

City of East Bethel
Planning Commission Agenda
7:00 PM
Tuesday, July 22, 2014



Agenda

	<u>Item</u>
7:00 PM	1.0 Call to Order
7:02 PM	2.0 Adopt Agenda
7:03 PM	3.0 Approval of Final Plat – Viking Preserve
7:25 PM	4.0 Public Hearing – Rezoning of Property from B2 and R2 to I1 PID #203323430001, 19801 Highway 65 NE, 33.5 acres
7:40 PM	5.0 Public Hearing – Comprehensive Plan Amendment Proposed changes to lot area, lot width, and minimum buildable areas outside Hwy. 65 corridor.
8:10 PM	6.0 Approval of Meeting Minutes - June 24, 2014 – Regular Meeting
8:15 PM	7.0 Other Business/Council reports
8:30 PM	8.0 Adjournment



City of East Bethel Planning Commission Agenda Information

Date:

July 22, 2014

Agenda Item Number:

Item 3.0

Agenda Item:

Approval of the Final Plat of Viking Preserve

Background Information:

Over the past several months City Staff, Planning Commission and City Council has reviewed the plans for Viking Preserve, a 48 unit housing project in the City of East Bethel located in the sewer and water district. After several revisions and discussions, the Developer – Don Shaw has prepared the final plat that includes all of the information that has been reviewed and discussed in prior months. The City Engineer, and Attorney is reviewing this project, and City Staff has put together a draft Developer’s agreement.

Recommendation:

City Staff requests Planning Commission to recommend approval to the City Council for Final Plat approval Viking Preserve subject to:

- 1. City Engineer and City Attorney approval
- 2. Final Developer’s agreement

Attachments:

Final Plat materials

Planning Commission Action

Motion by: _____

Second by: _____

Vote Yes: _____

Vote No: _____

No Action Required: _____

VIKING PRESERVE

TITLE SHEET, NOTES & LEGEND

EAST BETHEL, MN

VICINITY MAP



N.T.S.

GENERAL NOTES

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUDING. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UTILITIES AS NECESSARY TO AVOID DAMAGE TO THESE UTILITIES.

CALL "811" FOR EXISTING UTILITIES LOCATIONS PRIOR TO ANY EXCAVATIONS.

THE CONTRACTOR SHALL FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING SANITARY SEWER, STORM SEWER, AND WATER MAIN AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF INSTALLATIONS.

INSTALLATIONS SHALL CONFORM TO THE CITY STANDARD SPECIFICATIONS (MOST CURRENT EDITION), CITY STANDARD DETAIL PLATES, AND MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2005 EDITION.

THE CONTRACTOR SHALL NOTIFY CITY PUBLIC WORKS DEPARTMENT A MINIMUM OF 48 HOURS PRIOR TO THE INTERRUPTION OF ANY SEWER OR WATER SERVICES TO EXISTING HOMES OR BUSINESSES.

STORAGE OF MATERIALS OR EQUIPMENT SHALL NOT BE ALLOWED ON PUBLIC STREETS OR WITHIN PUBLIC RIGHT-OF-WAY.

NOTIFY CITY A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

ALL ELECTRIC, TELEPHONE, AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.

REMOVE/RELOCATE EXISTING UTILITIES AS NECESSARY FOR CONSTRUCTION.

ABANDON EXISTING WATER WELLS PER CITY AND STATE CODE.

WATER MAIN NOTES

EXISTING WATER MAIN LOCATION AND SIZE SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.

PROVIDE PIPE INSULATION PER STANDARD DETAIL PLATE NO. 304 WHERE SEWER (SANITARY OR STORM) CROSSES WITHIN 18" OF WATER MAIN.

MECHANICAL JOINTS SHALL BE USED FOR WATER MAIN PIPES 4" IN DIAMETER AND LARGER. RUBBER GASKETS SHALL CONFORM TO AWWA C111 (ANSI A21.11).

MAINTAIN MINIMUM 7.5-FT COVER TO TOP OF ALL WATER MAIN PIPE.

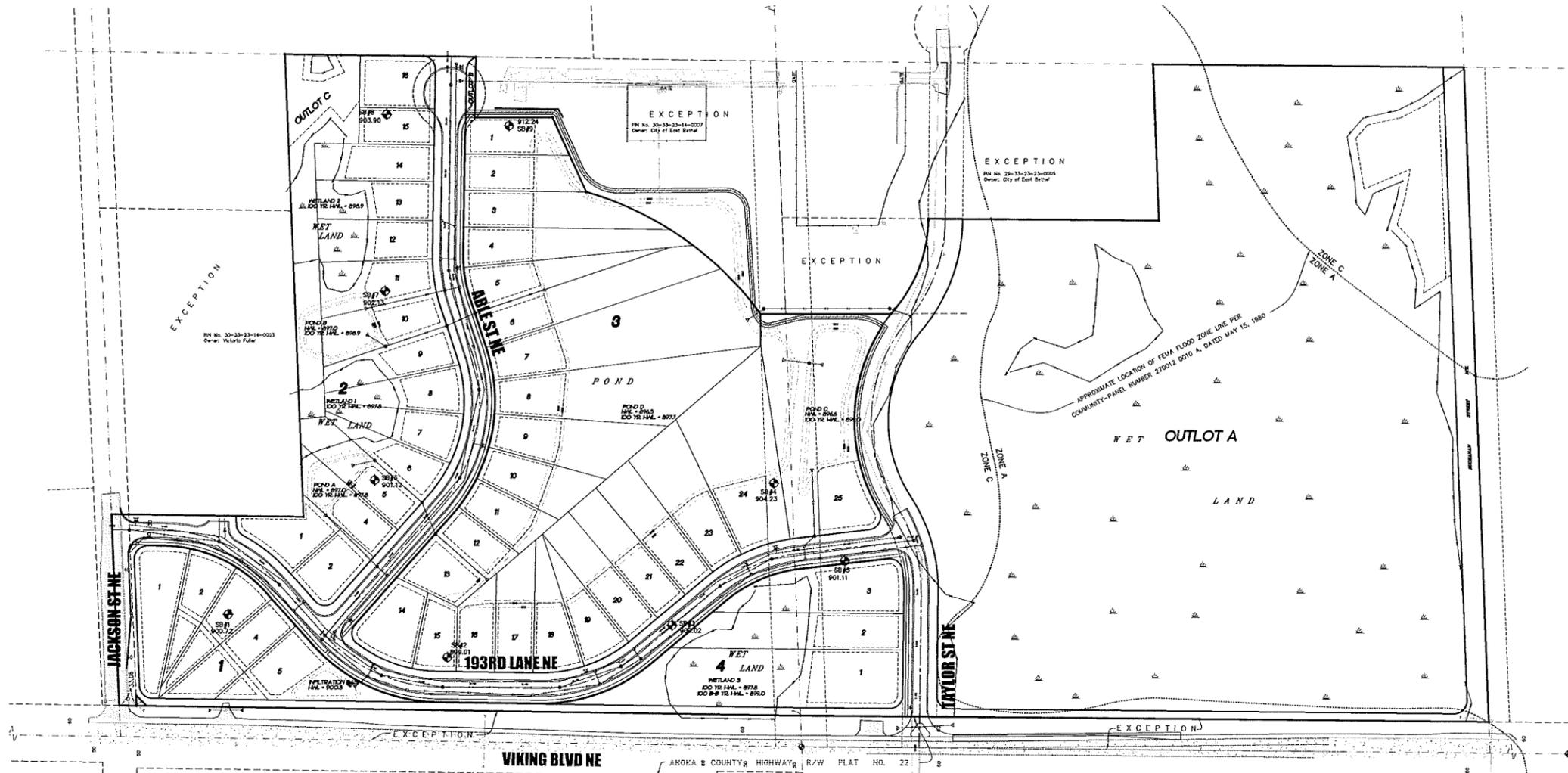
PROVIDE CONCRETE THRUST BLOCKING AT BENDS AND TEES PER STANDARD PLATE NO. 202

TRACER WIRE IS REQUIRED FOR ALL PVC WATERMAIN PIPE AND SHALL BE NO. 8 COPPER INSULATED AND RATED FOR UNDERGROUND SERVICE. TRACER WIRE SHALL REMAIN CONTINUOUS AND BE BROUGHT TO THE SURFACE AT ALL HYDRANTS. SEE STANDARD PLATE NO. 204 FOR DETAIL.

GATE VALVES SHALL BE RESILIENT WEDGE VALVES CONFORMING TO AWWA C509 STANDARDS. ALL VALVES SHALL BE INSTALLED ON-LINE WITH ACCOMPANYING VALVE BOXES. ALL VALVES SHALL CLOSE IN A CLOCKWISE DIRECTION. ALL VALVES SHALL BE EPOXY COATED PER AWWA C550. ALSO SEE STANDARD DETAIL PLATE NO. 205.

WATER SERVICES SHALL BE 1" COPPER TYPE K AND SHALL CONFORM TO STANDARD DETAIL PLATE NO. 200.

HYDRANTS SHALL BE PLACE FIVE (5) FEET FROM BACK OF CURB AND SHALL CONFORM TO STANDARD DETAIL PLATE NO. 204.



STORM SEWER NOTES

FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING STORM SEWER AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.

STORM SEWER SHALL BE REINFORCED CONCRETE PIPE (RCP) ANSI C76 WITH R-4 GASKETS AND HDPE. ALL RCP PIPE SHALL BE CLASS 3. HDPE PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M294, TYPE S WITH WATERTIGHT CONNECTIONS. USE SAND/GRANULAR MATERIAL FOR BACKFILLING AND COMPACTION OF HDPE PIPE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM 2321.

STORM SEWER LENGTHS INCLUDE THE LAYING LENGTH OF THE FLARED-END SECTION. LAYING LENGTH OF APRON TO BE DEDUCTED FROM PAYMENT LENGTH OF PIPE.

ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF A WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MINNESOTA RULES, PART 4715.2820.

STORM SEWER PIPES TO BE JOINED TO THE CATCH BASIN MANHOLES W/ APPROVED PRE-FORMED RUBBER, TYPE A, IN ACCORDANCE WITH MNDOT 3726.

ALL FLARED-END SECTIONS FOR PIPE CULVERTS 18" AND LARGER SHALL BE FITTED WITH TRASH GUARDS AND ALL FLARED-END SECTIONS ON PIPE STORM SEWER SYSTEMS SHALL BE FITTED WITH TRASH GUARDS.

ALL CATCH BASINS SHALL BE OFFSET PER STANDARD DETAIL PLATE NO. 703.

SANITARY SEWER NOTES

EXISTING SANITARY SEWER LOCATION, SIZE, AND ELEVATION SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.

PROPOSED SANITARY SEWER SHALL BE PVC AND SHALL CONFORM TO ASTM 3034 FOR THE SIZE AND STRENGTH REQUIREMENTS AS SHOWN ON THE PLAN.

ALL CONNECTION BETWEEN EXISTING AND NEW SANITARY SEWER OR SERVICE PIPE SHALL BE MADE WITH FACTORY MANUFACTURED FLEXIBLE COUPLINGS, FENICO OR EQUIVALENT, SPECIFICALLY DESIGNED AND SIZED FOR SANITARY SEWER CONNECTIONS.

ALL SANITARY SEWER SERVICE PIPE SHALL BE 4" PVC SDR 26. ALL SERVICE CONNECTION SHALL BE SOLVENT WELDED - GASKETED CONNECTIONS WILL NOT BE ALLOWED. ALSO SEE STANDARD DETAIL PLATE NO. 302.

- CHIMNEY SEALS
ANY ONE OF THE FOLLOWING RING SEALS IS ALLOWED:
1. FLEXIBLE INTERNAL RUBBER SLEEVE, INTERLOCKING EXTENSIONS AND STAINLESS STEEL EXPANSION BANDS (STANDARD PLATE 308)
 2. FLEX-SEAL UTILITY SEALANT (STANDARD PLATE 309)
 3. INFI-SHIELD (STANDARD PLATE 310)

CURB & BITUMINOUS NOTES

REMOVAL AND DISPOSAL OF EXISTING STREET MATERIALS AS REQUIRED FOR CONSTRUCTION IS CONSIDERED INCIDENTAL.

PROVIDE SAW-CUT AND 2-INCH DEEP BY 4 FOOT WIDE MILL AT BITUMINOUS MATCH POINT. SAW-CUT EXISTING BITUMINOUS CONCRETE CURB TO PROVIDE BUTT-JOINT.

RESTORE DISTURBED STREET TO EXISTING OR BETTER SECTION.

BACKFILLING OF CURB IS INCIDENTAL TO CURB INSTALLATION.

APPROVED GRANULAR SUBGRADE UNDER CURB IS INCIDENTAL TO CURB INSTALLATION.

LEGEND

—○—	EXISTING OVERHEAD ELECTRIC	— —	PROPOSED WATER PIPE
—□—	EXISTING TELEPHONE PEDESTAL	— —	PROPOSED SANITARY SEWER PIPE
—□—	EXISTING ELECTRICAL PEDESTAL	— —	PROPOSED STORM SEWER PIPE
—□—	EXISTING CABLE PEDESTAL	— —	PROPOSED DRAIN TILE AND CLEAN-OUT
—□—	EXISTING UTILITY POLE	⊙	PROPOSED STORM MANHOLE
—□—	EXISTING STORM SEWER	□	PROPOSED CATCH BASIN
—□—	EXISTING WATER MAIN	△	PROPOSED FLARED-END SECTION
—□—	EXISTING SANITARY SEWER	⊕	PROPOSED GATE VALVE
⊙	EXISTING STORM MANHOLE	⊕	PROPOSED HYDRANT
□	EXISTING CATCH BASIN	⊕	PROPOSED SANITARY SEWER MANHOLE
△	EXISTING FLARED-END SECTION		
⊕	EXISTING GATE VALVE		
⊕	EXISTING HYDRANT		
⊕	EXISTING WELL		
⊕	EXISTING SANITARY SEWER MANHOLE		
— —	EXISTING FENCE		
— —	EXISTING WETLAND		
⊕	SOIL BORING LOCATIONS PERFORMED BY HCO ALLED TESTING COMPANY OCTOBER 2013		

SHEET INDEX

C0	TITLE SHEET, NOTES & LEGEND
E1	PRELIMINARY LIGHTING LAYOUT
G0	INITIAL GRADING EXHIBIT
G1-G4	PRELIMINARY GRADING, DRAINAGE & ESC PLAN
G5	LOT TABULATION & GRADING DETAILS
C1.1	PLAN/PROFILE (SANITARY/WATER) - 193RD LN NE
C1.2	PLAN/PROFILE (SANITARY/WATER) - 193RD LN NE/ABLE ST NE
C1.3	PLAN/PROFILE (SANITARY/WATER) - TAYLOR ST NE
C1.4	PLAN/PROFILE (STORM/STREET) - 193RD LN NE
C1.5	PLAN/PROFILE (STORM/STREET) - 193RD LN NE/ABLE ST NE
C1.6	PLAN/PROFILE (STORM/STREET) - TAYLOR ST NE
C1.7	PLAN/PROFILE (STORM) - MISCELLANEOUS STORM
C1.8	PLAN/PROFILE (STORM) - MISCELLANEOUS STORM
C2.1	STREET INTERSECTION DETAILS
C3.1-C3.3	DETAILS
C4.1	COUNTY HIGHWAY 22 TURN LANE
C5.1-C5.2	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

TITLE SHEET, NOTES & LEGEND
VIKING PRESERVE

DRAWN BY:	DESIGN BY:
A.G.	A.G.
CHKD BY:	PROJ. NO.
C.W.P.	13-1445
ORIGINAL DATE:	
NOVEMBER 12, 2013	

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET, LOT, AND POND LAYOUT DJ
7-11-14	CITY REVIEW #2

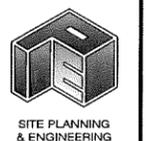
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM AN ACTIVE LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRELIMINARY

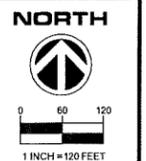
ADAM GANKEL
LIC. NO. 43863
DATE: 07.11.2014

VIKING PRESERVE
EAST BETHEL, MN
TITLE SHEET, NOTES & LEGEND

PREPARED FOR:
SHAW TRUCKING, INC.



