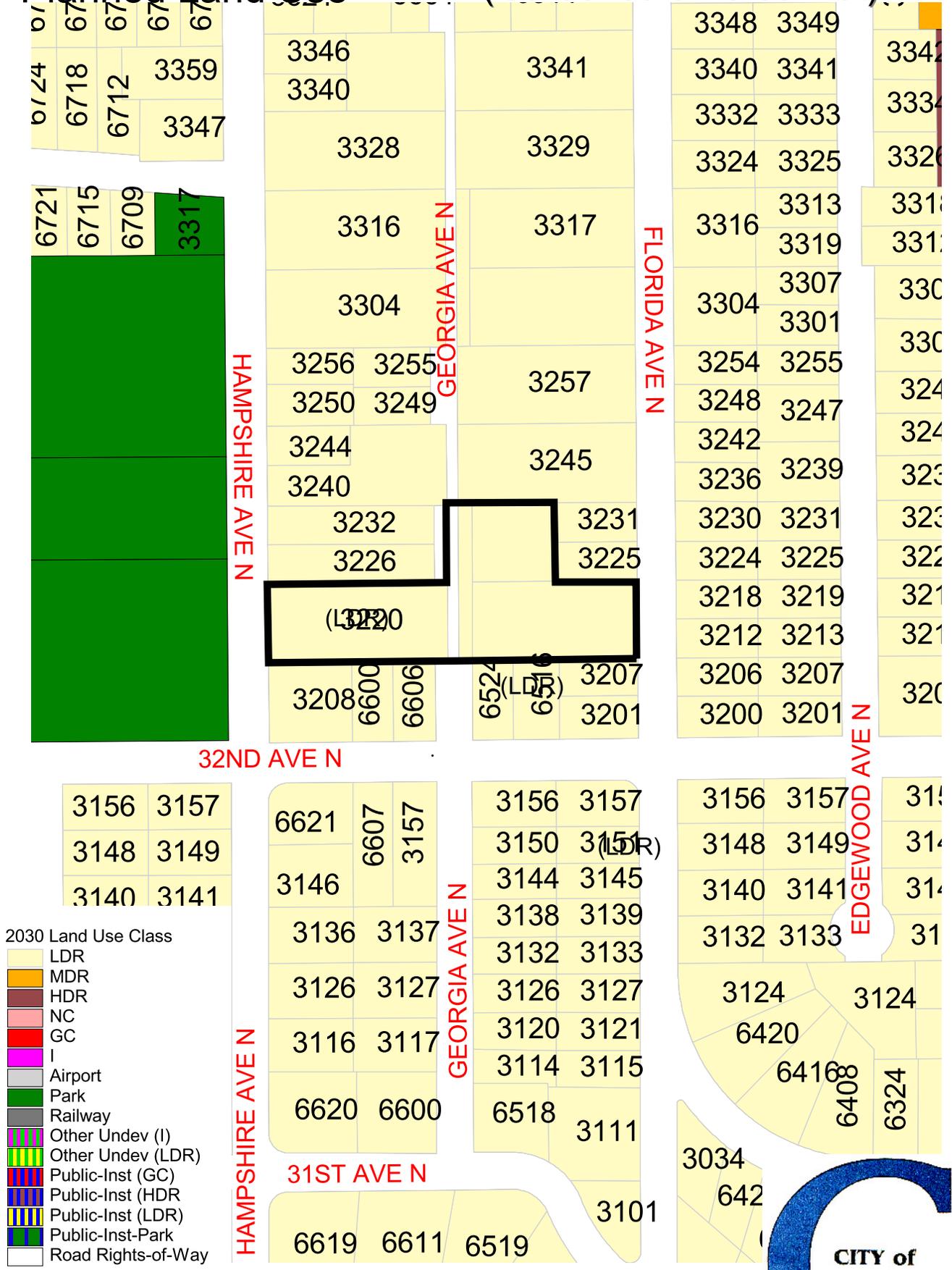
Crystal Zoning Map

Attachment B



City of Crystal, 2030 Planned Land Use

32nd & Georgia (Gardendale Acres Plat)



**Gardendale Subdivision
Crystal, MN**

**NARRATIVE FOR
PRELIMINARY PLAT**

January 12, 2016

INTRODUCTION

On behalf of SVK Development LLC., Landform is pleased to submit plans for a Preliminary Plat to allow 10 single-family homes on three parcels (PIDs 2011821140017, 2011821140101, and 2011821140109) located northeast of the intersection at 32nd Avenue and Hampshire Avenue. The parcels are guided Low Density Residential in the 2030 Comprehensive Plan and zoned R-1. The subdivision will help the city achieve its goal of increasing the availability of new housing of the type that is currently underrepresented in the housing stock, by providing move-up single-family homes.

PRELIMINARY PLAT

The preliminary would allow the development of one vacant parcel, one outlot and one parcel with an existing single family home, that will be demolished to provide 10 buildable lots.

Setbacks

Section 515.33 of the City Code requires all buildings in the R-1 District to be setback 30 feet from the front and rear lot line and setback 5 feet from side lot line. The proposed lots would comply with these requirements.

Lot Standards

Section 515.33 of the Zoning Ordinance establishes a minimum lot area of 7,500 square feet, and a minimum width of 60 feet and a minimum depth of 100 feet. The proposed lot widths are between 62.5 - 64.4 feet wide and lot depths of 130-135 feet. The lot sizes range from 8,472 – 8,527 square feet. Lot standards for the proposed subdivision comply with the lot standards as defined in Chapter 515 of the Zoning Ordinance.

Transportation

We are proposing a 28-foot road in a 60-foot right-of-way that will provide access to the proposed lots, connect with existing infrastructure and allow for parking on both sides of the street. The proposed street improvement will require a new curb cut to extend Georgia Avenue North. The proposed temporary cul-de-sac is P-shaped to minimize impacts on landowners and complies with the minimum turning radius of 35 degrees. The temporary cul-de-sac easement may be vacated and the street extended at some point to service neighboring properties to the north.

Landscaping

Section 520.13 of the Subdivision Ordinance requires open areas of a lot that are not used for required parking area, drives or storage to be landscaped with a combination of overstory trees, understory trees, shrubs, flowers and ground cover materials. The landscape plan provides diverse tree species that are supportive of the site's characteristics. The proposed plantings in the back yard are species that work well in low wet areas. The chosen species for the boulevard trees and backyard trees will provide textures and colors for year round

interests. The value of the landscaping will be at minimum \$34,500.00 per the standards of Section 520.13 of the Zoning Ordinance, based on the estimated project value of \$2.6 million dollars.

Stormwater management

The proposed subdivision will tie into the existing catch basin located where Georgia Avenue will extend from 32nd Avenue. The existing catch basin will need to be moved west out of the street. The system will be lowered to provide positive drainage from the existing drainage ditches including drainage from the adjacent parcels. Stormwater calculations are provided. Improvements are proposed to clean up the existing drainage ditch to make it flow better and allow the homes to be drain tiled and pumped into existing storm system.

SUMMARY

We request approval of the preliminary plat to allow 10 single-family homes on this 2.016-acre parcel. The proposed development is consistent with the R-1 Zoning District standards for subdivision.

We request to be placed on the February 8, 2016 Planning Commission agenda and the February 16, 2016 City Council agenda for approval.

CONTACT INFORMATION

This document is respectfully submitted by:

Landform

105 South Fifth Street, Suite 513

Minneapolis, MN 55330

Any additional questions regarding this application can be directed to Reid Schulz at rschulz@landform.net or 612.638.0245.

CRYSTAL, MINNESOTA AREA LOCATION MAP



ABBREVIATIONS

D & @	Angle	L.F.	Lineal Feet
100 YR.	100 Year Flood Elevation	L.P.	Low Point / Liquid Petroleum
A.B.	Anchor Bolt	L.B.	Pound
A.D.	Area Drain	LGU	Local Government Unit
A/C	Ar. Conditioning Unit	LONG.	Longitudinal
ADD.	Addendum	LT.	Light / Lighting
ADDL.	Additional	MAINT.	Maintenance
ADJ.	Adjacent / Adjust	MAS.	Masonry
AHJ	Air Handling Unit	MATL.	Material
ALT.	Alternate	MAX.	Maximum
ALUM.	Aluminum	MCH.	Mechanical
ANOD.	Anodized	MED.	Medium
APPROX.	Approximate	MFR.	Manufacturer
ARCH.	Architect / Architectural	MH	Manhole
AUTO.	Automatic	MN.	Minimum / Minute
AVG.	Average	MISC.	Miscellaneous
B.C.	Back of Curb	MISS.	Minnesota Department Of Transportation
B/W	Bottom of Wall	MOD.	Module / Modular
BFE	Basement Floor Elevation	MUL.	Mullion
BIT	Bituminous (Asphaltic)	N.	North
BLDG	Building	N.I.C.	Not In Contract
BSMT.	Basement	NO. OR #	Number
C.F.	Cubic Feet	NOM	Nominal
C.F.S.	Cubic Feet Per Second	NTS	Not to Scale
C.G.	Corner Guard	NWE	Normal Water Elevation
C.J.	Control Joint	O.C.	On Center
C.L.	Centerline	O.D.	Outside Dimension
C.M.U.	Concrete Masonry Unit	O.E.	Overhead Electric
C.O.	Cleanout	OH	Overhead
C.O.E.	U.S. Army Corps Of Engineers	OH.WL	Ordinary High Water Level
C.Y.	Cubic Yards	OPNG.	Opening
CB	Catch Basin	ORIG.	Original
CBMH	Catch Basin Manhole	P.C.	Point of Curvature
CEM.	Cement	P.I.	Point of Intersection
CHP	Cast Iron Pipe	P.I.V.	Post Indicator Valve
CIP	Corrugated Metal Pipe	P.L. OR P/L	Property Line
CONC.	Concrete (Portland)	P.O.B.	Point of Beginning
CONN.	Connection	P.S.F.	Pounds Per Square Foot
CONST.	Construction	P.S.I.	Pounds Per Square Inch
CONT.	Continuous	P.T.	Point of Tangency
CONTR.	Contractor	P.V.C.	Point of Vertical Curvature
COP.	Copper	P.V.I.	Point of Vertical Intersection
CU.	Cup	P.V.T.	Point of Vertical Tangency
D.S.	Down Spout	PE	Polyethylene
DEG.	Degree	PED.	Pedestal / Pedestrian
DEMO.	Demolition / Demolish	PERF.	Perforated
DEPT.	Department	PREP.	Preparation
DET.	Detail	PROJ.	Project
DIAM.	Diameter	PROP.	Proposed
DIAG.	Diagonal	PVC	Poly-Vinyl-Chloride (Ppma)
DM.	Dimension	PVMT.	Pavement
DN	Down	QTY.	Quantity
DWG.	Drawing	R.	Radius
E.	East	RAD.	Radius
E.J.	Expansion Joint	R.E.	Rim Elevation (Castina)
E.O.	Emergency Overflow	R.D.	Roof Drain
E.O.S.	Emergency Overflow Swole	R.E.	Remove Existing
E.W.	Each Way	R.O.	Rough Opening
EA.	Each	R.P.	Radius Point
EL.	Elevation	RCP	Reinforced Concrete Pipe
EL.EC.	Electrical	R.S.	Rough Slab
ELEV.	Elevation	RSD	Roof Storm Drain
EPR.	Emergency Engineer	RE.	Regrading
ENGR.	Engineer	RENF.	Reinforced
ENTR.	Entrance	REQD	Required
EQ.	Equal	REV.	Revision / Revised
EQIP.	Equipment	R.G.U.	Regulatory Government Unit
EQUIV.	Equivalent	ROW OR R/W	Right of Way
EXIST.	Existing	S.	South
EXP.	Expansion	S.F.	Square Feet
F & I	Furnish and Install	SAN.	Sanitary Sewer
F.B.O.	Furnished by Others	SECT.	Section
F.C.	Face of Curb	SE	Side Exit
F.D.	Floor Drain	SEWO	Side Exit Walk Out Sheet
F.D.C.	Fire Department Connection	SHT.	Sheet
F.V.	Field Verify	SHT.	Sheet
FB	Full Basement	SHT.	Sheet
FBWO	Full Basement Walk Out	SHT.	Sheet
FBLO	Full Basement Look Out	SHT.	Sheet
FDNL	Foundation	SHT.	Sheet
FES	Flared End Section	SHT.	Sheet
FFE	Finished Floor Elevation	SHT.	Sheet
FLR.	Floor	SHT.	Sheet
FL. OR ()	Floor	SHT.	Sheet
FUT.	Future	SHT.	Sheet
G.B.	Grade Break	SHT.	Sheet
G.C.	General Contractor	SHT.	Sheet
GAL.	Gallon	SHT.	Sheet
GALV.	Galvanized	SHT.	Sheet
GFE	Garage Floor Elevation	SHT.	Sheet
GL.	Glass	SHT.	Sheet
GR.	Grade	SHT.	Sheet
H.	Height	SHT.	Sheet
H.P.	High Point	SHT.	Sheet
HDPEP	High Density Polyethylene Pipe	SHT.	Sheet
HGT.	Height	SHT.	Sheet
HORIZ.	Horizontal	SHT.	Sheet
HVAC	Heating, Ventilation, Air Conditioning	SHT.	Sheet
HYD	Hydrant	SHT.	Sheet
ID.	Inside Dimension	SHT.	Sheet
IE. or IE	Invert Elevation	SHT.	Sheet
IN. OR ()	Inches	SHT.	Sheet
INFO.	Information	SHT.	Sheet
INSUL.	Insulation	SHT.	Sheet
INV.	Invert Elevation	SHT.	Sheet
JO.	Joint	SHT.	Sheet

Attachment E

GARDENDALE SUBDIVISION

CRYSTAL, MN

SYMBOLS

EXISTING	DESCRIPTION	NEW	DESCRIPTION
	MAJOR CONTOUR		MAJOR CONTOUR
	MINOR CONTOUR		MINOR CONTOUR
	SPOT ELEVATION		SPOT ELEVATION
	BUILDING		BUILDING
	CANOPY / OVERHANG		CANOPY/OVERHANG
	CONCRETE		UNDERGROUND STRUCTURE
	BITUMINOUS		CONCRETE
	LANDSCAPING		CONCRETE CURB
	GRAVEL		EDGE OF PAVEMENT
	PAVING BLOCK		FENCING
	STORM SEWER LINE		GUARD RAIL
	SANITARY SEWER LINE		CONCRETE RETAINING WALL
	WATER MAIN		MODULAR RETAINING WALL
	OVERHEAD ELECTRIC		FIELDSTONE RETAINING WALL
	UNDERGROUND TELEPHONE		EXIT LOCATION
	UNDERGROUND ELECTRIC		LIGHT STANDARD
	GAS LINE		POWER POLE
	CONCRETE CURB		SLOPE DIRECTION
	FENCING		CATCH BASIN
	RETAINING WALL		MANHOLE
	SET 1/2" X 1/4" IRON PIPE		BOLLARD
	IRON MONUMENT FOUND		STORM SEWER
	SURVEY DISK (BENCHMARK)		SANITARY SEWER-WASTE
	POWERPOLE		FORCE MAIN
	GUY WIRE		ROOF DRAIN SYSTEM
	GUARD POST		WATERMAN
	GAS METER		FIRE DEPT. CONNECTION
	TRANSFORMER		SOIL SUBDRAIN
	WATER SHUT-OFF VALVE		GAS LINE-UNDERGROUND
	TRAFFIC SIGN		ELECTRIC-UNDERGROUND
	FLAG POLE		TELEPHONE-UNDERGROUND
	LIGHT POLE		UNDERGROUND CABLE/TV
	TREES		LAWN SPRINKLER SLEEVE
	TREE LINE		
	MANHOLE		
	CATCH BASIN		
	FIRE HYDRANT		
	WATER VALVE		
	FLARED END SECTION		
	MAILBOX		
	NOTE NUMBER		
	MEASURED DISTANCE		
	DISTANCE PER RECORDED PLAT		
	SOL BORING		

EROSION CONTROL SYMBOLS

SYMBOL	DESCRIPTION
	SEDIMENT CONTROL FENCE
	INLET PROTECTION

DRAWING SYMBOLS

SYMBOL	DESCRIPTION
	NOTE REFERENCE
	PARKING STALL COUNT
	LARGE SHEET DETAIL
	COORDINATE POINT
	REVISION - ADDENDUM, BULLETIN, ETC.
	REVISED AREA (THIS ISSUE)

LEGAL DESCRIPTION

OUTLOT A, PROFESSORS ADDITION, HENNEPIN COUNTY, MINNESOTA.
 THAT PART OF LOT 9, BLOCK 2, GARDENDALE ACRES, HENNEPIN COUNTY, MINNESOTA LYING EAST OF THE WEST 22 FEET THEREOF.
 LOT 12, BLOCK 3, GARDENDALE ACRES, HENNEPIN COUNTY, MINNESOTA.

BENCHMARK

ELEVATIONS ARE BASED ON MN/DOT GEODETIC STATION NAME: CARL MN053 WHICH HAS AN ELEVATION OF: 907.209 FEET (NAVD88).

OWNER

SVK DEVELOPMENT
 3335 PENNSYLVANIA AVE. N.
 CRYSTAL, MN 55427
 TEL (612) 760-8660
 FAX (612) 252-9077
 CONTACT: MICHAEL KEVITT

PROJECT CONTACTS

CIVIL ENGINEER LANDFORM
 105 SOUTH FIFTH AVENUE, SUITE 513
 MINNEAPOLIS, MN 55401
 TEL 612-252-9070
 FAX 612-252-9077
 CONTACT: REID SCHULZ

SURVEYOR SATHRE-BERGQUIST INC.
 150 SOUTH BROADWAY
 WAYZATA, MN 55391
 TEL 952-476-8000
 CONTACT: DAVID PEMBERTON

LANDSCAPE ARCHITECT LANDFORM
 105 SOUTH FIFTH AVENUE, SUITE 513
 MINNEAPOLIS, MN 55401
 TEL 612-252-9070
 FAX 612-252-9077
 CONTACT: DANIELLE PIERQUET

CIVIL / LANDSCAPE SHEET INDEX & REVISION MATRIX

SHEETS ISSUED BY ISSUE / REVISION DATE	DATE
C0.1 CIVIL & LANDSCAPE TITLE SHEET	X
C0.2 PRELIMINARY PLAT	X
C1.1 EXISTING CONDITIONS & DEMOLITION	X
C3.1 GRADING, DRAINAGE, & EROSION CONTROL	X
C4.1 UTILITIES	X
C7.1 CIVIL CONSTRUCTION DETAILS	X
C7.2 CIVIL CONSTRUCTION DETAILS	X
C7.3 CIVIL CONSTRUCTION DETAILS	X
L1.1 TREE PRESERVATION PLAN	X
L2.1 LANDSCAPE PLAN	X

SITE / UTILITY CONTACTS

CITY PLANNER CITY OF CRYSTAL 441 DOUGLAS DRIVE N. CRYSTAL, MN 55422	CITY ENGINEER CITY OF CRYSTAL
DAN OLSON DAN.OLSON@CRYSTALMN.GOV TEL: 763-531-1142 FAX:	MARK RAY MARK.RAY@CRYSTALMN.GOV TEL: 763-531-1160 FAX:

DEVELOPER

SVK DEVELOPMENT
 3335 PENNSYLVANIA AVE. N.
 CRYSTAL, MN 55427
 TEL (612) 760-8660 - FAX (612) 545-5235

MUNICIPALITY



PROJECT

GARDENDALE SUBDIVISION
 CRYSTAL, MN

SHEET INDEX

SHEET	TITLE
C0.1	CIVIL & LANDSCAPE TITLE SHEET
C0.2	PRELIMINARY PLAT
C1.1	EXISTING CONDITIONS & DEMOLITION
C3.1	GRADING, DRAINAGE & EROSION CONTROL
C4.0	UTILITIES
C7.1	CIVIL CONSTRUCTION DETAILS
C7.2	CIVIL CONSTRUCTION DETAILS
C7.3	CIVIL CONSTRUCTION DETAILS
L1.1	TREE PRESERVATION
L2.1	LANDSCAPE

REVISION HISTORY

DATE	REVISION	REVIEW
12 JAN 2016	PRELIMINARY PLAT	CNC
26 JAN 2016	CITY REVISIONS	CNC
02 FEB 2016	CITY REVISIONS	CNC

PROJECT MANAGER REVIEW

BY: [Signature] DATE: 02/02/2016

CERTIFICATION

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

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CITY COMMENTS

02-02-2016



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 Minneapolis, MN 55401 Web: landform.net

FILE NAME: C001SVK004.DWG

PROJECT NO. SVK16004

CIVIL & LANDSCAPE TITLE SHEET

C0.1

SHEET NO. 1/10

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**GARDENDALE
 SUBDIVISION
 CRYSTAL, MN**

SHEET	TITLE
C0.1	CIVIL & LANDSCAPE TITLE SHEET
C0.2	PRELIMINARY PLAT
C1.1	EXISTING CONDITIONS & DEMOLITION
C3.1	GRADING, DRAINAGE & EROSION CONTROL
C4.0	UTILITIES
C7.1	CIVIL CONSTRUCTION DETAILS
C7.2	CIVIL CONSTRUCTION DETAILS
C7.3	CIVIL CONSTRUCTION DETAILS
L1.1	TREE PRESERVATION
L2.1	LANDSCAPE

REVISION HISTORY

DATE	REVISION	REVIEW
12 JAN 2016	PRELIMINARY PLAT	CNC
26 JAN 2016	CITY REVISIONS	CNC
02 FEB 2016	CITY REVISIONS	CNC

PROJECT MANAGER REVIEW

BY RTS DATE 02.02.2016

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Signature shown in red on this sheet is a digital signature. A wet signed copy of this plan on file at the City of Crystal, Minnesota, will be provided upon request.