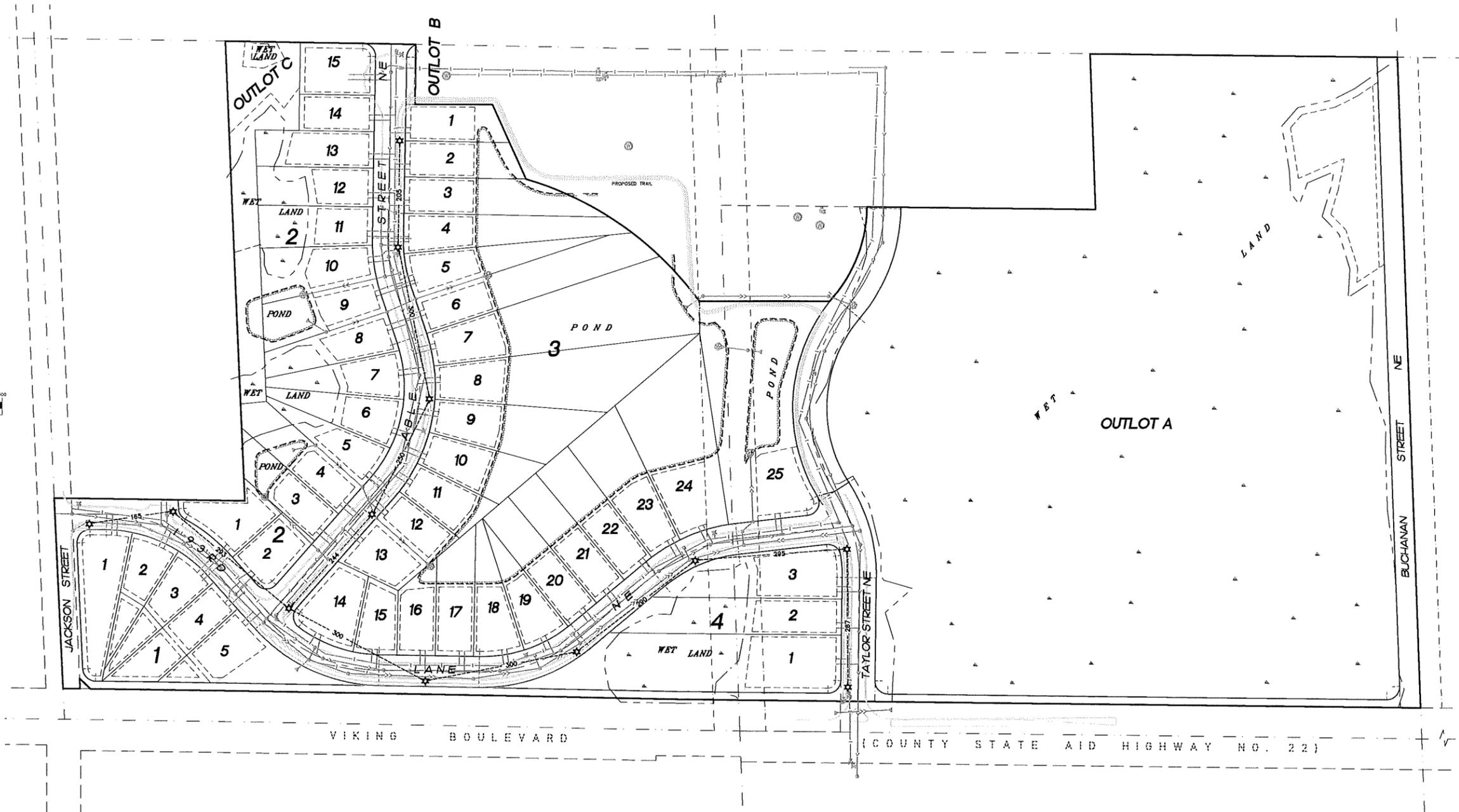
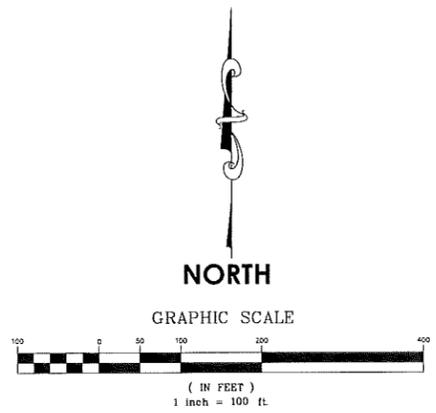
PLOWE
ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701



GO

PRELIMINARY LIGHTING LAYOUT

~of~ VIKING PRESERVE
 ~for~ SHAW TRUCKING, INC.
 18530 Buchanan Street N.E
 East Bethel, MN 55011



LEGEND

★ DENOTES PROPOSED STREET LIGHT (12 TOTAL)

NOTES

- PER CONNEXUS ENERGY, 300 FOOT MAXIMUM DISTANCE BETWEEN LIGHTS.
- FINAL LIGHTING PLAN AND DESIGN TO BE DONE BY CONNEXUS ENERGY.
- CONNEXUS ENERGY CONTACT IS DAN JOHNSON 763-323-4265.

E. G. RUD & SONS, INC.
 EST. 1977 Professional Land Surveyors
 6776 Lake Drive NE, Suite 110
 Lino Lakes, MN 55014
 Tel. (651) 361-8200 Fax (651) 361-8701

DRAWN BY: JEN	JOB NO: 13630PP	DATE: 7/11/14	
CHECK BY: JER	SCANNED <input type="checkbox"/>		
1			
2			
3			
NO.	DATE	DESCRIPTION	BY

S:\rud\CAD\13proj\13630PP\13630PP-LIGHTINGPLAN.dwg 7/11/2014 9:45:26 AM CDT

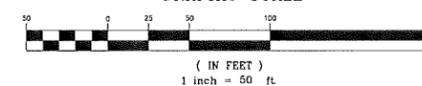
GRADING, DRAINAGE, AND EROSION CONTROL PLAN

~of~ VIKING PRESERVE
 ~for~ SHAW TRUCKING, INC.
 18530 Buchanan Street N.E.
 East Bethel, MN 55011

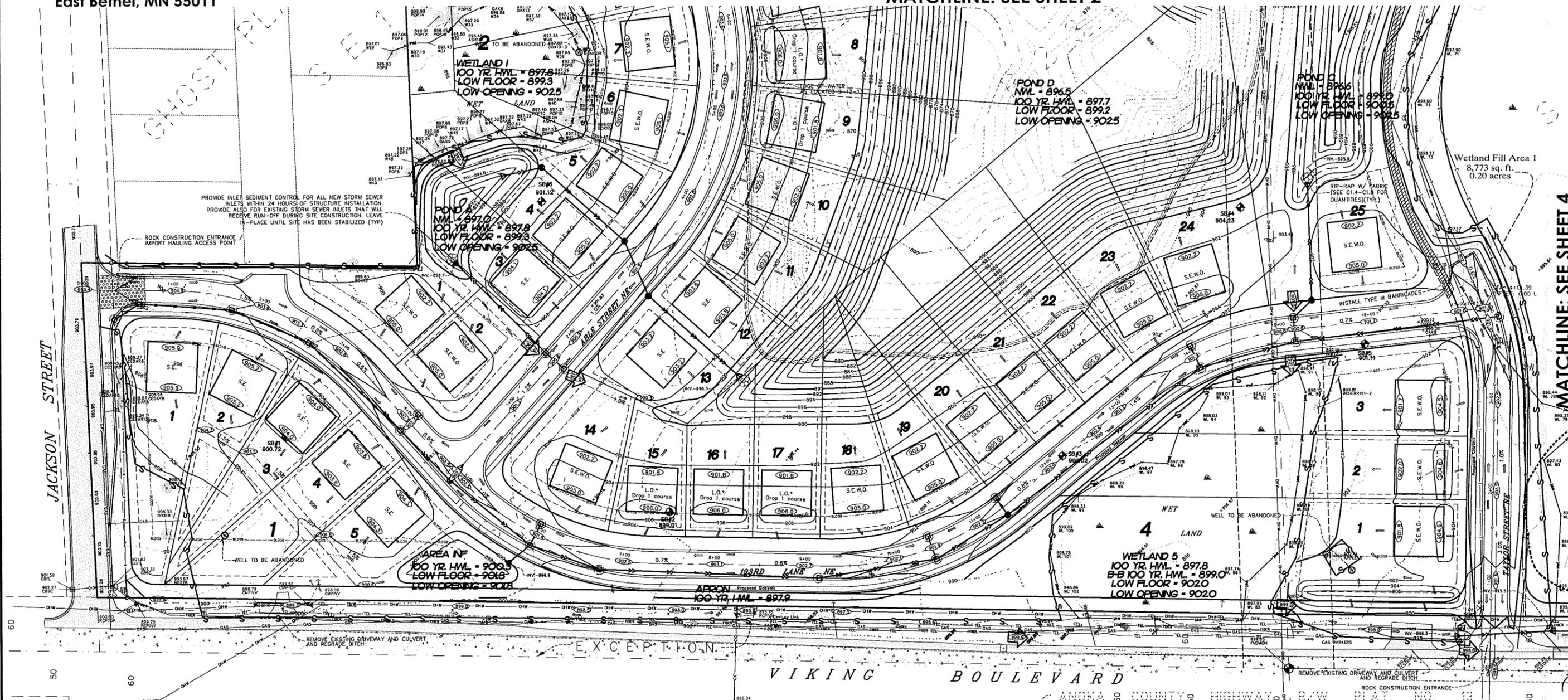
WETLAND NOTES

- AREA OF WETLAND FILL = 18,517 SQ. FT. (0.43 ACRES)

GRAPHIC SCALE



MATCHLINE: SEE SHEET 2



MATCHLINE: SEE SHEET 4

GRADING, LOT GRADING DETAILS AND PONDING SLOPES BY RUDS LAND SURVEYING, INC. I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

Jason E. Rud
 JASON E. RUD License No. 41578
 Date: 07-11-14

PONDING CALCULATIONS, EROSION CONTROL, REVEGETATION, AND STORM SEWER DESIGN BY PLOWE ENGINEERING, INC.

PLOWE ENGINEERING, INC.
 6776 LAKE DRIVE SUITE 110 LINO LAKES, MN 55014
 PHONE: (651) 361-8210 FAX: (651) 361-8701

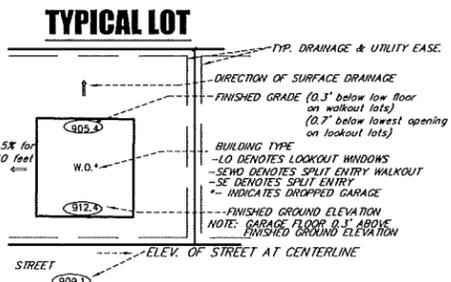
SITE PLANNING & ENGINEERING

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.

Adam Ginkel
 ADAM GINKEL
 DATE: 07.11.2014 LIC. NO. 43963

EROSION CONTROL / REVEGETATION SPECS.

- PRIOR TO ROUGH GRADING, INSTALL SILT STOP FENCE IN LOCATIONS SHOWN. ADDITIONAL SILT STOP FENCE WILL BE REQUIRED WHERE LOCAL CONDITIONS REQUIRE. INSTALL TREE PROTECTION AS DEEMED NECESSARY BY THE CITY FORESTER PRIOR TO ANY GRADING.
- ANY GRADING SHALL PROCEED ON AN AREA BY AREA BASIS TO MINIMIZE UNCOMPLETED AREAS.
- AS EACH AREA OUTSIDE THE STREET IS GRADED, PROVIDE NATIVE TOPSOIL, SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN SEVEN DAYS AFTER ROUGH GRADING.
- MAINTAIN AND REPAIR SILT STOP FENCES (INCLUDING REMOVAL OF ACCUMULATED SILT) UNTIL VEGETATION IS ESTABLISHED.
- SEE "STORM WATER POLLUTION PREVENTION PLAN" FOR ADDITIONAL EROSION CONTROL NOTES AND SITE SEQUENCING.



LEGEND

- DENOTES IRON MONUMENT FOUND AS LABELED
 - DENOTES IRON MONUMENT SET, MARKED RLS# 41578
 - DENOTES ANOKA COUNTY CAST IRON MONUMENT
 - DENOTES CATCH BASIN
 - DENOTES SANITARY SEWER MANHOLE
 - DENOTES HYDRANT
 - DENOTES GATE VALVE
 - DENOTES POWER POLE
 - DENOTES EXISTING SPOT ELEVATION
 - DENOTES SIGN
 - DENOTES LIGHT POLE
 - DENOTES TELEPHONE PEDESTAL
 - DENOTES FIBER OPTIC BOX
 - DENOTES GUY WIRE
 - DENOTES EMERGENCY OVERFLOW ELEVATION
 - DENOTES WELL
 - DENOTES DIRECTION OF DRAINAGE
 - DENOTES PROPOSED SPOT ELEVATION
 - DENOTES SOIL BORING BY ALLIED TESTING
 - DENOTES PROPOSED SILT / TREE PROTECTION FENCE
 - DENOTES STORM SEWER APRON
 - DENOTES WET LAND
 - DENOTES WOVEN WIRE FENCE
 - DENOTES EXISTING 2 FOOT CONTOURS
 - DENOTES PROPOSED 2 FOOT CONTOURS
 - DENOTES EXISTING SANITARY SEWER
 - DENOTES EXISTING STORM SEWER
 - DENOTES PROPOSED STORM SEWER
 - DENOTES EXISTING WATER MAIN
 - DENOTES OVERHEAD WIRE
 - DENOTES CONCRETE SURFACE
 - DENOTES BITUMINOUS SURFACE
 - DENOTES GRAVEL SURFACE
 - DENOTES EDGE OF WETLANDS AS DELINEATED BY EARTH SCIENCE ASSOCIATES, INC., SEPTEMBER 2013
 - DENOTES BUILDING SETBACK LINE
 - DENOTES PROPOSED RETAINING WALL
 - DENOTES WETLAND FILL
- NOTE: SEE PLAN / PROFILE DRAWINGS FOR STORM SEWER RIMS, INVERTS AND SIZES.

E.G. RUD & SONS, INC.
 EST. 1977 Professional Land Surveyors
 6776 Lake Drive NE, Suite 110 Lino Lakes, MN 55014
 Tel. (651) 361-8200 Fax (651) 361-8701

DRAWN BY: MUD	JOB NO: 13630PP	DATE: 11/12/13
CHECK BY: JER	SCANNED	
1	01/07/14	CITY COMMENTS
2	02/03/14	REVISED LAYOUT
3	07/11/14	CITY COMMENTS
NO.	DATE	DESCRIPTION

NORTH

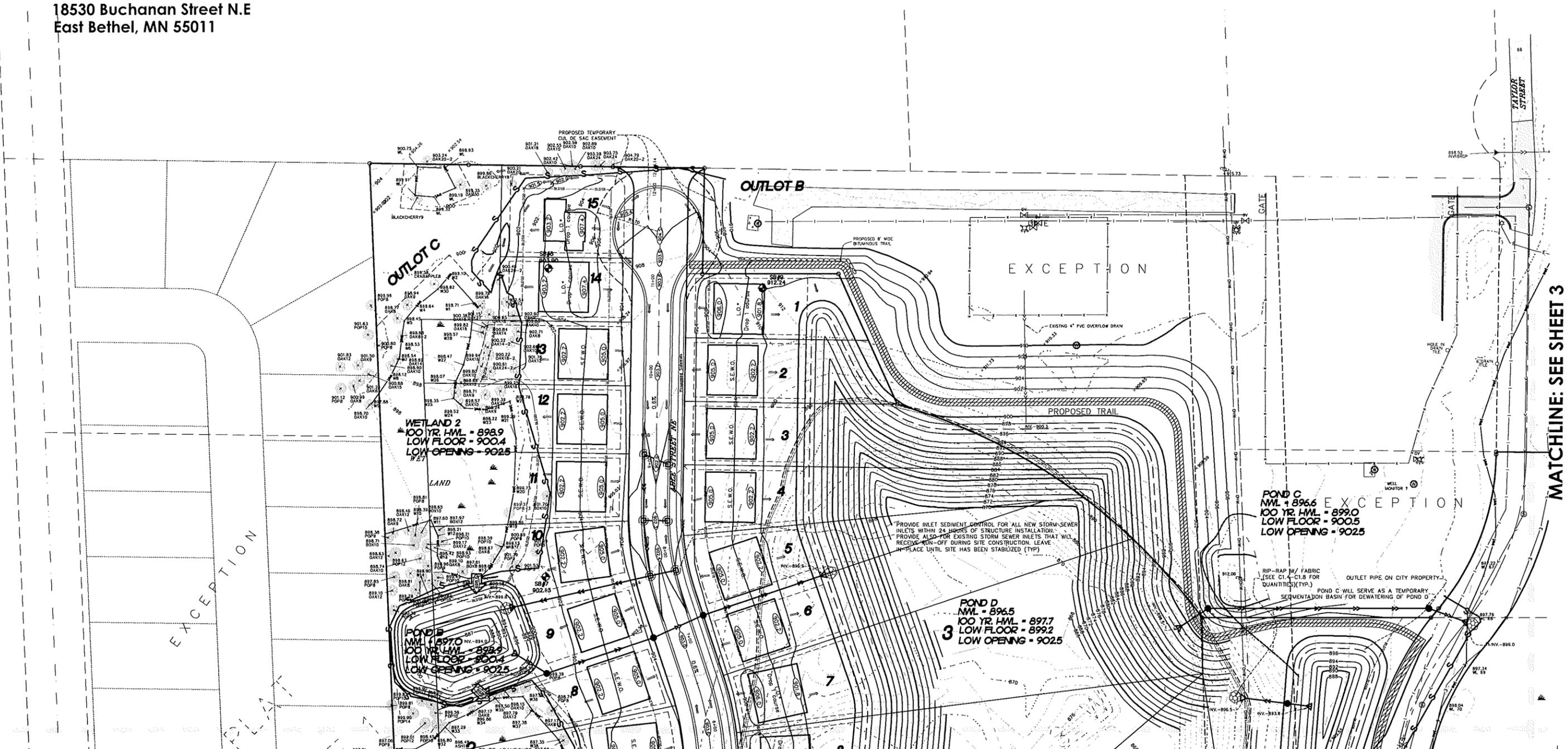
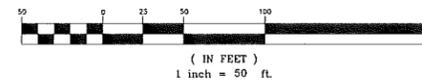
GRADING, DRAINAGE, AND EROSION CONTROL PLAN

~of~ VIKING PRESERVE
 ~for~ SHAW TRUCKING, INC.
 18530 Buchanan Street N.E.
 East Bethel, MN 55011

WETLAND NOTES

- AREA OF WETLAND FILL = 18,517 SQ. FT. (0.43 ACRES)

GRAPHIC SCALE



MATCHLINE: SEE SHEET 3

MATCHLINE: SEE SHEET 1

GRADING, LOT GRADING DETAILS AND
 PONDING SLOPES BY
 RUDS LAND SURVEYING, INC.
 I hereby certify that this survey, plan
 or report was prepared by me or under
 my direct supervision and that I am
 a duly Registered Land Surveyor under
 the laws of the State of Minnesota.

Jason E. Rud
 JASON E. RUD
 Date: 07-11-14 License No. 41578

PONDING CALCULATIONS, EROSION CONTROL,
 REVEGETATION, AND STORM SEWER DESIGN BY
 PLOWE ENGINEERING, INC.

PLOWE
 ENGINEERING, INC.
 6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

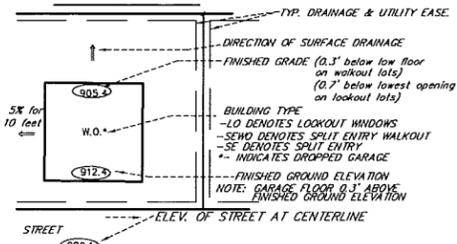
I HEREBY CERTIFY THAT THIS PLAN WAS
 PREPARED BY ME OR UNDER MY DIRECT
 SUPERVISION AND THAT I AM A DULY LICENSED
 PROFESSIONAL ENGINEER UNDER THE LAWS OF
 THE STATE OF MINNESOTA.

Adam Ginnel
 ADAM GINNEL
 DATE: 07.11.2014 LIC. NO. 43963

EROSION CONTROL / REVEGETATION SPECS.

- PRIOR TO ROUGH GRADING, INSTALL SILT STOP FENCE
 AT LOCATIONS SHOWN. ADDITIONAL SILT STOP FENCE
 WILL BE REQUIRED WHERE LOCAL CONDITIONS REQUIRE.
 INSTALL TREE PROTECTION AS DEEMED NECESSARY
 BY THE CITY FORESTER PRIOR TO ANY GRADING.
- ANY GRADING SHALL PROCEED ON AN AREA BY AREA
 BASIS TO MINIMIZE UNCOMPLETED AREAS.
- AS EACH AREA OUTSIDE THE STREET IS GRADED, PROVIDE
 NATIVE TOPSOIL, SEED, AND MULCH ANCHORED WITH A
 STRAIGHT SET DISC WITHIN SEVEN DAYS AFTER ROUGH GRADING.
- MAINTAIN AND REPAIR SILT STOP FENCES (INCLUDING
 REMOVAL OF ACCUMULATED SILT) UNTIL VEGETATION IS ESTABLISHED.
- SEE "STORM WATER POLLUTION PREVENTION PLAN" FOR ADDITIONAL
 EROSION CONTROL NOTES AND SITE SEQUENCING.

TYPICAL LOT



LEGEND

- DENOTES IRON MONUMENT FOUND AS LABELED
- DENOTES IRON MONUMENT SET, MARKED RLS# 41578
- DENOTES ANOKA COUNTY CAST IRON MONUMENT
- DENOTES CATCH BASIN
- DENOTES SANITARY SEWER MANHOLE
- DENOTES HYDRANT
- DENOTES GATE VALVE
- DENOTES POWER POLE
- x 852.36 DENOTES EXISTING SPOT ELEVATION
- DENOTES SIGN
- DENOTES LIGHT POLE
- DENOTES TELEPHONE PEDESTAL
- DENOTES FIBER OPTIC BOX
- DENOTES GUY WIRE
- DENOTES EMERGENCY OVERFLOW ELEVATION
- DENOTES WELL
- DENOTES DIRECTION OF DRAINAGE
- DENOTES PROPOSED SPOT ELEVATION
- DENOTES SOL BORING BY ALLIED TESTING
- S DENOTES PROPOSED SILT / TREE PROTECTION FENCE
- S DENOTES STORM SEWER APRON
- S DENOTES WET LAND
- S DENOTES WOVEN WIRE FENCE
- S DENOTES EXISTING 2 FOOT CONTOURS
- S DENOTES PROPOSED 2 FOOT CONTOURS
- S DENOTES EXISTING SANITARY SEWER
- S DENOTES EXISTING STORM SEWER
- S DENOTES PROPOSED STORM SEWER
- S DENOTES EXISTING WATER MAIN
- S DENOTES OVERHEAD WIRE
- S DENOTES CONCRETE SURFACE
- S DENOTES BITUMINOUS SURFACE
- S DENOTES GRAVEL SURFACE
- S DENOTES EDGE OF WETLANDS AS DELINEATED BY
 EARTH SCIENCE ASSOCIATES, INC., SEPTEMBER 2013
- S DENOTES BUILDING SETBACK LINE
- S DENOTES PROPOSED RETAINING WALL
- DENOTES WETLAND FILL

NOTE: SEE PLAN / PROFILE DRAWINGS FOR STORM
 SEWER RIMS, INVERTS AND SIZES.

E. G. RUD & SONS, INC.
 Professional Land Surveyors
 6776 Lake Drive NE, Suite 110
 Lino Lakes, MN 55014
 Tel. (651) 361-8200 Fax (651) 361-8701

NORTH

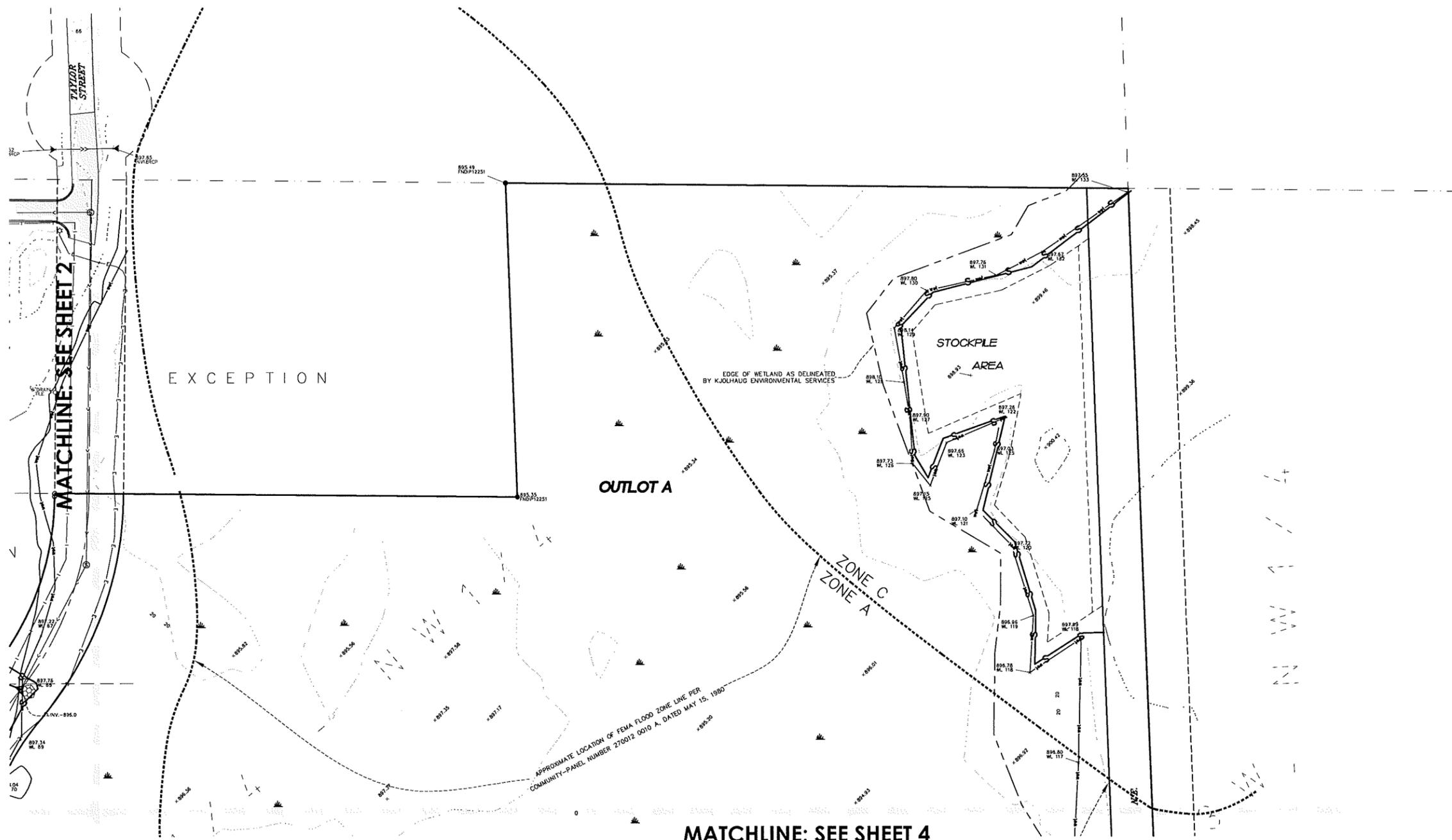
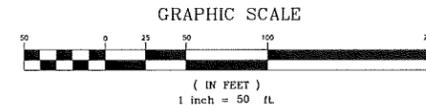
DRAWN BY: MUD	JOB NO: 13630PP	DATE: 11/12/13	
CHECK BY: JER	SCANNED		
1 01/07/14	CITY COMMENTS	MUD	
2 02/03/14	REVISED LAYOUT	MUD	
3 07/11/14	CITY COMMENTS	MUD	
NO.	DATE	DESCRIPTION	BY

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

~of~ VIKING PRESERVE
 ~for~ SHAW TRUCKING, INC.
 18530 Buchanan Street N.E
 East Bethel, MN 55011

WETLAND NOTES

- AREA OF WETLAND FILL = 18,517 SQ. FT. (0.43 ACRES)



GRADING, LOT GRADING DETAILS AND PONDING SLOPES BY RUDS LAND SURVEYING, INC. I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

Jason E. Rud
 Date: 07-11-14 License No. 41578

PONDING CALCULATIONS, EROSION CONTROL, REVEGETATION, AND STORM SEWER DESIGN BY PLOWE ENGINEERING, INC.