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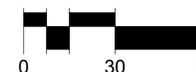
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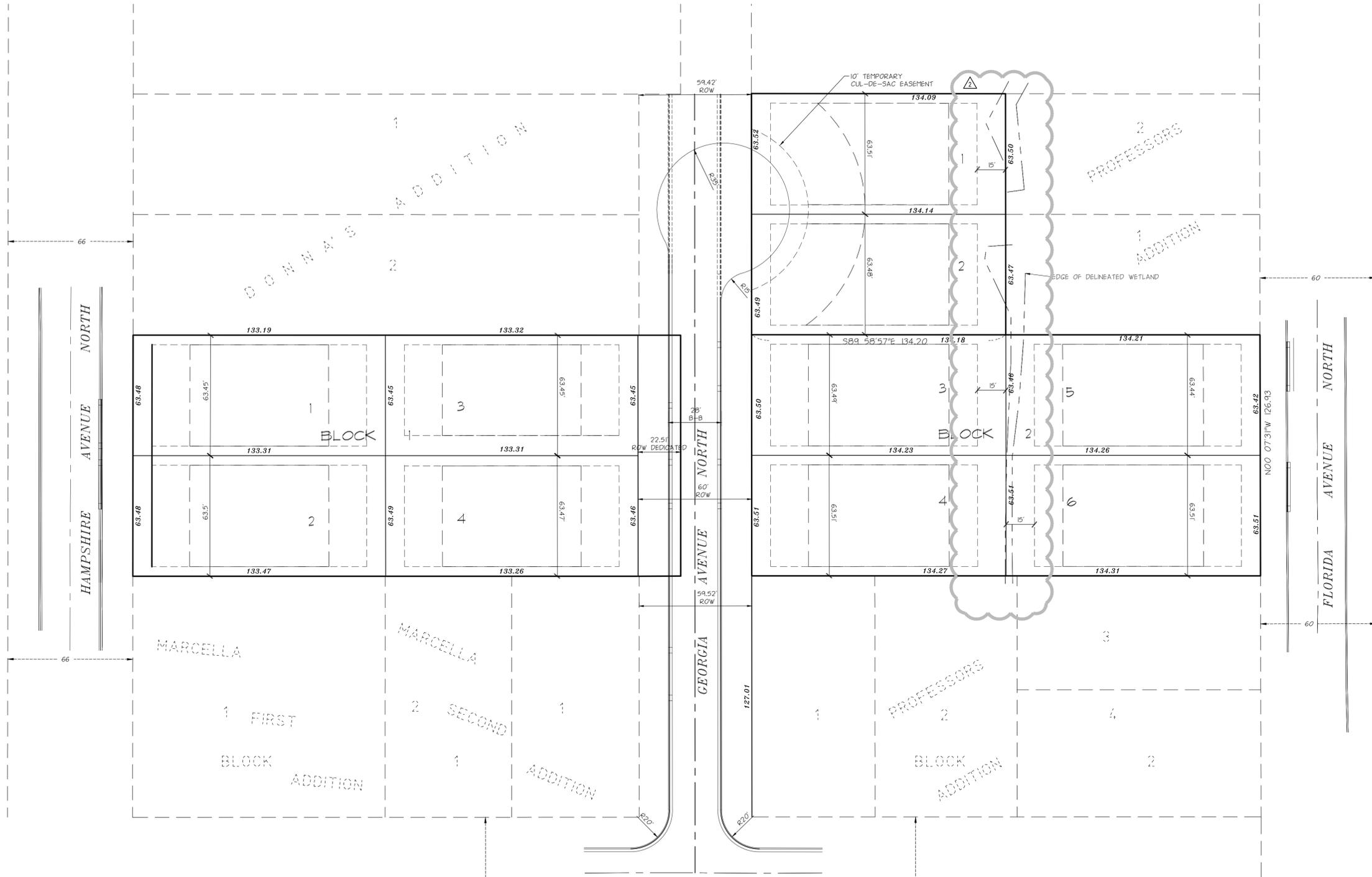
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FILE NAME C002SVK004.DWG

PROJECT NO. SVK16004

PRELIMINARY
 PLAT
C0.2

SHEET NO. 2/10



AREA SUMMARY

TOTAL GROSS AREA = 87,816 S.F. (2.016 ACRES)
 ROW DEDICATION = 2,855 S.F. (0.065 ACRES)
 NET AREA = 84,961 S.F. (1.951 ACRES)
 TOTAL # OF UNITS = 10
 NET DENSITY = 5.12 UNITS/ACRE

LOT SUMMARY

PARCEL ID:	PARCEL SIZE:
LOT 1, BLOCK 1	8,454 S.F.
LOT 2, BLOCK 1	8,468 S.F.
LOT 3, BLOCK 1	8,459 S.F.
LOT 4, BLOCK 1	8,457 S.F.
LOT 1, BLOCK 2	7,515 S.F.
LOT 2, BLOCK 2	7,663 S.F.
LOT 3, BLOCK 2	8,519 S.F.
LOT 4, BLOCK 2	8,525 S.F.
LOT 5, BLOCK 2	8,516 S.F.
LOT 6, BLOCK 2	8,527 S.F.

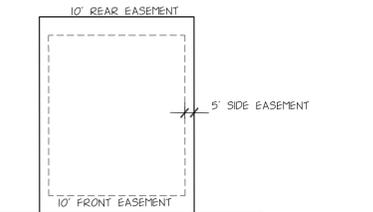
ZONING SETBACK SUMMARY

THE PROPERTY IS CURRENTLY ZONED (R-1) LOW DENSITY RESIDENTIAL
 BUILDING SETBACK INFORMATION IS AS FOLLOWS
 FRONT YARD = 30 FT.
 REAR = 30 FT.
 SIDE = 5 FT.

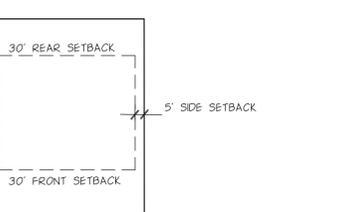
LEGAL DESCRIPTION

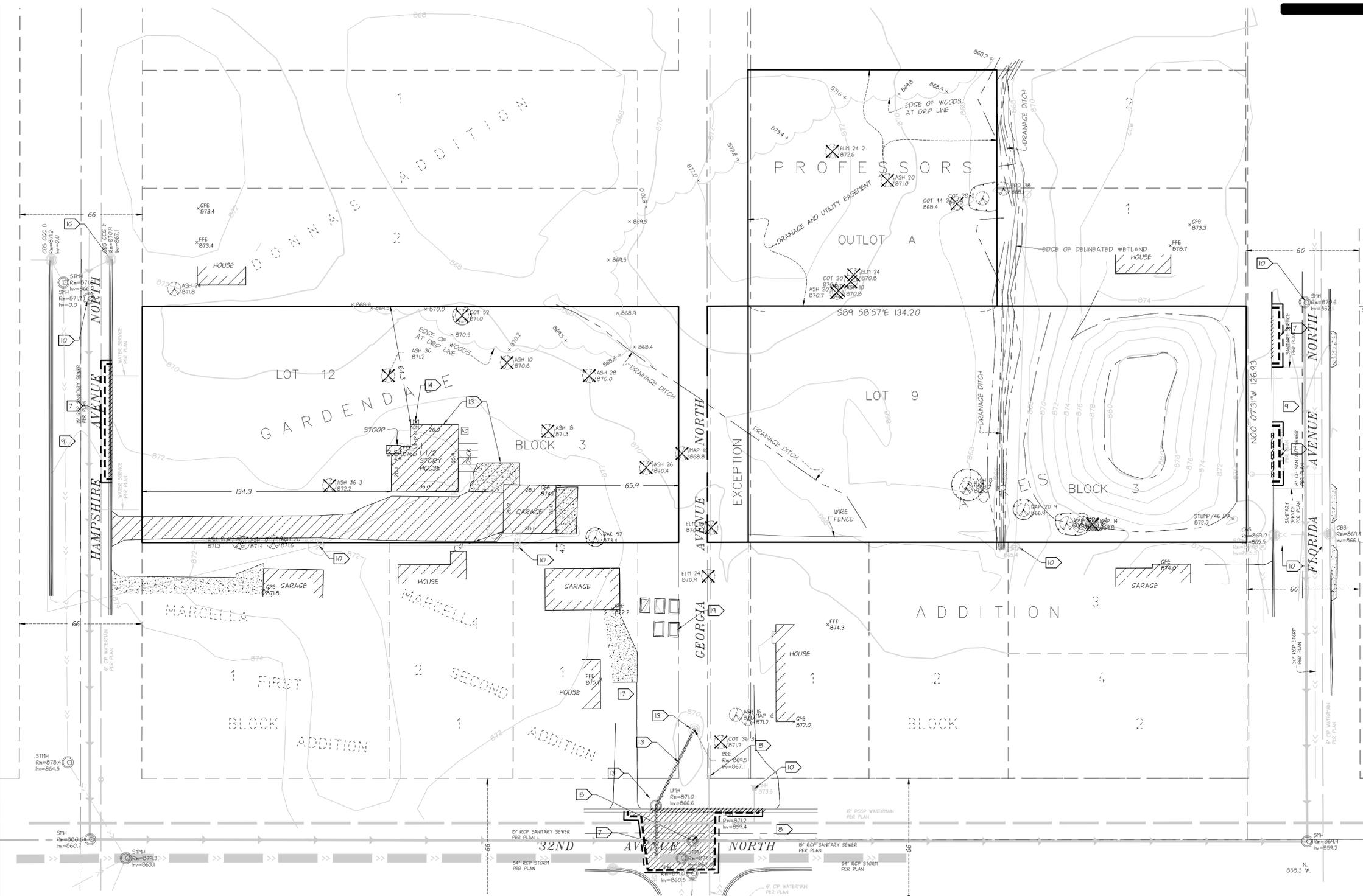
OUTLOT A, PROFESSORS ADDITION, HENNEPIN COUNTY, MINNESOTA.
 THAT PART OF LOT 9, BLOCK 2, GARDENDALE ACRES, HENNEPIN COUNTY, MINNESOTA LYING EAST OF THE WEST 22 FEET THEREOF.
 LOT 12, BLOCK 3, GARDENDALE ACRES, HENNEPIN COUNTY, MINNESOTA.