PLOWE ENGINEERING, INC.
 8776 LAKE DRIVE SUITE 110 LINO LAKES, MN 55014
 PHONE: (651) 361-8210 FAX: (651) 361-8701

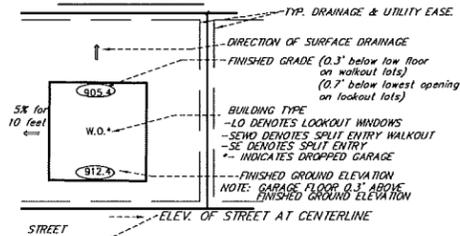
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Adam Ginkkel
 DATE: 07.11.2014 LIC. NO. 43963

EROSION CONTROL / REVEGETATION SPECS.

- PRIOR TO ROUGH GRADING, INSTALL SILT STOP FENCE IN LOCATIONS SHOWN. ADDITIONAL SILT STOP FENCE WILL BE REQUIRED WHERE LOCAL CONDITIONS REQUIRE. INSTALL TREE PROTECTION AS DEEMED NECESSARY BY THE CITY FORESTER PRIOR TO ANY GRADING.
- ANY GRADING SHALL PROCEED ON AN AREA BY AREA BASIS TO MINIMIZE UNCOMPLETED AREAS.
- AS EACH AREA OUTSIDE THE STREET IS GRADED, PROVIDE NATIVE TOPSOIL, SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN SEVEN DAYS AFTER ROUGH GRADING.
- MAINTAIN AND REPAIR SILT STOP FENCES (INCLUDING REMOVAL OF ACCUMULATED SILT) UNTIL VEGETATION IS ESTABLISHED.
- SEE "STORM WATER POLLUTION PREVENTION PLAN" FOR ADDITIONAL EROSION CONTROL NOTES AND SITE SEQUENCING.

TYPICAL LOT



MATCHLINE: SEE SHEET 4

LEGEND

- DENOTES IRON MONUMENT FOUND AS LABELED
- DENOTES IRON MONUMENT SET, MARKED RLS# 41578
- DENOTES ANOKA COUNTY CAST IRON MONUMENT
- DENOTES CATCH BASIN
- DENOTES SANITARY SEWER MANHOLE
- DENOTES HYDRANT
- DENOTES GATE VALVE
- DENOTES POWER POLE
- x 952.34 DENOTES EXISTING SPOT ELEVATION
- ☆ DENOTES SIGN
- ☆ DENOTES LIGHT POLE
- DENOTES TELEPHONE PEDESTAL
- DENOTES FIBER OPTIC BOX
- DENOTES GUY WIRE
- DENOTES EMERGENCY OVERFLOW ELEVATION
- DENOTES WELL
- DENOTES DIRECTION OF DRAINAGE
- DENOTES PROPOSED SPOT ELEVATION
- DENOTES SOIL BORING BY ALLIED TESTING
- DENOTES PROPOSED SILT / TREE PROTECTION FENCE
- DENOTES STORM SEWER APRON
- DENOTES WET LAND
- DENOTES HOVEN WIRE FENCE
- DENOTES EXISTING 2 FOOT CONTOURS
- DENOTES PROPOSED 2 FOOT CONTOURS
- DENOTES EXISTING SANITARY SEWER
- DENOTES EXISTING STORM SEWER
- DENOTES PROPOSED STORM SEWER
- DENOTES EXISTING WATER MAIN
- DENOTES OVERHEAD WIRE
- DENOTES CONCRETE SURFACE
- DENOTES BITUMINOUS SURFACE
- DENOTES GRAVEL SURFACE
- DENOTES EDGE OF WETLANDS AS DELINEATED BY EARTH SCIENCE ASSOCIATES, INC., SEPTEMBER 2013
- DENOTES BUILDING SETBACK LINE
- DENOTES PROPOSED RETAINING WALL
- DENOTES WETLAND FILL

NOTE: SEE PLAN / PROFILE DRAWINGS FOR STORM SEWER RIMS, INVERTS AND SIZES.

E.G. RUD & SONS, INC.
 EST. 1977 Professional Land Surveyors
 6776 Lake Drive NE, Suite 110
 Lino Lakes, MN 55014
 Tel. (651) 361-8200 Fax (651) 361-8701

DRAWN BY:	MUD	JOB NO:	13630PP	DATE:	11/12/13
CHECK BY:	JER	SCANNED			
1	01/07/14	CITY COMMENTS			MUD
2	02/03/14	REVISED LAYOUT			MUD
3	07/11/14	CITY COMMENTS			MUD
NO.	DATE	DESCRIPTION			BY

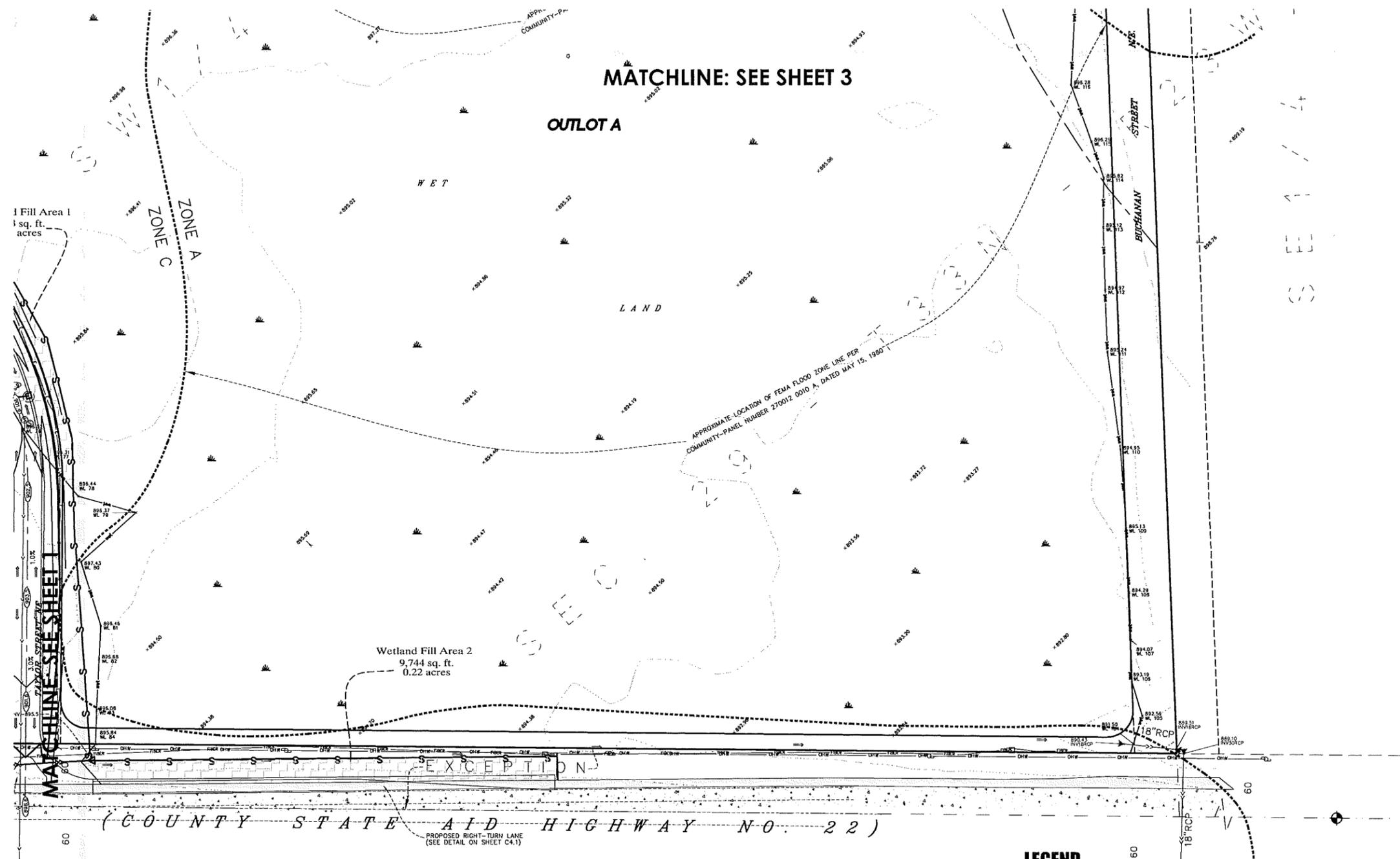
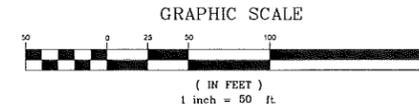
NORTH

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

~of~ VIKING PRESERVE
 ~for~ SHAW TRUCKING, INC.
 18530 Buchanan Street N.E.
 East Bethel, MN 55011

WETLAND NOTES

- AREA OF WETLAND FILL = 18,517 SQ. FT. (0.43 ACRES)



GRADING, LOT GRADING DETAILS AND PONDING SLOPES BY RUDS LAND SURVEYING, INC. I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

Jason E. Rud
 JASON E. RUD
 Date: 07-11-14 License No. 41578

PONDING CALCULATIONS, EROSION CONTROL, REVEGETATION, AND STORM SEWER DESIGN BY PLOWE ENGINEERING, INC.

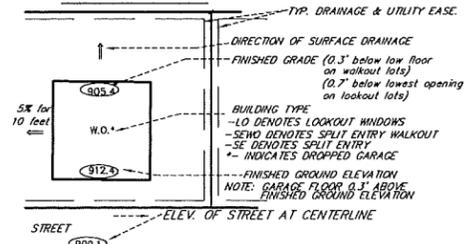
PLOWE ENGINEERING, INC.
 6776 LAKE DRIVE SUITE 110 LINO LAKES, MN 55014
 PHONE: (651) 361-8210 FAX: (651) 361-8701

SITE PLANNING & ENGINEERING

EROSION CONTROL / REVEGETATION SPECS.

- PRIOR TO ROUGH GRADING, INSTALL SILT STOP FENCE IN LOCATIONS SHOWN. ADDITIONAL SILT STOP FENCE WILL BE REQUIRED WHERE LOCAL CONDITIONS REQUIRE. INSTALL TREE PROTECTION AS DEEMED NECESSARY BY THE CITY FORESTER PRIOR TO ANY GRADING.
- ANY GRADING SHALL PROCEED ON AN AREA BY AREA BASIS TO MINIMIZE UNCOMPLETED AREAS.
- AS EACH AREA OUTSIDE THE STREET IS GRADED, PROVIDE NATIVE TOPSOIL, SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN SEVEN DAYS AFTER ROUGH GRADING.
- MAINTAIN AND REPAIR SILT STOP FENCES (INCLUDING REMOVAL OF ACCUMULATED SILT) UNTIL VEGETATION IS ESTABLISHED.
- SEE "STORM WATER POLLUTION PREVENTION PLAN" FOR ADDITIONAL EROSION CONTROL NOTES AND SITE SEQUENCING.

TYPICAL LOT



LEGEND

- DENOTES IRON MONUMENT FOUND AS LABELED
 - DENOTES IRON MONUMENT SET, MARKED RLS# 41578
 - DENOTES ANOKA COUNTY CAST IRON MONUMENT
 - DENOTES CATCH BASIN
 - DENOTES SANITARY SEWER MANHOLE
 - DENOTES HYDRANT
 - DENOTES GATE VALVE
 - DENOTES POWER POLE
 - DENOTES EXISTING SPOT ELEVATION
 - DENOTES SIGN
 - DENOTES LIGHT POLE
 - DENOTES TELEPHONE PEDESTAL
 - DENOTES FIBER OPTIC BOX
 - DENOTES GUY WIRE
 - DENOTES EMERGENCY OVERFLOW ELEVATION
 - DENOTES WELL
 - DENOTES DIRECTION OF DRAINAGE
 - DENOTES PROPOSED SPOT ELEVATION
 - DENOTES SOIL BORING BY ALLIED TESTING
 - S— DENOTES PROPOSED SILT / TREE PROTECTION FENCE
 - S— DENOTES STORM SEWER APRON
 - S— DENOTES WET LAND
 - S— DENOTES HOVEN WIRE FENCE
 - S— DENOTES EXISTING 2 FOOT CONTOURS
 - S— DENOTES PROPOSED 2 FOOT CONTOURS
 - S— DENOTES EXISTING SANITARY SEWER
 - S— DENOTES EXISTING STORM SEWER
 - S— DENOTES PROPOSED STORM SEWER
 - S— DENOTES EXISTING WATER MAIN
 - S— DENOTES OVER-HEAD WIRE
 - S— DENOTES CONCRETE SURFACE
 - S— DENOTES BITUMINOUS SURFACE
 - S— DENOTES GRAVEL SURFACE
 - S— DENOTES EDGE OF WETLANDS AS DELINEATED BY EARTH SCIENCE ASSOCIATES, INC., SEPTEMBER 2013
 - S— DENOTES BUILDING SETBACK LINE
 - S— DENOTES PROPOSED RETAINING WALL
 - DENOTES WETLAND FILL
- NOTE: SEE PLAN / PROFILE DRAWINGS FOR STORM SEWER RIMS, INVERTS AND SIZES.

E.G. RUD & SONS, INC.
 EST. 1977 Professional Land Surveyors
 6776 Lake Drive NE, Suite 110
 Lino Lakes, MN 55014
 Tel. (651) 361-8200 Fax (651) 361-8701

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.

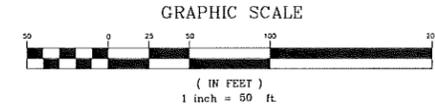
Adam Ginnel
 ADAM GINNEL
 DATE: 07.11.2014 LIC. NO. 43963

DRAWN BY: MWD	JOB NO: 13830PP	DATE: 11/12/13	
CHECK BY: JER	SCANNED		
1	01/07/14	CITY COMMENTS	MWD
2	02/03/14	REVISED LAYOUT	MWD
3	07/11/14	CITY COMMENTS	MWD
NO.	DATE	DESCRIPTION	BY

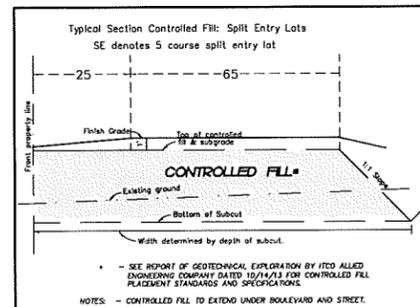
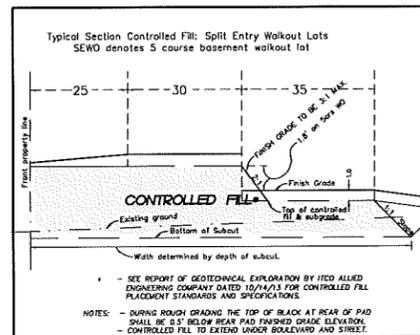
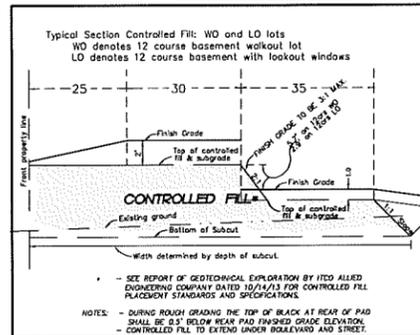
NORTH

LOT TABULATION, AND GRADING DETAILS

~of~ VIKING PRESERVE
 ~for~ SHAW TRUCKING, INC.
 18530 Buchanan Street N.E.
 East Bethel, MN 55011



LOT GRADING DETAIL



LOT INFORMATION TABULATION

VIKING PRESERVE												
Lot	Block	Proposed House Type	Street Elevation	Gar. Floor Elevation	Lowest Opening	Lowest Floor	100 yr. flood Elevation	Overflow Elevation	Mottling Elevation	Water Elevation	Highest Anticipated Water Elevation	SOURCE
1	1	S.E.	904.7	906.2	906.6	903.4	897.9	899.9	895.7	888.2	891.2	Boring 1
2	1	S.E.	903.9	905.5	905.9	902.7	897.9	899.9	895.7	888.2	891.2	Boring 1
3	1	S.E.	902.8	904.3	904.7	901.5	897.9	899.9	895.7	888.2	891.2	Boring 1
4	1	S.E.	902.4	903.9	904.3	901.1	897.9	899.9	895.7	888.2	891.2	Boring 1
5	1	S.E.	902.5	904.6	905.0	901.8	900.3	899.9	895.7	888.2	891.2	Boring 1

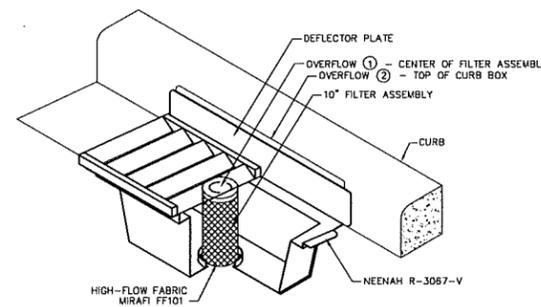
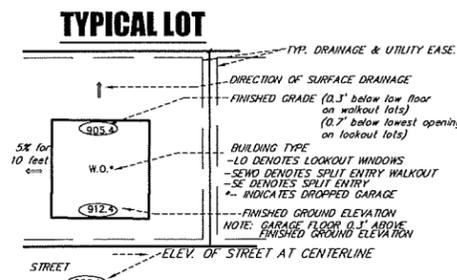
VIKING PRESERVE												
Lot	Block	Proposed House Type	Street Elevation	Gar. Floor Elevation	Lowest Opening	Lowest Floor	100 yr. flood Elevation	Overflow Elevation	Mottling Elevation	Water Elevation	Highest Anticipated Water Elevation	SOURCE
1	2	S.E.W.O.	902.7	905.3	902.5	902.5	897.8	901.0	898.6	891.1	894.1	Boring 6
2	2	S.E.W.O.	902.4	905.3	902.5	902.5	897.8	901.0	898.6	891.1	894.1	Boring 6
3	2	S.E.	901.2	904.4	904.8	901.6	897.8	901.0	898.6	891.1	894.1	Boring 6
4	2	S.E.W.O.	901.8	905.3	902.5	902.5	897.8	901.0	898.6	891.1	894.1	Boring 6
5	2	S.E.W.O.	902.6	905.3	902.5	902.5	897.8	901.0	898.6	891.1	894.1	Boring 6
6	2	S.E.W.O.	903.6	905.4	902.6	902.6	897.8	901.0	898.6	891.1	894.1	Boring 6
7	2	S.E.W.O.	903.7	905.4	902.6	902.6	897.8	901.0	898.6	891.1	894.1	Boring 6
8	2	S.E.W.O.	903.3	905.3	902.5	902.5	898.9	901.0	897.1	889.6	892.6	Boring 7
9	2	S.E.W.O.	902.8	905.3	902.5	902.5	898.9	901.0	897.1	889.6	892.6	Boring 7
10	2	S.E.W.O.	902.4	905.3	902.5	902.5	898.9	901.0	897.1	889.6	892.6	Boring 7
11	2	S.E.W.O.	902.6	905.3	902.5	902.5	898.9	901.0	897.1	889.6	892.6	Boring 7
12	2	S.E.W.O.	903.0	905.3	902.5	902.5	898.9	901.0	897.1	889.6	892.6	Boring 7
13	2	S.E.W.O.	903.5	905.3	902.5	902.5	898.9	901.0	897.1	889.6	892.6	Boring 7
14	2	L.O.*	904.0	907.7	903.9	900.7	898.9	901.0	897.1	889.6	892.6	Boring 7
15	2	L.O.*	905.4	907.7	903.9	900.7	898.9	901.0	897.1	889.6	892.6	Boring 7

VIKING PRESERVE												
Lot	Block	Proposed House Type	Street Elevation	Gar. Floor Elevation	Lowest Opening	Lowest Floor	100 yr. flood Elevation	Overflow Elevation	Mottling Elevation	Water Elevation	Highest Anticipated Water Elevation	SOURCE
1	3	L.O.*	903.6	906.3	902.5	899.3	897.7	901.0	NA	893.2	896.2	Boring 9
2	3	S.E.W.O.	903.3	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
3	3	S.E.W.O.	902.9	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
4	3	S.E.W.O.	902.5	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
5	3	S.E.W.O.	902.8	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
6	3	S.E.W.O.	903.2	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
7	3	L.O.*	903.6	906.3	902.5	899.3	897.7	901.0	NA	893.2	896.2	Boring 9
8	3	L.O.*	903.8	906.3	902.5	899.3	897.7	901.0	NA	893.2	896.2	Boring 9
9	3	L.O.*	903.8	906.3	902.5	899.3	897.7	901.0	NA	893.2	896.2	Boring 9
10	3	S.E.W.O.	903.3	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
11	3	S.E.W.O.	902.7	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
12	3	S.E.	902.4	904.1	904.5	901.3	897.7	901.0	NA	893.2	896.2	Boring 9
13	3	S.E.	901.5	903.5	903.9	900.7	897.7	901.0	NA	893.2	896.2	Boring 9
14	3	S.E.W.O.	902.2	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
15	3	L.O.*	902.8	906.3	902.5	899.3	897.7	901.0	NA	893.2	896.2	Boring 9
16	3	L.O.*	903.1	906.3	902.5	899.3	897.7	901.0	NA	893.2	896.2	Boring 9
17	3	L.O.*	902.9	906.3	902.5	899.3	897.7	901.0	NA	893.2	896.2	Boring 9
18	3	S.E.W.O.	902.4	905.3	902.5	902.5	897.7	901.0	NA	893.2	896.2	Boring 9
19	3	S.E.W.O.	902.2	905.3	902.5	902.5	897.7	901.0	897.5	891.0	894.0	Boring 3
20	3	S.E.W.O.	902.9	905.3	902.5	902.5	897.7	901.0	897.5	891.0	894.0	Boring 3
21	3	S.E.W.O.	903.4	905.3	902.5	902.5	897.7	901.0	897.5	891.0	894.0	Boring 3
22	3	S.E.W.O.	903.2	905.3	902.5	902.5	897.7	901.0	897.5	891.0	894.0	Boring 3
23	3	S.E.W.O.	902.3	905.3	902.5	902.5	897.7	901.0	897.5	891.0	894.0	Boring 3
24	3	S.E.W.O.	901.6	905.3	902.5	902.5	899.0	901.0	896.1	895.1	896.1	Boring 5
25	3	S.E.W.O.	901.4	905.3	902.5	902.5	899.0	901.0	896.1	895.1	896.1	Boring 5

VIKING PRESERVE												
Lot	Block	Proposed House Type	Street Elevation	Gar. Floor Elevation	Lowest Opening	Lowest Floor	B-B flood Elevation	Overflow Elevation	Mottling Elevation	Water Elevation	Highest Anticipated Water Elevation	SOURCE
1	4	S.E.W.O.	903.4	904.9	902.1	902.1	899.0	899.0	896.1	895.1	896.1	Boring 5
2	4	S.E.W.O.	903.5	905.1	902.3	902.3	899.0	899.0	896.1	895.1	896.1	Boring 5
3	4	S.E.W.O.	902.7	904.8	902.0	902.0	899.0	899.0	896.1	895.1	896.1	Boring 5

LOWEST FLOOR / OPENING NOTES:

- Minimum Low Floor Elevation - 1.5 feet above 100 year HWL
3.0 feet above highest anticipated water table
3.0 feet above 100 year back to back HWL
3.0 feet above mottled soils.
- Minimum Lowest Opening - 1.5 feet above emergency overflow elevation



WIMCO INLET PROTECTION
 N.T.S.

GRADING, LOT GRADING DETAILS AND PONDING SLOPES BY RUDS LAND SURVEYING, INC. I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

JASON E. RUD
 Date: 07-11-14 License No. 41578

PONDING CALCULATIONS, EROSION CONTROL, REVEGETATION, AND STORM SEWER DESIGN BY PLOWE ENGINEERING, INC.

PLOWE ENGINEERING, INC.
 6776 LAKE DRIVE SUITE 110 LINO LAKES, MN 55014
 PHONE: (651) 361-8210 FAX: (651) 361-8701

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.

ADAM GINKEL
 DATE: 07.11.2014 LIC. NO. 43963

E.G. RUD & SONS, INC.
 EST. 1977 Professional Land Surveyors
 6776 Lake Drive NE, Suite 110 Lino Lakes, MN 55014
 Tel. (651) 361-8200 Fax (651) 361-8701

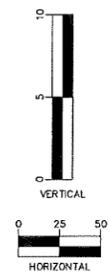
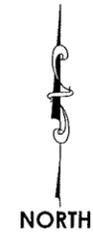
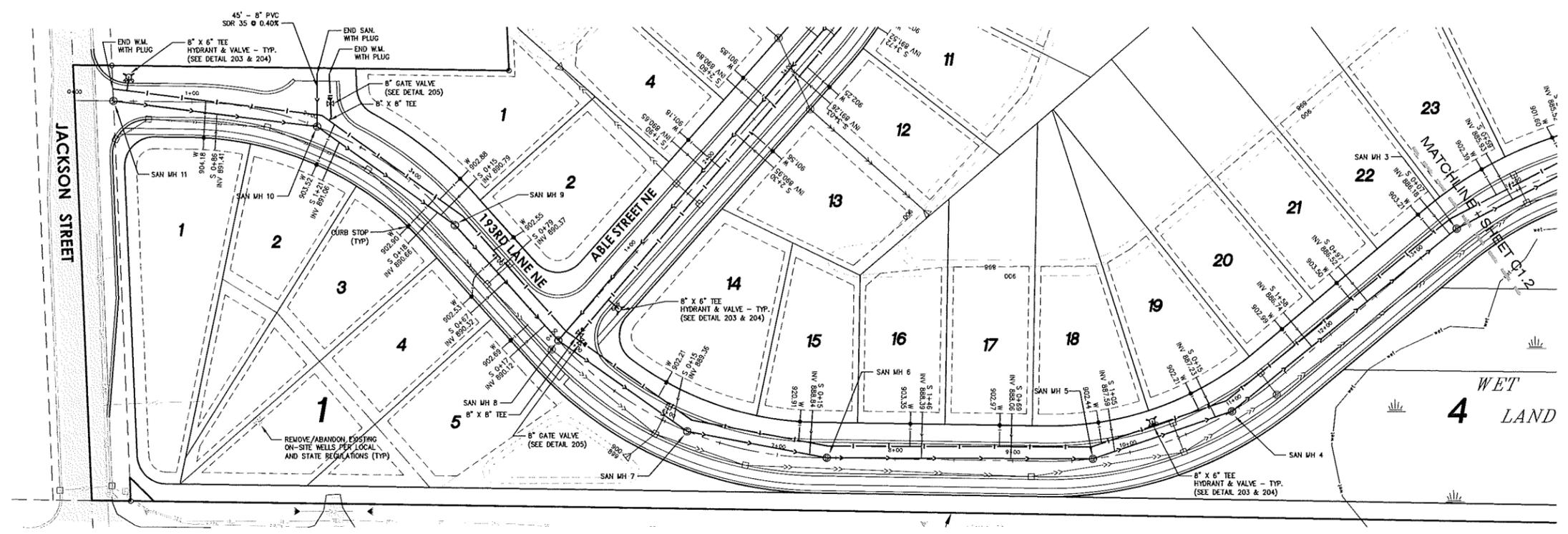
NORTH

DRAWN BY: MWD	JOB NO: 13630PP	DATE: 11/12/13
CHECK BY: JER	SCANNED	
1	01/07/14	CITY COMMENTS
2	02/03/14	REVISED LAYOUT
3	07/11/14	CITY COMMENTS
NO.	DATE	DESCRIPTION

SEE SHEET C0 FOR LEGEND AND GENERAL CONSTRUCTION NOTES

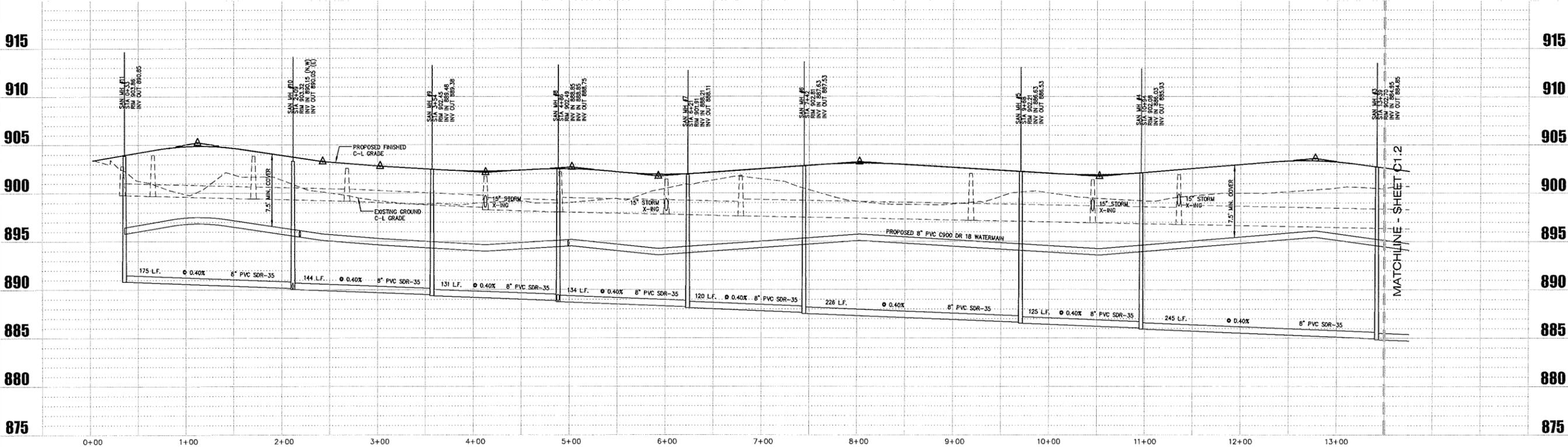
SEE SHEET C3.1 FOR WATER AND SANITARY SEWER DETAILS

DRAWN BY: A.G.
 DESIGN BY: A.G.
 CHCKD BY: PROJ. NO.
 C.W.P. 13-1445
 ORIGINAL DATE:
 NOVEMBER 12, 2013



Know what's below.
 Call before you dig.