DRAINAGE AND UTILITY EASEMENTS



TYPICAL SETBACKS





LEGEND	
	TREE REMOVAL
	TREE FENCE
	STRUCTURE AND/OR PAVEMENT REMOVAL
	CURB REMOVAL
	STORM SEWER REMOVAL
	SAWCUT LINE
	CONSTRUCTION LIMITS

DEVELOPER

SVK DEVELOPMENT
 3335 PENNSYLVANIA AVE. N.
 CRYSTAL, MN 55427
 TEL (612)760-8660 - FAX (612)545-5235

MUNICIPALITY



PROJECT

**GARDENDALE
 SUBDIVISION
 CRYSTAL, MN**

SHEET INDEX

SHEET	TITLE
C01	CIVIL & LANDSCAPE TITLE SHEET
C02	PRELIMINARY PLAN
C03	EXISTING CONDITIONS & DEMOLITION
C4.0	UTILITIES
C7.1	CIVIL CONSTRUCTION DETAILS
C7.2	CIVIL CONSTRUCTION DETAILS
C7.3	CIVIL CONSTRUCTION DETAILS
L11	TREE PRESERVATION
L21	LANDSCAPE

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BY RTS DATE 02.02.2016

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02-02-2016



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FILE NAME C101SVK16004.DWG

PROJECT NO. SVK16004

EXISTING CONDITIONS & DEMOLITION

C1.1

SHEET NO. 3/10

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EXISTING CONDITIONS

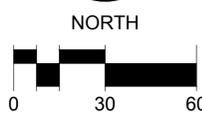
- BACKGROUND INFORMATION SHOWN IS FROM SURVEY BY SATHRE-BERGQUIST INC., WAUZATA, MN, ON NOV. 10, 2015, EXPRESSLY FOR THIS PROJECT; CITY OF CRYSTAL, MINNESOTA RECORDED DRAWINGS; AND UTILITY SERVICE PROVIDERS. LANDFORM OFFERS NO WARRANTY, EXPRESSED OR WRITTEN, FOR INFORMATION PROVIDED BY OTHERS. EXISTING PROJECT CONDITIONS SHALL BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION. ERRORS, INCONSISTENCIES, OR OMISSIONS DISCOVERED SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

DEMOLITION AND CLEARING NOTES

- OBTAIN PERMITS FOR DEMOLITION, CLEARING, AND DISPOSAL PRIOR TO BEGINNING.
- CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING DEMOLITION AND CLEARING.
- SEE SHEET C3.1 FOR EROSION PREVENTION AND SEDIMENT CONTROL MEASURES THAT MUST BE IN PLACE PRIOR TO DISTURBANCES TO SITE.
- BUILDING DEMOLITION: VERIFY WITH OWNER THAT BUILDING HAS BEEN CLEARED OF REGULATED MATERIALS REQUIRING SPECIAL HANDLING OR DISPOSAL. REMOVE STRUCTURE, COLUMNS, CANOPIES, FOOTINGS, FOUNDATIONS, AND ANY ASSOCIATED CONSTRUCTION IN ITS ENTIRETY.
- DIENSIONS SHOWN FOR REMOVAL ARE APPROXIMATE. COORDINATE WITH NEW CONSTRUCTION TO ENSURE APPROPRIATE REMOVAL OF EXISTING FACILITIES.
- REFER TO DETAILS FOR PAVEMENT SAWCUT. REMOVE CONCRETE WALKS AND CURBING TO THE NEAREST EXISTING JOINT BEYOND CONSTRUCTION LIMITS.
- COMPLETE DEMOLITION WITH MINIMAL DISRUPTION OF TRAFFIC. COORDINATE LANE CLOSURES WITH THE REGULATORY AUTHORITY AND PROVIDE ADVANCE NOTIFICATION TO AFFECTED EMERGENCY RESPONSE PROVIDERS.
- PROVIDE BARRICADES, LIGHTS, SIGNS, TRAFFIC CONTROL, AND OTHER MEASURES NECESSARY FOR PROTECTION AND SAFETY OF THE PUBLIC AND MAINTAIN THROUGHOUT CONSTRUCTION.
- PROTECT STRUCTURES, UTILITIES, TREES, PLANT MATERIAL, SOO, AND ADJACENT PROPERTY FROM DAMAGE DURING CONSTRUCTION UNLESS NOTED FOR REMOVAL. DAMAGE SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION AT NO ADDITIONAL COST.
- ABANDON WELLS AND ON SITE SEWAGE FACILITIES PRIOR TO ANY OTHER DEMOLITION IN ACCORDANCE WITH REQUIREMENTS OF REGULATORY AUTHORITIES.
- REMOVE TREES NOTED, INCLUDING ROOT STRUCTURES, FROM THE SITE. COORDINATE WITH OWNER TO MARK TREES TO BE SAVED OR TRANSPLANTED PRIOR TO CLEARING.
- REMOVE EXISTING SITE FEATURES INCLUDING, BUT NOT LIMITED TO, UNDERGROUND UTILITIES, PAVING, CURBING, WALKWAYS, FENCING, RETAINING WALLS, SCREEN WALLS, APRONS, LIGHTING, RELATED FOUNDATIONS, SIGNAGE, BOLLARDS, LANDSCAPING, AND STAIRWAYS WITHIN THE CONSTRUCTION LIMITS UNLESS NOTED OTHERWISE.
- COORDINATE REMOVAL, RELOCATION, TERMINATION, AND RE-USE OF EXISTING PRIVATE UTILITY SERVICES AND APPURTENANCES WITH THE UTILITY COMPANIES. RESTORE ELECTRIC HANDHOLES, PULLBOXES, POWERPOLES, GUYLINES, AND STRUCTURES DISTURBED BY CONSTRUCTION IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS.
- EXISTING PIPING AND CONDUITS MAY BE ABANDONED IN-PLACE IF FILLED WITH SAND AND IF NOT IN LOCATION OF PROPOSED BUILDING OR IN CONFLICT WITH PROPOSED UTILITIES OR STRUCTURES. TERMINATE EXISTING SERVICES AT THE SUPPLY SIDE IN CONFORMANCE WITH PROVIDER'S STANDARDS.
- HALL DEMOLITION DEBRIS OFF-SITE TO A FACILITY APPROVED BY REGULATORY AUTHORITIES FOR THE HANDLING OF DEMOLITION DEBRIS, UNLESS NOTED OTHERWISE.
- COORDINATE REMOVAL OF DRIVEWAY AND REPLACEMENT WITH ADJACENT NEIGHBOR
- SAVE AND RE-USE STRUCTURES, IF APPLICABLE, AS TIE-IN POINTS FOR NEW CONSTRUCTION.
- CONTRACTOR TO COORDINATE REMOVALS/RELOCATION OF GARDEN PLOTS WITH HOMEOWNER.



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GARDENDALE SUBDIVISION
 CRYSTAL, MN

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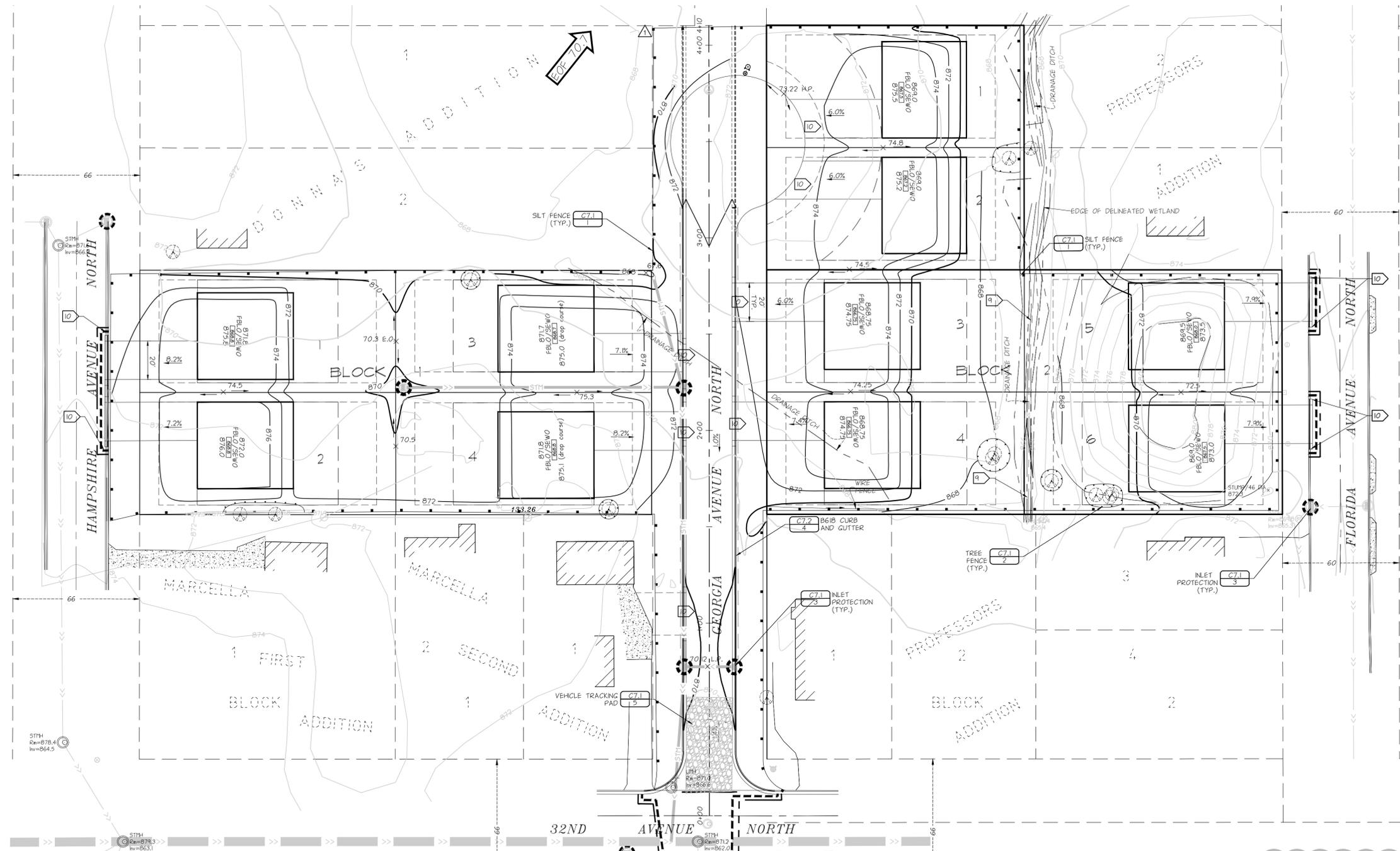
FILE NAME C301SVK16004.DWG

PROJECT NO. SVK16004

GRADING, DRAINAGE & EROSION CONTROL

C3.1

SHEET NO. 4/10



GRADING AND PAVING NOTES

- CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING GRADING.
 - NO GEOTECHNICAL REPORT WAS PREPARED.
 - REMOVE TOPSOIL FROM GRADING AREAS AND STOCKPILE SUFFICIENT QUANTITY FOR REUSE. MATERIALS MAY BE MINED FROM LANDSCAPE AREAS FOR USE ON SITE AND REPLACED WITH EXCESS ORGANIC MATERIAL WITH PRIOR OWNER APPROVAL.
 - REMOVE SURFACE AND GROUND WATER FROM EXCAVATIONS. PROVIDE INITIAL LIFTS OF STABLE FOUNDATION MATERIAL IF EXPOSED SOILS ARE WET AND UNSTABLE.
 - REFER TO STRUCTURAL SPECIFICATIONS FOR EARTHWORK REQUIREMENTS FOR BUILDING PADS.
 - AN INDEPENDENT TESTING FIRM SHALL VERIFY THE REMOVAL OF ORGANIC AND UNSUITABLE SOILS, SOIL CORRECTION, AND COMPACTION AND PROVIDE PERIODIC REPORTS TO THE OWNER.
 - PLACE AND COMPACT FILL USING LIFT THICKNESSES MATCHED TO SOIL TYPE AND COMPACTION EQUIPMENT TO OBTAIN SPECIFIED COMPACTION THROUGHOUT THE LIFT.
 - COMPACT MATERIAL IN PAVED AREAS TO 95% OF MAXIMUM DRY DENSITY, STANDARD PROCTOR (ASTM D698) EXCEPT THE TOP 3 FEET WHICH SHALL BE COMPACTED TO 100%. COMPACT TO 98% DENSITY WHERE FILL DEPTH EXCEEDS 10 FEET.
- CONTRACTOR TO DREDGE AND REGRADE DRAINAGE SWALES.
- CONTRACTOR TO PLACE 3" NOSE DOWN CURB AT ALL DRIVEWAY TRANSITIONS

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

- INSTALL PERIMETER SEDIMENT CONTROLS PRIOR TO BEGINNING WORK AND MAINTAIN FOR DURATION OF CONSTRUCTION. REMOVE CONTROLS AFTER AREAS CONTRIBUTING RUNOFF ARE PERMANENTLY STABILIZED AND DISPOSE OF OFF SITE.
- LIMIT SOIL DISTURBANCE TO THE GRADING LIMITS SHOWN. SCHEDULE OPERATIONS TO MINIMIZE LENGTH OF EXPOSURE OF DISTURBED AREAS.
- MANAGEMENT PRACTICES SHOWN ARE THE MINIMUM REQUIREMENT. INSTALL AND MAINTAIN ADDITIONAL CONTROLS AS WORK PROCEEDS TO PREVENT EROSION AND CONTROL SEDIMENT CARRIED BY WIND OR WATER.
- EXCAVATE PONDS EARLY IN THE CONSTRUCTION SEQUENCE. REMOVE SEDIMENT FROM PONDS PERIODICALLY AND AFTER AREAS CONTRIBUTING RUNOFF ARE PERMANENTLY STABILIZED.
- CONTRACTOR SHALL PREVENT SEDIMENT LADEN WATER FROM ENTERING THE INFILTRATION SYSTEM UNTIL THE SITE IS COMPLETELY STABILIZED.
- ALL EXPOSED SOIL AREAS MUST BE STABILIZED WITHIN 72 HOURS OF COMPLETION OF WORK IN EACH AREA. (IF WITHIN 1 MILE OF IMPAIRED WATER USE THE FOLLOWING NOTE INSTEAD) ALL EXPOSED SOILS AREAS SHALL BE STABILIZED IMMEDIATELY TO LIMIT SOIL EROSION IN THAT PORTION OF THE SITE WHERE CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED.
- SEED, SOD, MULCH AND FERTILIZER SHALL MEET THE FOLLOWING SPECIFICATIONS, AS MODIFIED.

ITEM	SPECIFICATION NUMBER
SOD	MNDOT 3878
SEED	MNDOT 3876

MN TYPE 22-III @ 30.5 LB/AC - TEMPORARY EROSION CONTROL
 MN TYPE 25-151 @ 120 LB/AC - PERMANENT TURF

MULCH (MNDOT TYPE 1 @ 2 TON/AC, DISC ANCHORED) MNDOT 3882
 FERTILIZER MNDOT 3881 MNDOT 2575
- SEE LANDSCAPE SHEETS FOR PERMANENT TURF AND LANDSCAPE ESTABLISHMENT.
- HYDRAULIC MULCHING AND OTHER PRACTICES MUST BE USED ON SLOPES OF 3:1 OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
- AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER MUST BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
- THE CONTRACTOR MUST, AT A MINIMUM INSPECT, MAINTAIN, AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE CONTRACTOR MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED.

LEGEND

SYMBOL	DESCRIPTION	ESTIMATED QUANTITY
	INLET PROTECTION	8 EACH
	SILT FENCE	1920 L.F.
	TREE FENCE	
	VEHICLE TRACKING PAD	1 EACH
	PAVEMENT SAWCUT	
	CONSTRUCTION LIMITS	

BUILDING TYPE	XXX.X	FBWO/FB	XXXXX	XXX.X
FBWO = FULL BASEMENT WALK OUT				
FBLO = FULL BASEMENT LOOK OUT				
SEWO = SPLIT ENTRY WALK OUT				

NOTES:
 1. GARAGE LOCATION INDICATED BY DRIVEWAY.

1 PAD DETAIL NO SCALE

NPDES AREA SUMMARY

	EXISTING	PROPOSED
PERVIOUS	101,780 SF	66,950 SF
IMPERVIOUS	5,884 SF	40,714 SF
TOTAL	107,664 SF	107,664 SF



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NORTH
 0 30 60



**GARDENDALE
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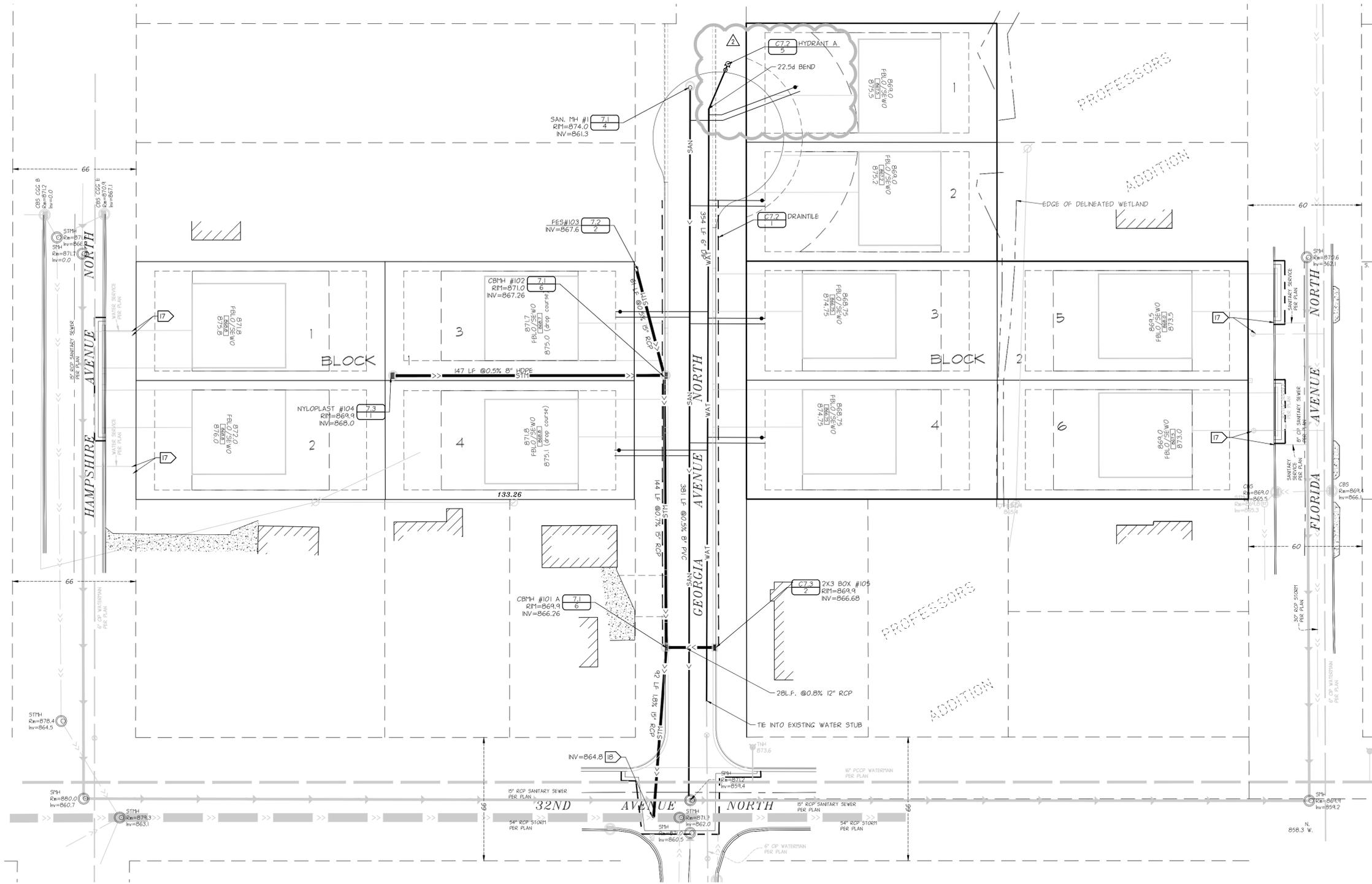
FILE NAME C401SVK16004.DWG

PROJECT NO. SVK16004

UTILITIES

C4.1

SHEET NO. 5/10



UTILITY NOTES

- PIPE MATERIALS
 WATERMAN 6" POLYWRAPPED DIP CLASS 52
 WATER SERVICE 1.5" COPPER PIPE
 SANITARY SEWER 8" PVC SDR 35
 SANI. SEWER SERVICE 4" PVC SDR 26
 STORM SEWER RCP 12"-15" CLASS 5 (ASTM C76)
 8" HDPE
- CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING.
- COORDINATE WITH PRIVATE UTILITIES TO PROVIDE ELECTRIC, NATURAL GAS, AND COMMUNICATIONS SERVICES TO LOTS.
- PROVIDE MEANS AND MEASURES TO PROTECT ADJACENT PROPERTY FROM DAMAGE DURING UTILITY INSTALLATION.
- PIPE LENGTHS SHOWN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE OR END OF SECTION.
- ADJUST STRUCTURES TO FINAL GRADE WHERE DISTURBED. COMPLY WITH REQUIREMENTS OF UTILITY. MEET REQUIREMENTS FOR TRAFFIC LOADING IN PAVED AREAS.
- INSTALL TRACER WIRE WITH ALL NON-CONDUCTIVE UTILITIES.
- CONNECT TO CITY UTILITIES IN ACCORDANCE WITH CITY OF CRYSTAL STANDARDS.
- CONTACT CITY OF CRYSTAL PUBLIC WORKS AT 815-356-3614 FOR WET TAP INSPECTION.

UTILITY NOTES

- MAINTAIN 7.5 FEET OF COVER ON WATER.
- DEFLECT WATER TO MAINTAIN 18-INCH MINIMUM OUTSIDE SEPARATION AT SEWER CROSSINGS. CENTER PIPE LENGTHS TO PROVIDE GREATEST SEPARATION BETWEEN JOINTS.
- CONTACT CITY OF CRYSTAL PUBLIC WORKS AT 815-356-3614 FOR FLUSHING AND PRESSURE TEST INSPECTIONS.
- CATCH BASINS IN CURB AND GUTTER ARE SUMPED 1 INCH BELOW THE GUTTER GRADE. REFER TO DETAIL 4 ON SHEET C7.2.
- CENTER POINT ENERGY WILL FURNISH AND INSTALL GAS SERVICE PIPING FROM THE MANLINE TO THE METER. GAS SERVICE FROM THE METER SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR.
- CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION OF NEW UTILITIES TO VERIFY DEPTHS OF EXISTING LINES. CONTACT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE DISCOVERED.
- THE WATER DISTRIBUTION SYSTEM SHALL BE DISINFECTED PER MINNESOTA RULES, PART 4715.2250.
- CONTRACTOR TO FIELD VERIFY SANITARY AND WATER SERVICES
- CONTRACTOR TO FIELD VERIFY STORM SEWER TIE-IN INVERT



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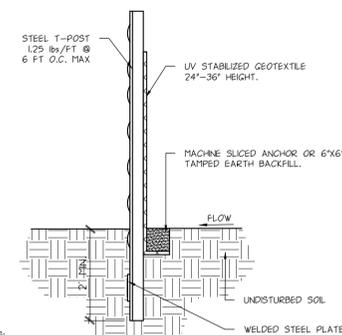
FILE NAME C701SVK16004.DWG

PROJECT NO. SVK16004

DETAIL / CIVIL CONSTRUCTION

C7.1

SHEET NO. 6/10



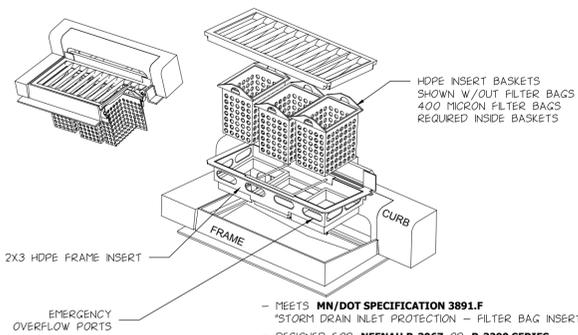
NOTES:

- DIG A 6" TRENCH ALONG THE INTENDED FENCE LINE OR USE MACHINE SLICED ANCHOR.
- INSTALL ON CONTOUR AT CONSTANT ELEVATION.
- DRIVE ALL POSTS INTO THE GROUND AT THE BACK SIDE OF THE TRENCH.
- LAYOUT WIRE MESH AND SILT FENCE ON THE UPHILL SIDE ALONG THE FENCE LINE, AND BACK FILL.