193rd LANE N.E.



DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET, LOT, AND POND LAYOUT D.I.
7-11-14	CITY REVIEW #2

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.
ADAM GANKEL
 LICENSE NO. 43963
 DATE: 07.11.2014

VIKING PRESERVE
 EAST BETHEL, MN
 PLAN PROFILE (SANITARY/WATER)
 193RD LANE NE

PREPARED FOR:
SHAW TRUCKING, INC.

PLOWE ENGINEERING, INC.
 8775 LAKE DRIVE
 SUITE 110
 LINDO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

PLAN/PROFILE - 193RD LANE NE
 (SANITARY SEWER & WATERMAIN)
 VIKING PRESERVE

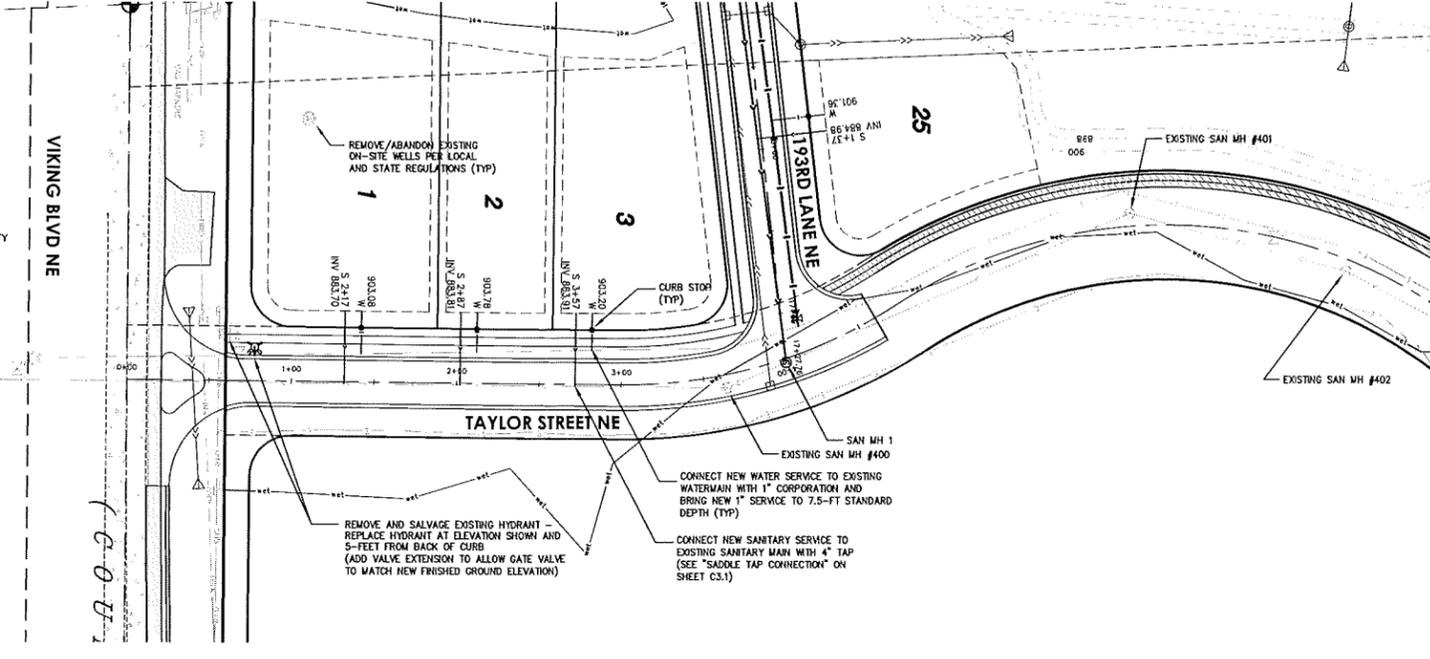
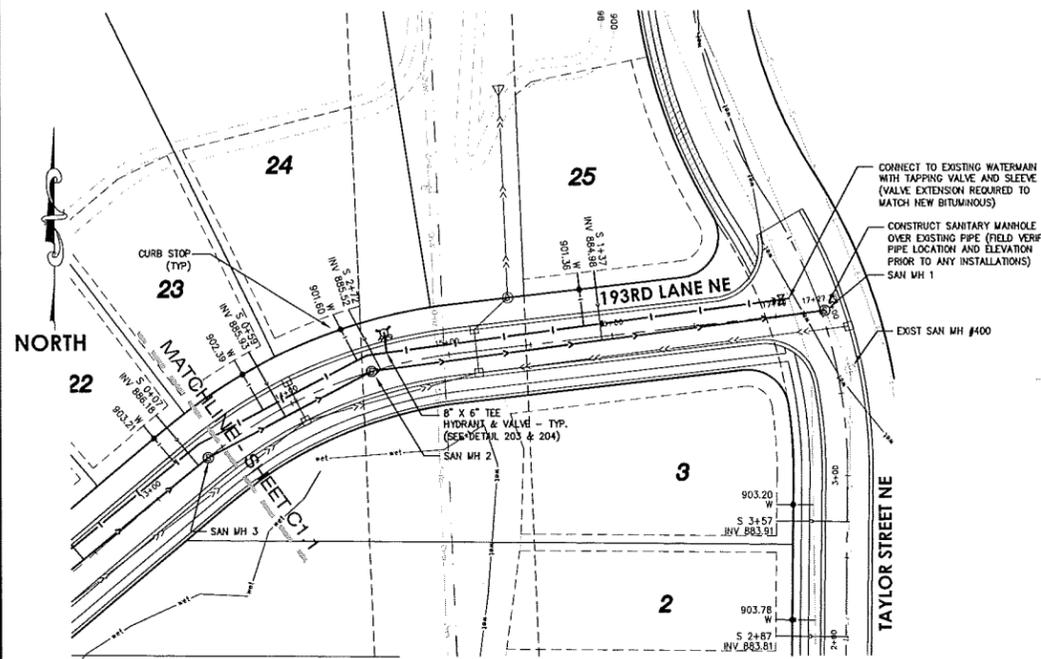
C1.1

SEE SHEET C0 FOR LEGEND AND GENERAL CONSTRUCTION NOTES

SEE SHEET C3.1 FOR WATER AND SANITARY SEWER DETAILS

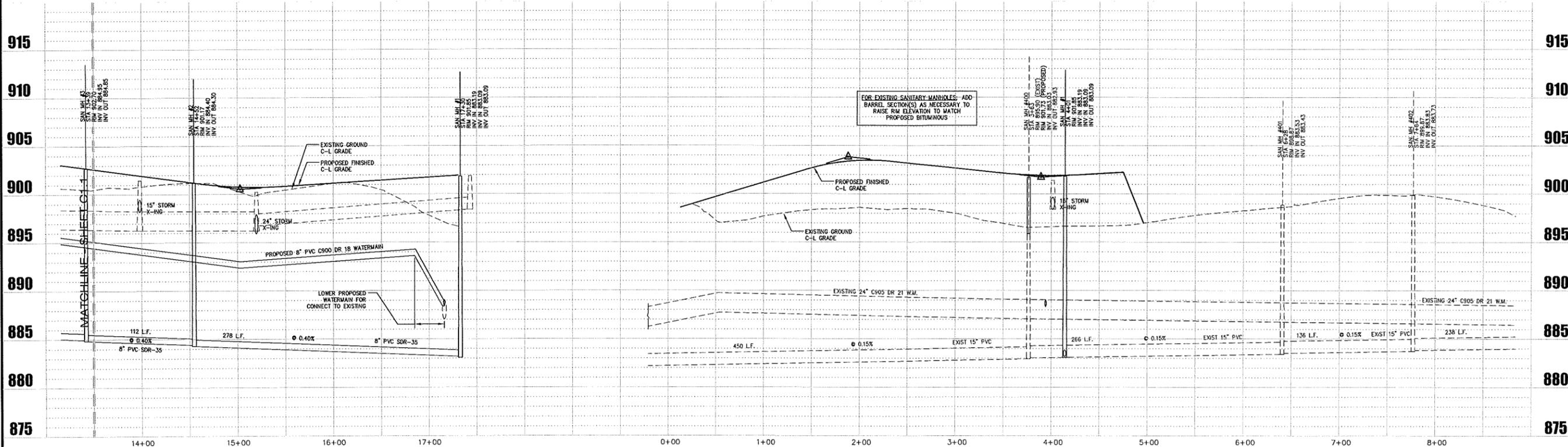


Know what's below.
Call before you dig.



193rd LANE N.E.

TAYLOR STREET N.E.



PLAN/PROFILE - 193RD LANE NE/TAYLOR STREET NE
(SANITARY SEWER & WATERMAIN)
VIKING PRESERVE

DRAWN BY:	DESIGN BY:
A.G.	A.G.
CHKD BY:	PROJ. NO.
C.W.P.	13-1445
ORIGINAL DATE:	
NOVEMBER 12, 2013	

DATE	REVISION DESCRIPTION
1-2-14	CITY REVIEW #1
2-3-14	STREET LAYOUT AND POND LAYOUT D1
7-11-14	CITY REVIEW #2

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ADAM GANDEL
DATE: 02.03.2014 LIC. NO. 439583

VIKING PRESERVE
EAST BETHEL, MN
PLAN PROFILE (SANITARY/WATER)
193RD LANE NE & TAYLOR STREET NE

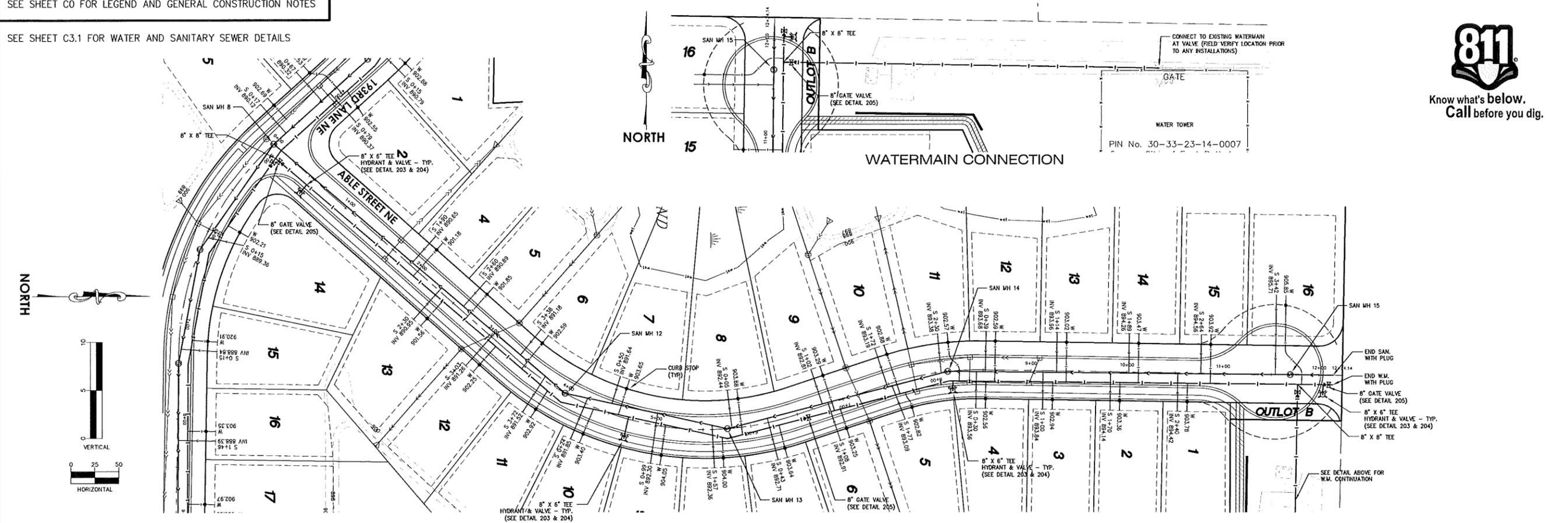
PREPARED FOR:
SHAW TRUCKING, INC.