1

SILT FENCE

NO SCALE



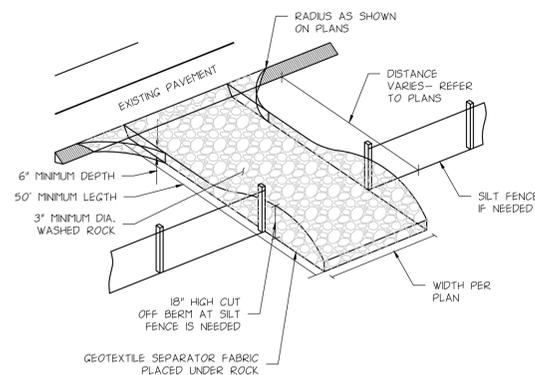
INFRASAFE - 2'x3' DEBRIS COLLECTION DEVICE

AS MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS
 ALTERNATIVE ALLOWED AS APPROVED BY PERMITTING AUTHORITIES

INLET PROTECTION 2'x3'

NO SCALE

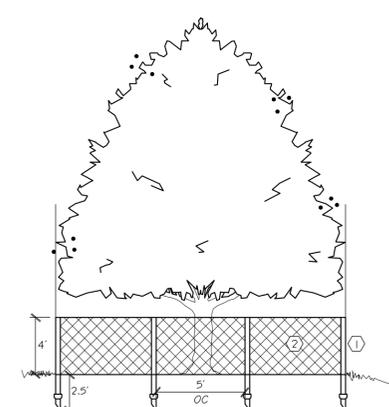
3



VEHICLE TRACKING PAD

NO SCALE

5



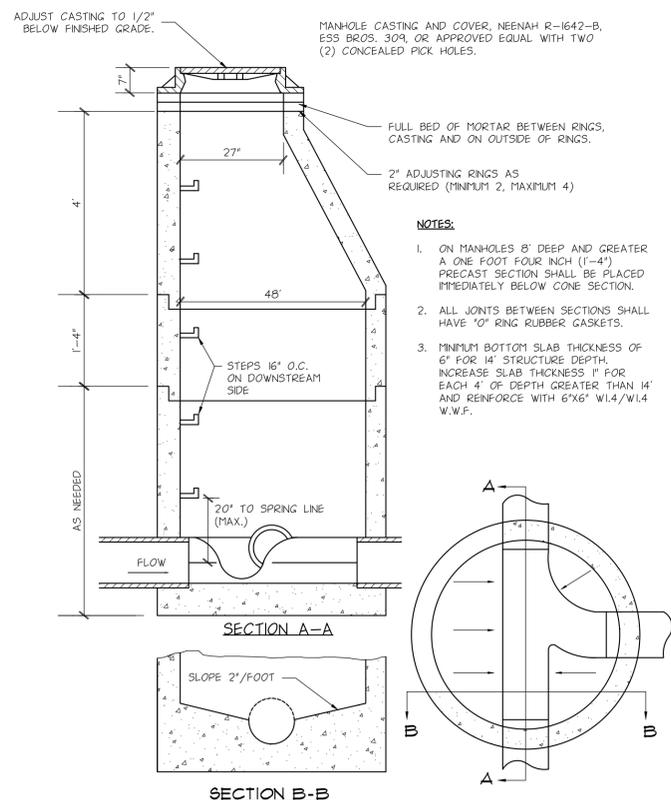
INSTALL TREE PROTECTION DEVICES PRIOR TO START OF LAND DISTURBANCE. MAINTAIN UNTIL FINAL LANDSCAPE IS INSTALLED.

- 6.5" STEEL T-POST, 1.25 LB/LF, POSITION AT DRIPLINE.
- ORANGE, POLYETHYLENE SAFETY NETTING, THREE TIES PER POST.

2

TREE PROTECTION

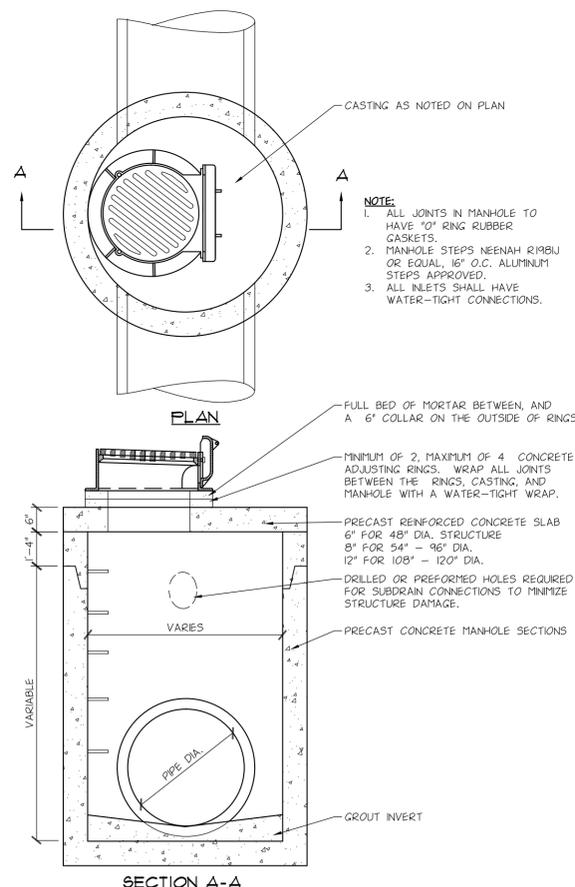
NO SCALE



SANITARY SEWER MANHOLE

NO SCALE

4



STORM SEWER CATCH BASIN MANHOLE

NO SCALE

6



**GARDENDALE
 SUBDIVISION
 CRYSTAL, MN**

SHEET	TITLE
CO.1	CIVIL & LANDSCAPE TITLE SHEET
CO.2	PRELIMINARY PLAN
CU.1	EXISTING CONDITIONS & DEMOLITION
C4.0	GRADING, DRAINAGE & EROSION CONTROL UTILITIES
C7.1	CIVIL CONSTRUCTION DETAILS
C7.2	CIVIL CONSTRUCTION DETAILS
C7.3	CIVIL CONSTRUCTION DETAILS
L1.1	TREE PRESERVATION
L2.1	LANDSCAPE

REVISION HISTORY

DATE	REVISION	REVIEW
12 JAN 2016	PRELIMINARY PLAN	CNC
26 JAN 2016	CITY REVISIONS	CNC
02 FEB 2016	CITY REVISIONS	CNC

PROJECT MANAGER REVIEW

BY	DATE
RTS	02.02.2016

CERTIFICATION

I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
 Signature shown in red ink. Wet signed copy of this plan on file at SVK Development, LLC office and is available upon request.
**PRELIMINARY
 NOT FOR
 CONSTRUCTION**
 IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS.

CITY COMMENTS

02-02-2016



105 South Fifth Avenue Tel: 612-252-9070
 Suite 513 Fax: 612-252-9077
 Minneapolis, MN 55401 Web: landform.net

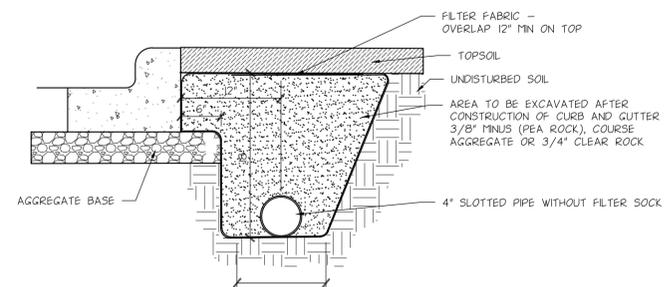
FILE NAME C702SVK16004.DWG

PROJECT NO. SVK16004

DETAIL / CIVIL CONSTRUCTION

C7.2

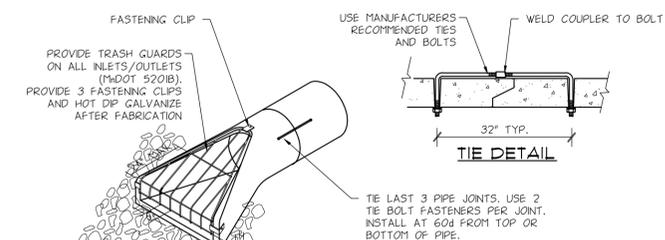
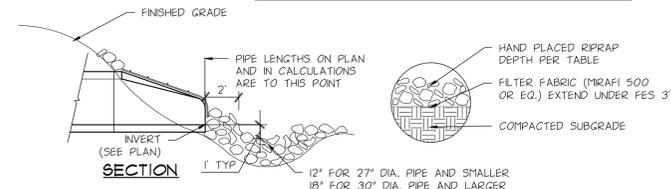
SHEET NO. 7/10



1 DRAIN TILE BEHIND CURB
 NO SCALE

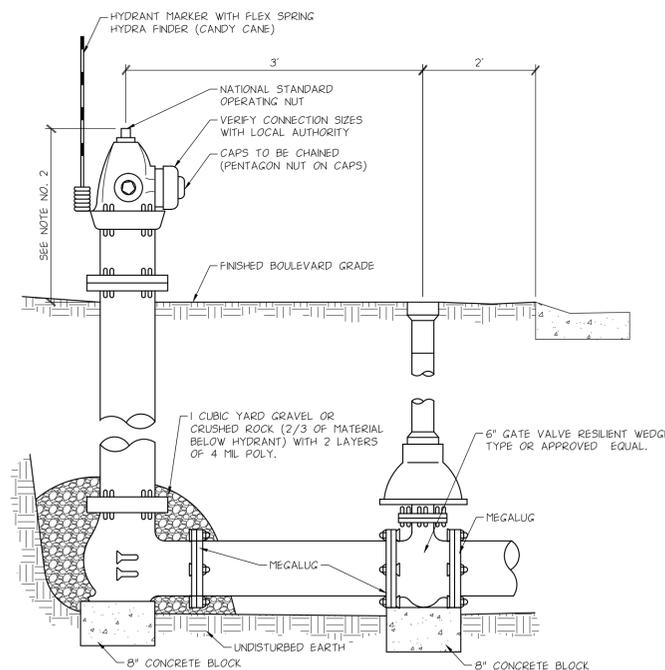
TABLE OF QUANTITIES
 RIPRAP AT RCP OUTLETS