Plowe
ENGINEERING, INC.
0776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-0701

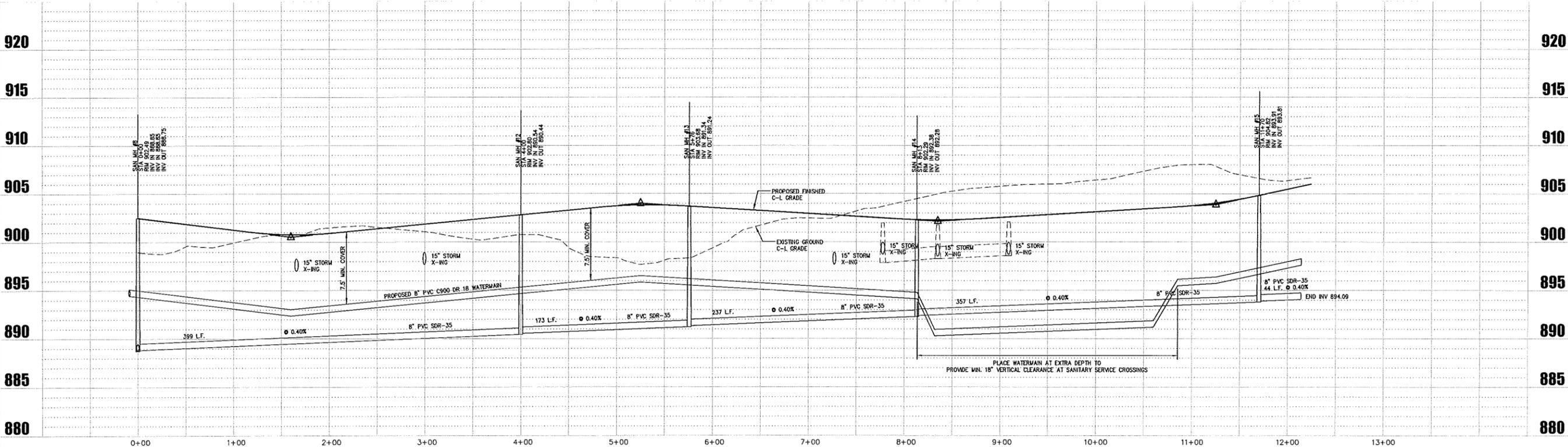
C1.2

SEE SHEET C0 FOR LEGEND AND GENERAL CONSTRUCTION NOTES

SEE SHEET C3.1 FOR WATER AND SANITARY SEWER DETAILS



ABLE STREET N.E.



PLAN/PROFILE - ABLE STREET NE
(SANITARY SEWER & WATERMAIN)
VIKING PRESERVE



DRAWN BY: A.G.
DESIGN BY: A.G.
CHCKD BY: PROJ. NO.
C.W.P. 13-1445
ORIGINAL DATE:
NOVEMBER 12, 2013

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET, LOT, AND POND LAYOUT D.I.
7-1-14	CITY REVIEW #2

I HEREBY CERTIFY THAT THE PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF MINNESOTA.

ADAM GANKEL
L.C. NO. 43953
DATE: 02-03-2014

VIKING PRESERVE
EAST BETHEL, MN
PLAN PROFILE (SANITARY/WATERMAIN)
ABLE STREET NE

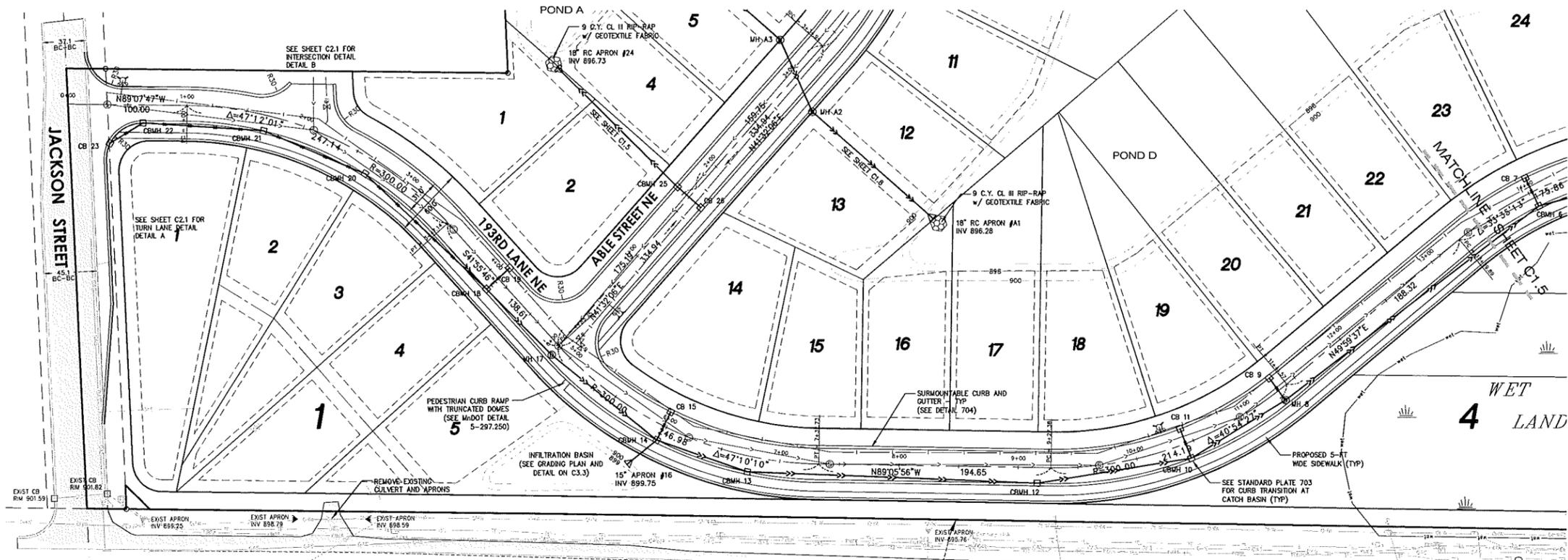
PREPARED FOR:
SHAW TRUCKING, INC.

PLOWE
ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701

SEE SHEET C0 FOR LEGEND AND GENERAL CONSTRUCTION NOTES

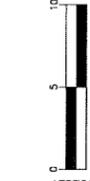
SEE SHEETS C3.2 & C3.3 FOR STORM SEWER AND STREET DETAILS

DRAWN BY:	DESIGN BY:
A.G.	A.G.
CHKD BY:	PROJ. NO.
C.W.P.	13-1446
ORIGINAL DATE:	
NOVEMBER 12, 2013	



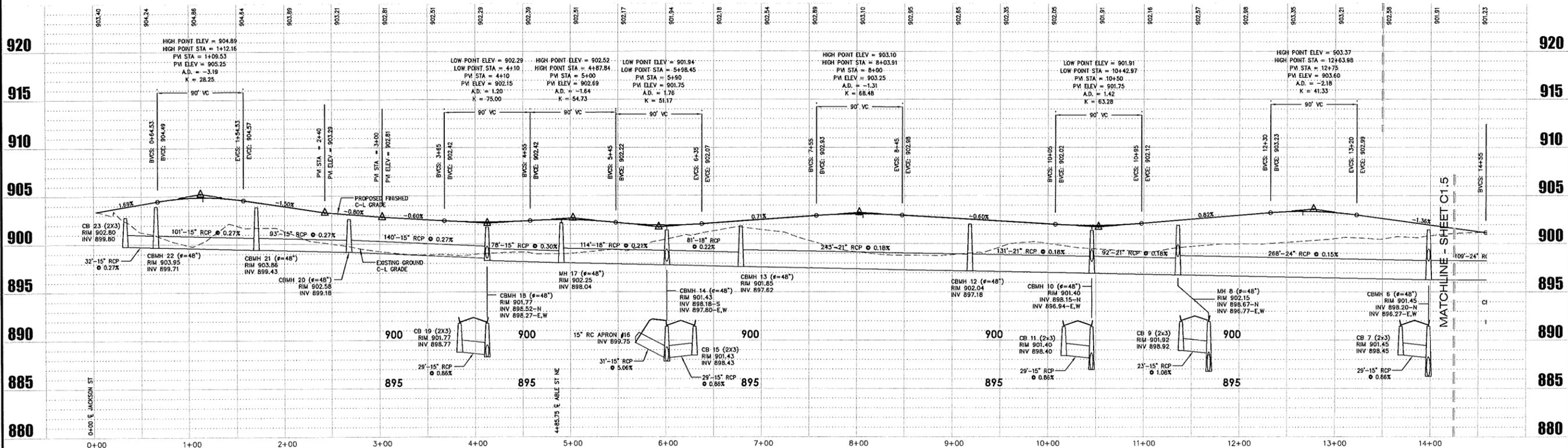
BENCHMARK

MNDOT NAME: DENN MNDT ELEV. = 899.21 (NAVD88)
 1.5 MILES NORTH OF HAM LAKE, AT TRUNK HIGHWAY 65 MILEPOINT 23.2, 1.5 MILES NORTH ALONG TRUNK HIGHWAY 65 FROM JUNCTION OF TRUNK HIGHWAY 65 AND COUNTY ROAD 18 (CROSSTOWN BLVD), 70 FEET EAST OF TRUNK HIGHWAY 65, 61.1 FEET NORTHWEST OF WESTERN MOST LEG OF ANTIQUES SIGN, 22.5 FEET NORTH OF POWER POLE, 31.5 FEET WEST-SOUTHWEST OF RIGHT-OF-WAY POST, 9.4 FEET SOUTHWEST OF RIGHT-OF-WAY POST, 3.0 FEET NORTH OF WITNESS POST.



Know what's below.
Call before you dig.

193rd LANE N.E.



PLAN/PROFILE - 193RD LANE NE
(STORM SEWER & STREET)
VIKING PRESERVE

I HEREBY CERTIFY THAT THE 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.

ADAM GANKEL
L.C. NO. 43983
DATE: 08.03.2014

VIKING PRESERVE
EAST BETHEL, MN
PLAN PROFILE (STORM/STREET)
193RD LANE NE

PREPARED FOR:
SHAW TRUCKING, INC.

SITE PLANNING & ENGINEERING

PLOWE
ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014

PHONE: (651) 361-8210
FAX: (651) 361-8701

C1.4

SEE SHEET C0 FOR LEGEND AND GENERAL CONSTRUCTION NOTES

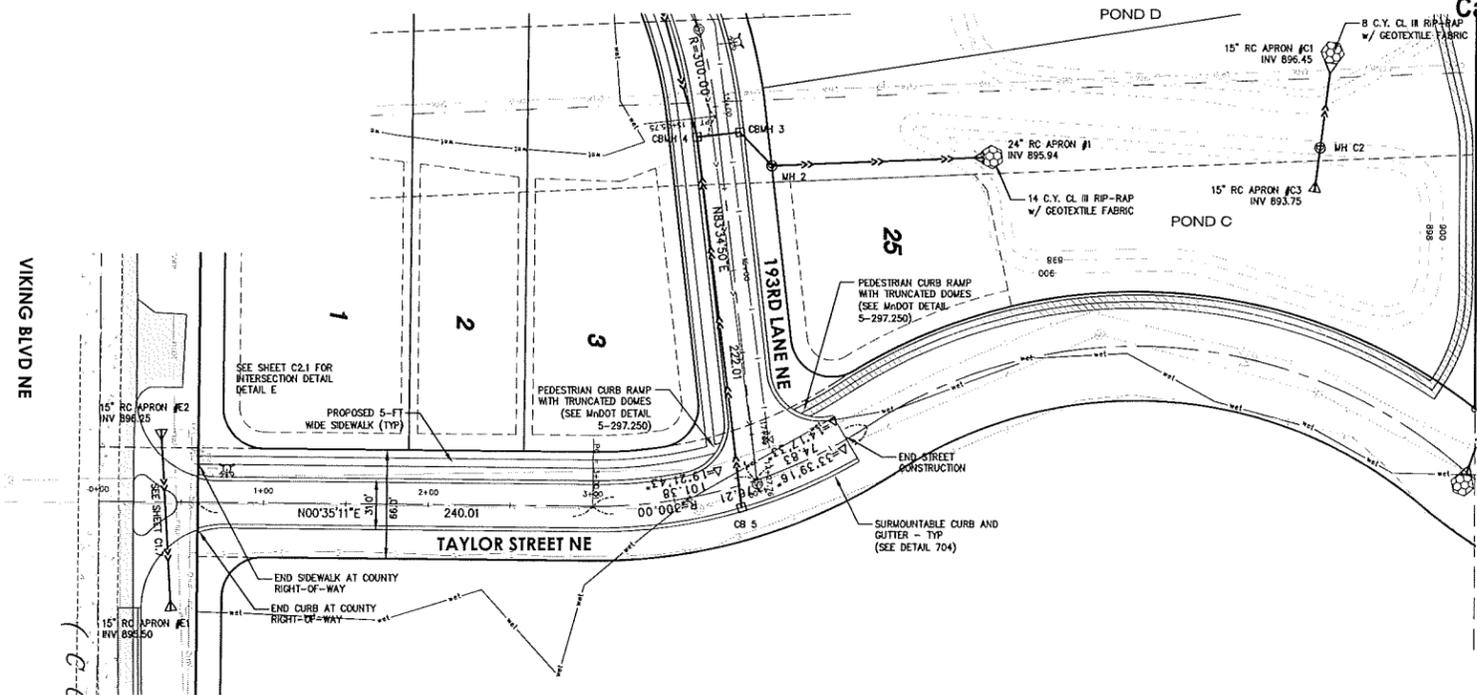
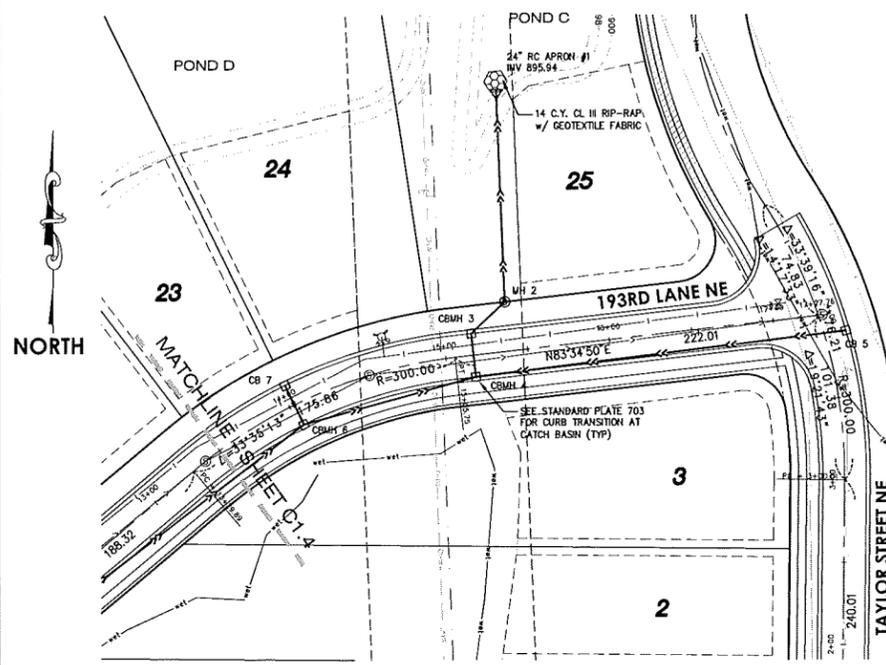
SEE SHEET C3.1 FOR WATER AND SANITARY SEWER DETAILS

BENCHMARK

MNDOT NAME: DENN MNDT ELEV. = 899.21 (NAVD88)
 1.5 MILES NORTH OF HAM LAKE, AT TRUNK HIGHWAY 65 MILEPOINT 23.2, 1.5 MILES NORTH ALONG TRUNK HIGHWAY 65 FROM JUNCTION OF TRUNK HIGHWAY 65 AND COUNTY ROAD 18 (CROSSTOWN BLVD), 70 FEET EAST OF TRUNK HIGHWAY 65, 61.1 FEET NORTHWEST OF WESTERN MOST LEG OF ANTIQUES SIGN, 22.5 FEET NORTH OF POWER POLE, 31.5 FEET WEST-SOUTHWEST OF RIGHT-OF-WAY POST, 9.4 FEET SOUTHWEST OF RIGHT-OF-WAY POST, 3.0 FEET NORTH OF WITNESS POST.