DIA. OF ROUND PIPE (IN.)	LENGTH (FT.)	CLASS II	CLASS III	CLASS IV
		Ø50 = 6"	Ø50 = 9"	Ø50 = 9"
12	8	2.8	4.1	5.5
15	8	2.9	4.4	5.8
18	10	3.9	5.9	7.8
21	10	4.2	6.3	8.4
24	12	5.5	8.3	11.0
27	12	5.8	8.7	11.6
30	14	7.3	10.9	14.5
36	16	9.2	13.6	18.3
42	18	10.9	16.3	21.7
48	20	12.9	19.4	25.8



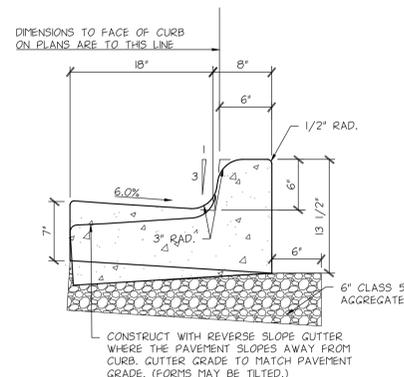
PIPE SIZE	TRASH GUARD SIZING		
	BAR SIZE	H	BOLTS
12"	3/4"	2 1/2"	5/8"
15"	3/4"	3"	5/8"
18"	3/4"	4"	5/8"
21\"/24"	1"	4"	3/4"
27\"/36"	1"	5"	3/4"
42"	1"	6"	3/4"
48\"/54"	1 1/4"	6"	1"
60\"/72"	1 1/4"	7"	1"
78\"/90"	1 1/4"	8"	1"

2 FLARED END SECTION AND TRASH GUARD WITH RIP RAP
 NO SCALE

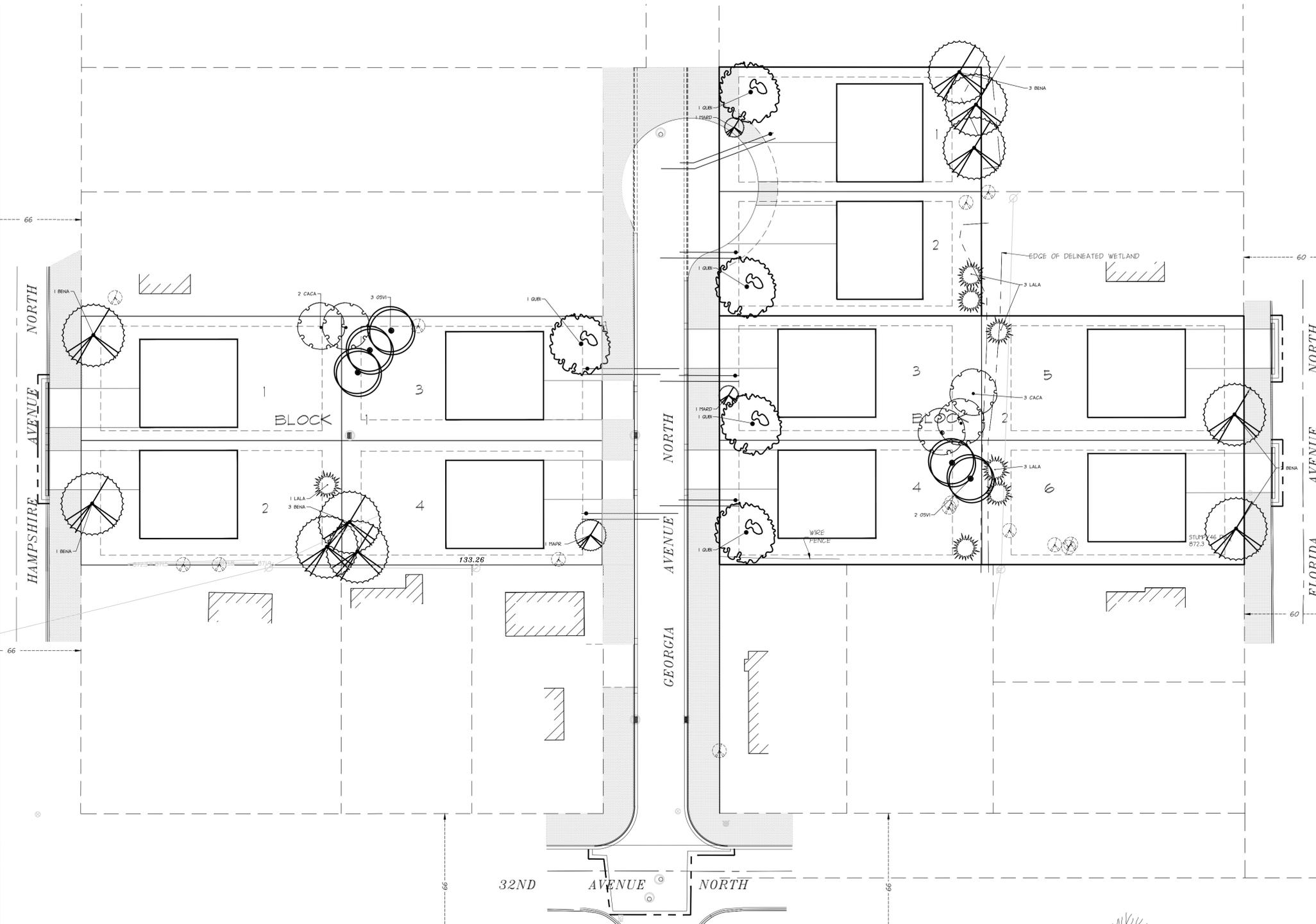


- NOTES:
- FIRE HYDRANTS SHALL BE PAINTED RED AT THE FACTORY.
 - TOP OF FIRE HYDRANT DESIGN ELEVATION SHALL BE 2.5' ABOVE FINISHED BOULEVARD GRADE.
 - THRUST BLOCKING MAY ALSO BE REQUIRED ON DEAD END LINES.
 - COVER WATERMAN PER PLAN.
 - VERIFY BRAND AND MODEL OF HYDRANT WITH LOCAL AUTHORITY.

5 HYDRANT AND GATE VALVE WITH BOX
 NO SCALE



4 B618 CONCRETE CURB & GUTTER
 NO SCALE



LANDSCAPE NOTES

- CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING.
- COORDINATE INSTALLATION WITH CONTRACTORS PERFORMING RELATED WORK.
- SEED MIXTURE (36-211, 34-1B1, 25-251 & 33-261) AS DEFINED IN CURRENT MNDOT SEEDING MANUAL. NATIVE SEEDS SHALL BE OF MINNESOTA ORIGIN AND CERTIFIED BY THE MINNESOTA CROP IMPROVEMENT ASSOCIATION (MCI). PROVIDE VERIFYING DOCUMENTATION TO THE OWNER 30 DAYS MINIMUM PRIOR TO INSTALLATION.
- PLANT MATERIAL SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND BE OF HARDY STOCK, FREE FROM DISEASE, INFESTATION, DAMAGE, AND DISFIGURATION. FOR DISCREPANCY BETWEEN THE NUMBER OF PLANTS ON THE SCHEDULE AND THE NUMBER SHOWN ON THE DRAWING, THE DRAWING SHALL GOVERN.
- PLANTING SOIL SHALL CONSIST OF 4 PARTS TOPSOIL TO 1 PART PEAT HUMUS, WITH 3 POUNDS OF COMMERCIAL FERTILIZER ADDED PER CUBIC YARD.
- SPREAD A MINIMUM OF 4 INCHES OF TOPSOIL AND SEED ALL TURF AREAS DISTURBED BY CONSTRUCTION.
- FOLLOW MNDOT SEEDING MANUAL FOR PLANTING INSTRUCTIONS FOR ESTABLISHMENT OF NATIVE SEED AND PROVIDE COORDINATION FOR REQUIRED EROSION PREVENTION AND SEDIMENT CONTROL.
- PLACE PLANTS ACCORDING TO LAYOUT WITH PROPER NOMINAL SPACING.
- SEE DETAILS FOR DEPTH OF PLANTING SOIL.
- 2" HDPE IRRIGATION STUB AND CONTROLLER WIRES. BUILDER TO EXTEND TO BUILDING FOR WATER REUSE IRRIGATION.
- UNDERGROUND RAINWATER REUSE CISTERNS, 2,333 C.F. CAPACITY. ACTUAL DESIGN, LOCATION AND INSTALLATION BY BUILDER AT THE TIME OF BUILDING CONSTRUCTION. LOCATION SHOWN FOR INFORMATIONAL USE ONLY.

LEGEND

SEED MIX: MNDOT 25-251 HIGH MAINTENANCE TURF

DEVELOPER

SVK DEVELOPMENT
 3335 PENNSYLVANIA AVE. N.
 CRYSTAL, MN 55427
 TEL (612)760-8660 - FAX (612)545-5235

MUNICIPALITY



PROJECT

GARDENDALE SUBDIVISION
 CRYSTAL, MN

SHEET INDEX

SHEET	TITLE
C01	CIVIL & LANDSCAPE TITLE SHEET
C02	PRELIMINARY PLANT
C11	EXISTING CONDITIONS & EROSION CONTROL
C4.0	UTILITIES
C7.1	CIVIL CONSTRUCTION DETAILS
C7.2	CIVIL CONSTRUCTION DETAILS
C7.3	CIVIL CONSTRUCTION DETAILS
L11	TREE PRESERVATION
L21	LANDSCAPE

REVISION HISTORY

DATE	REVISION	REVIEW
12 JAN 2016	PRELIMINARY PLANT	CNC
26 JAN 2016	CITY REVISIONS	CNC
02 FEB 2016	CITY REVISIONS	CNC

PROJECT MANAGER REVIEW

BY/TS	DATE
	02.02.2016

CERTIFICATION

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

PRELIMINARY NOT FOR CONSTRUCTION

Signature shown is not for use on any other project. Web signed copy of this plan on file at: [redacted] Professional Services, LLC office and is available upon request.

IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS.

CITY COMMENTS

02-02-2016

LANDFORM
 From Site to Finish

105 South Fifth Avenue Tel: 612-252-9070
 Suite 513 Fax: 612-252-9077
 Minneapolis, MN 55401 Web: landform.net

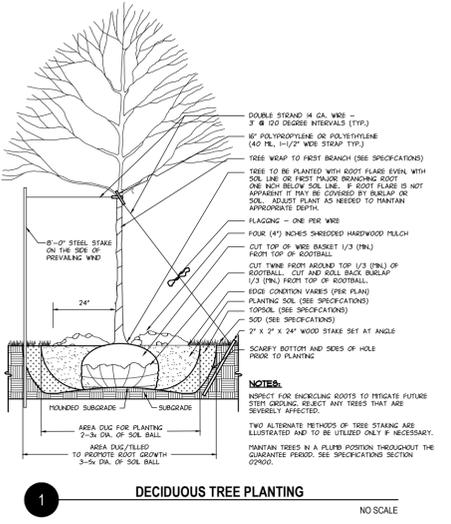
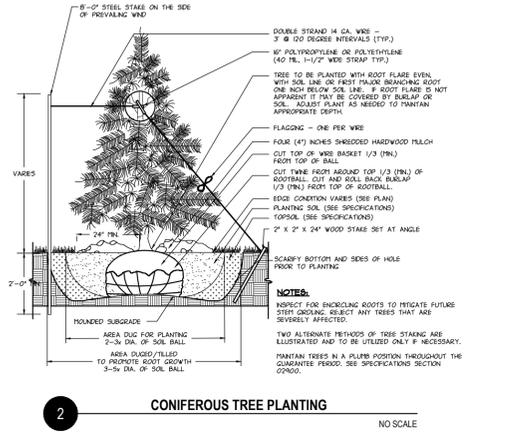
FILE NAME L201SVK16004.DWG
 PROJECT NO. SVK16004

LANDSCAPE

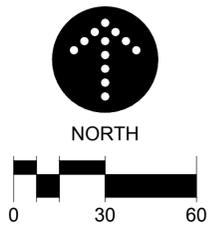
L2.1

SHEET NO. 10/10

NAME	COUNT	KEY	COMMON NAME	SCIENTIFIC NAME	MATURE SIZE	PLANTING SIZE	ROOT COND.
CONIFEROUS SHRUBS	7	POTR	AMERICAN LARCH	LARIX LARICINA	50'H x 30'W	6' HT.	B&B
DECIDUOUS TREES	5	QUBI	SWAMP WHITE OAK	QUERCUS BICOLOR	50'H x 40'W	2.5' CAL.	B&B
DECIDUOUS TREES	10	BENA	RIVER BIRCH, SINGLE TRUNK	BETULA NIGRA	50'H x 40'W	2.5' CAL.	B&B
DECIDUOUS TREES	5	OSVI	IRONWOOD	Ostrya virginiana	80'H x 30'W	2.5' CAL.	B&B
DECIDUOUS TREES	5	CACA	BLUE BEECH	Carpinus caroliniana	80'H x 30'W	2.5' CAL.	B&B
ORNAMENTAL TREES	1	MAPR	PRAIRIEFIRE CRABAPPLE	Malus spp.	20'H x 20'W	1.5' CAL.	B&B
ORNAMENTAL TREES	2	MARD	RED JEWEL CRABAPPLE	Malus spp.	15'H x 12'W	1.5' CAL.	B&B



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

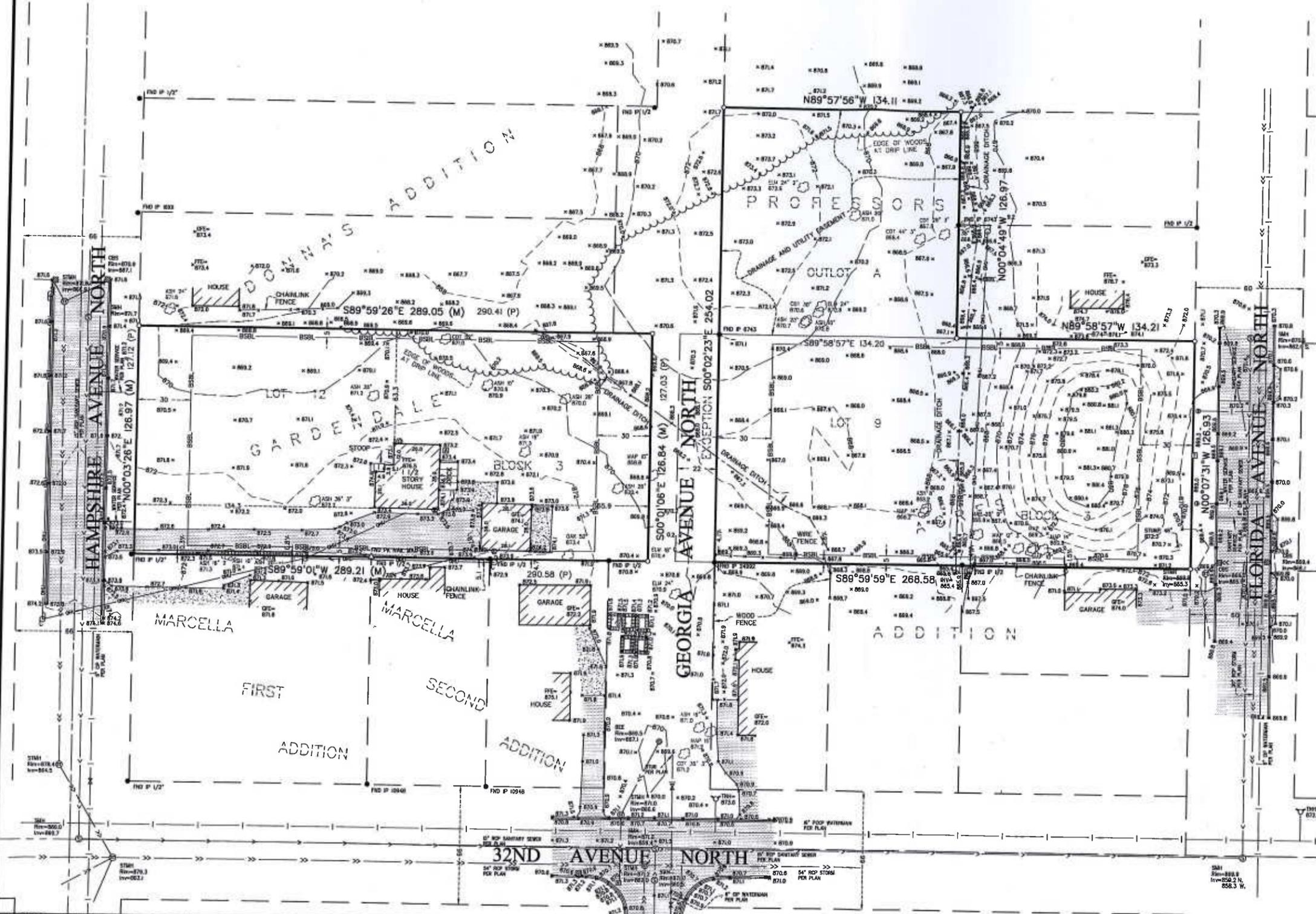
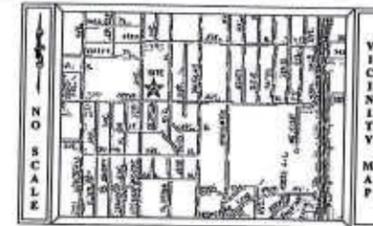




Readings are based on the Hennepin County
Coordinate System (NAD 83 - 1985 ad)



SCALE IN FEET



DESCRIPTION OF PROPERTY SURVEYED
(Legal descriptions per Hennepin County Tax ID)

Outlot A, PROFESSORS ADDITION, Hennepin County, Minnesota.
That part of Lot 9, Block 2, GARDENDALE ACRES, Hennepin County, Minnesota lying east of the west 22 feet thereof.
Lot 12, Block 3, GARDENDALE ACRES, Hennepin County, Minnesota.

A site opinion was not furnished to the surveyor as part of this survey. Only easements per the recorded plat are shown unless otherwise denoted hereon.

Site Address: 3215 Florida Avenue North, Crystal, MN
3228 Georgia Avenue North, Crystal, MN
3335 Pennsylvania Avenue North, Crystal, MN

Flood Zone Information: This property appears to lie in Zone X (area determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map, Community Panel No. 270156 0213 E, effective date of September 2, 2004.

Parcel Area Information: Gross Area: 87,816 s.f. - 2.016 acres

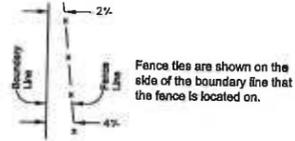
Site Elevation: Elevations are based on MNDOT Geodetic Station Name: CARL, MN053 which has an elevation of 907.209 feet (NAVD88).

Zoning Information: The current Zoning for the subject property is R-1 (Low Density Residential) per the City of Crystal's zoning map dated February 2014. The setback, height, and floor space restrictions for said zoning designation were obtained from the City of Crystal found on their web site on the date of October 30, 2015 and are as follows:

Principal Structure Setbacks - Front: 30 feet; Side: 5 feet; Rear: 30 feet; Height: 2 stories or 32 feet

Please note that the general restrictions for the subject property may have been amended through a city process. We could be unaware of such amendments if they are not in a recorded document provided to us. We recommend that a zoning letter be obtained from the Zoning Administrator for the current restrictions for this site.

Utilities: We have shown the location of utilities on the surveyed property by observed evidence only. There may be underground utilities encumbering the subject property we are unaware. Please note that we have not placed a Gopher State One Call for this survey. There may or may not be underground utilities in the mapped area, therefore extreme caution must be exercised before any excavation takes place on or near this site. Before digging, you are required by law to notify Gopher State One Call at least 48 hours in advance at 651/454-0002.



SURVEY LEGEND

- CAST IRON MONUMENT
- ◻ CATCH BASIN
- ◻ FLARED END SECTION
- ⊗ GATE VALVE
- ⋈ GUY WIRE
- ⊕ HYDRANT
- SURVEY MONUMENT SET
- SURVEY MONUMENT FOUND
- ▲ SURVEY CONTROL POINT
- ⊙ LIGHT POLE
- ⊕ POWER POLE
- SANITARY MANHOLE
- ◇ SANITARY CLEANOUT
- ⊕ SIGN
- GROUND ELEVATION
- STORM DRAIN
- STORM MANHOLE
- YARD LIGHT
- TREE CONIFEROUS
- TREE DECIDUOUS
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TRAFFIC SIGNAL
- UTILITY MANHOLE
- UTILITY PEDESTAL
- WELL
- A/C UNIT
- CABLE TV PEDESTAL
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE
- ELECTRIC METER
- GAS METER
- GAS VALVE
- GUARD RAIL
- HAND HOLE
- SOIL BORING
- STAMPHOUS
- BSL — BUILDING SETBACK LINE
- CTV — CABLE TV
- CONCRETE CURB
- CONCRETE
- CONTOUR EXISTING
- CONTOUR PROPOSED
- DT — DRAIN TILE
- EUC — ELECTRIC UNDERGROUND
- FENCE
- FO — FIBER OPTIC UNDERGROUND
- GAS — GAS UNDERGROUND
- OU — OVERHEAD UTILITY
- WOOD RETAINING WALL
- SANITARY SEWER
- STORM SEWER
- TEL — TELEPHONE UNDERGROUND
- UTL — UTILITY UNDERGROUND
- WATERWAY

FIELD CREW	NO.	BY	DATE	REVISION
CL SR				
DRAWN				
JUN				
CHECKED				
DBP				
DATE				
12/07/15				

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I hereby certify that this survey, plan or report 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 this 10th day of November, 2015.

David B. Pemberton, PLS
pemberton@sathre.com

Minnesota License No. 40344

SATHRE-BERGQUIST, INC.
150 SOUTH BROADWAY WAYZATA, MN. 55391 (952) 476-6000

ENGINEERS
SURVEYORS
PLANNERS

TWP 118 - RGE 21 - SEC 20
Project City: Crystal
Hennepin County

CERTIFICATE OF SURVEY

PREPARED FOR:
SVK Development, LLC.

FILE NO. 88025-008
1
1