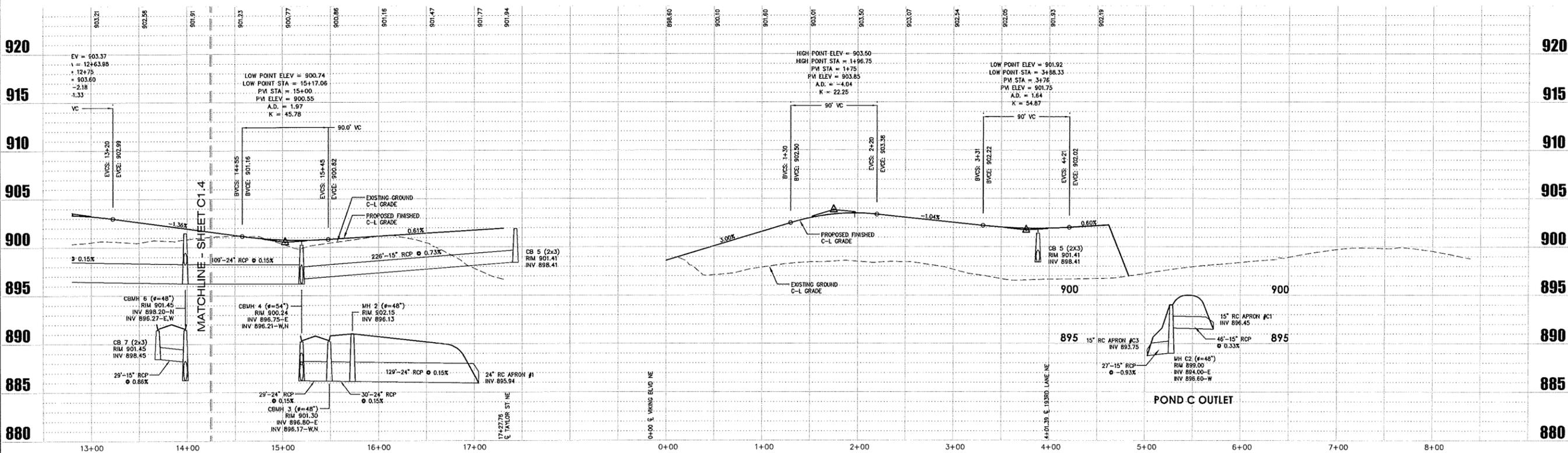


Know what's below.
 Call before you dig.



193rd LANE N.E.

TAYLOR STREET N.E.



PLAN/PROFILE - 193RD LANE NE/TAYLOR STREET NE
 (STORM SEWER & STREET)
 VIKING PRESERVE

DRAWN BY:	DESIGN BY:
A.G.	A.G.
CHKD BY:	PROJ. NO.
C.W.P.	13-1446
ORIGINAL DATE:	
NOVEMBER 12, 2013	

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET LOT AND POND LAYOUT D1
7-11-14	CITY REVIEW #2

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.

ADAM GANKEL
 LICENSE NO. 43963
 DATE: 08.03.2014

VIKING PRESERVE
 EAST BETHEL, MN
 PLAN PROFILE (STORM/STREET)
 193RD LANE NE & TAYLOR STREET NE

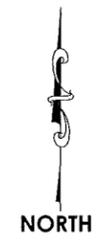
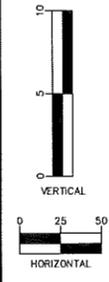
PREPARED FOR:
SHAW TRUCKING, INC.

SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.
 6776 LAKE DRIVE
 SUITE 110
 LINDO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

C1.5

SEE SHEET C0 FOR LEGEND AND GENERAL CONSTRUCTION NOTES



Know what's below.
Call before you dig.

DRAWN BY:	DESIGN BY:
A.G.	A.G.
CHECKED BY:	PROJ. NO.
C.W.P.	13-1445
ORIGINAL DATE:	
NOVEMBER 12, 2013	

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET, LOT AND POND LAYOUT D.I.
7-11-14	CITY REVIEW #2

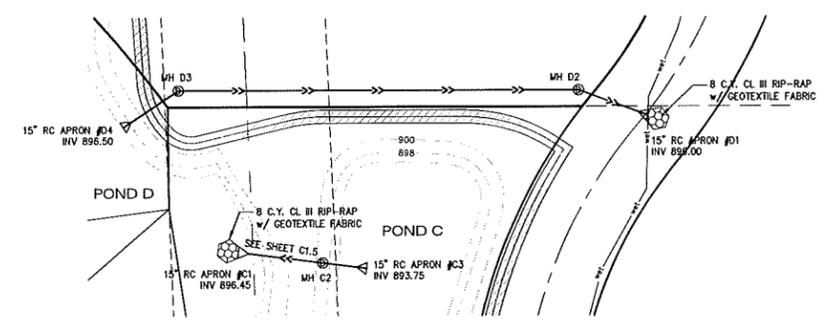
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ADAM GANIKEL
DATE: 02.05.2014 LIC. NO. 43968

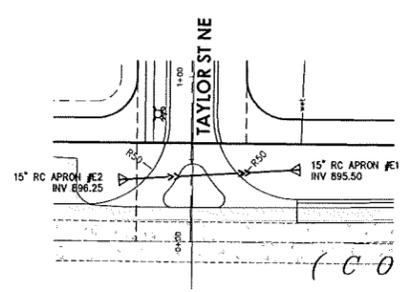
VIKING PRESERVE
EAST BETHEL, MN
PLAN PROFILE (STORM SEWER)
MISCELLANEOUS

PREPARED FOR:
SHAW TRUCKING, INC.

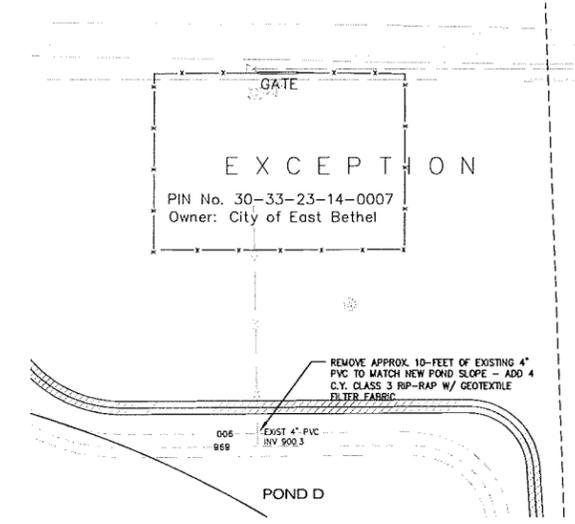
PLOWE
ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701



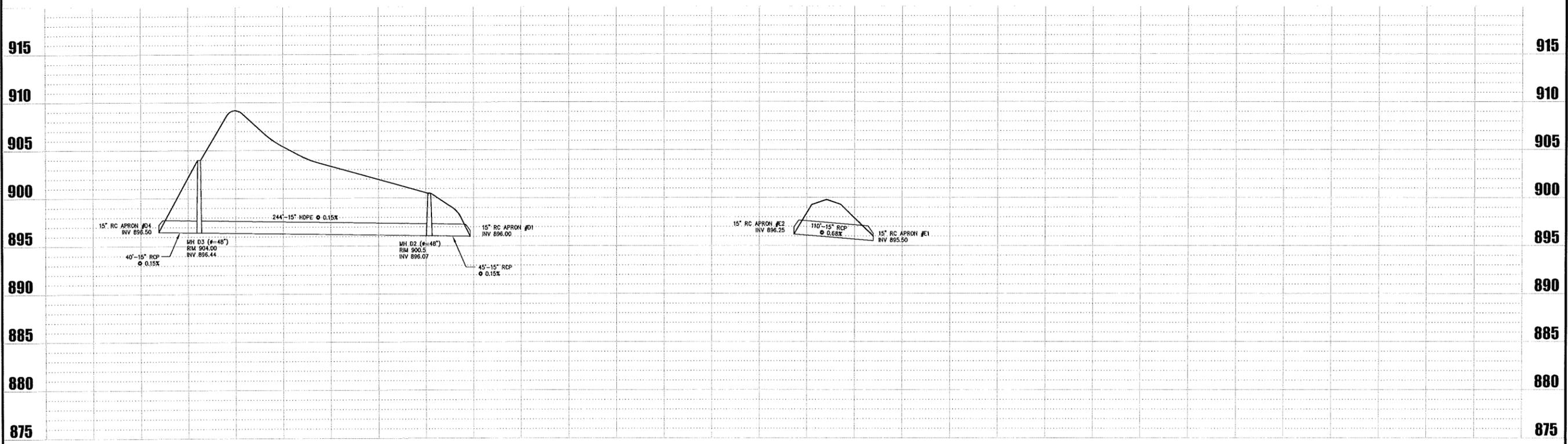
POND "D" OUTLET



CULVERT



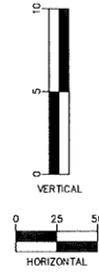
WATER TOWER
OVERFLOW DRAIN



PLAN/PROFILE - STORM SEWER
(MISCELLANEOUS)
VIKING PRESERVE

G1.7

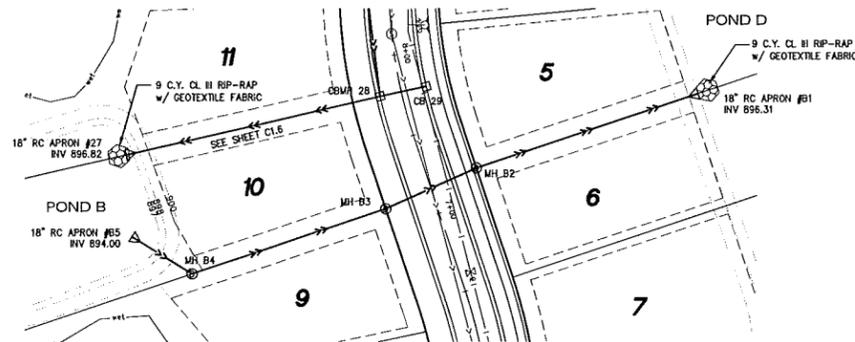
SEE SHEET C0 FOR LEGEND AND GENERAL CONSTRUCTION NOTES



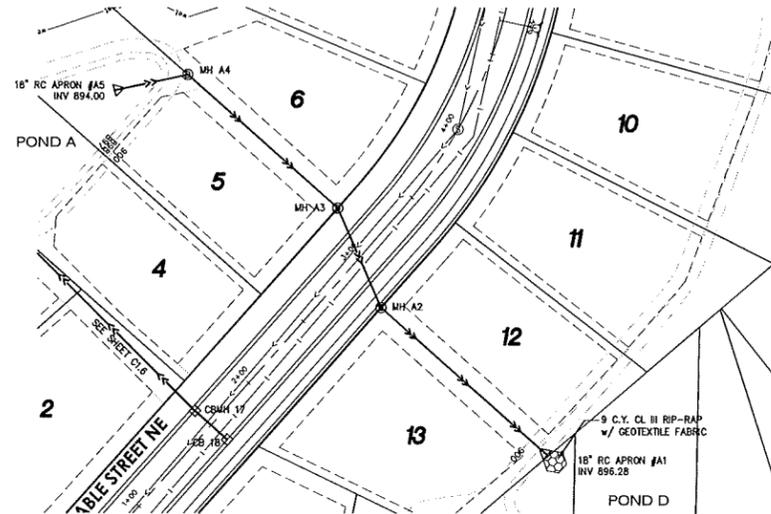
Know what's below.
Call before you dig.

DRAWN BY: A.G. DESIGN BY: A.G.
CHCKD BY: PROJ. NO. 13-1445
C.W.P. 13-1445
ORIGINAL DATE: NOVEMBER 12, 2013

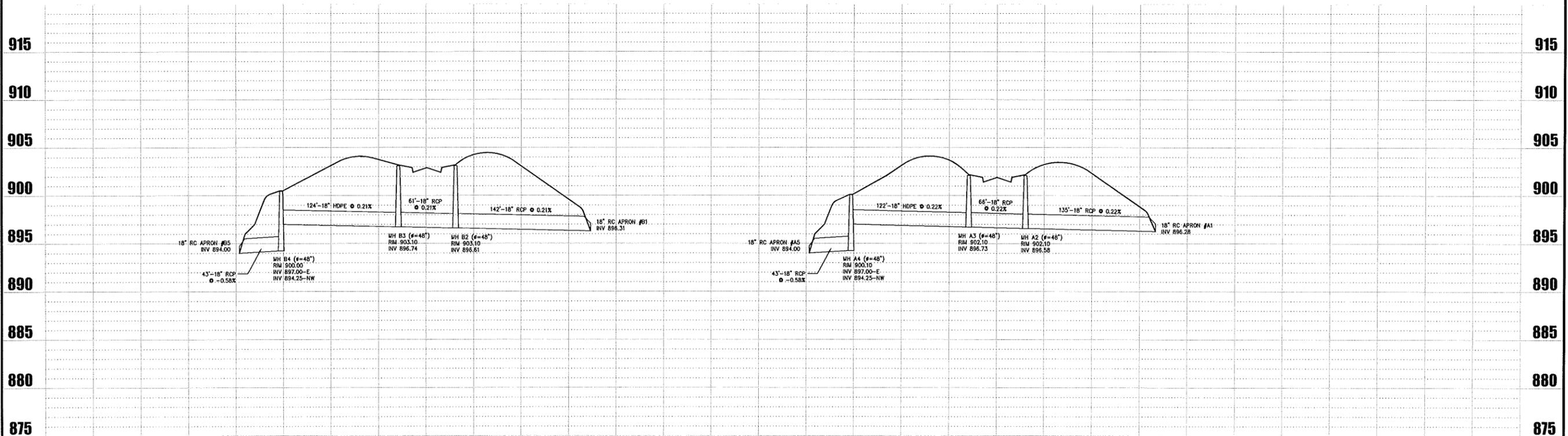
DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET, LOT, AND POND LAYOUT D.I.
7-11-14	CITY REVIEW #2



POND "B" OUTLET



POND "A" OUTLET



PLAN/PROFILE - STORM SEWER
(MISCELLANEOUS)
VIKING PRESERVE

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 MINNESOTA.
Adam Gankel
ADAM GANKEL
LIC. NO. 43963
DATE: 02.03.2014

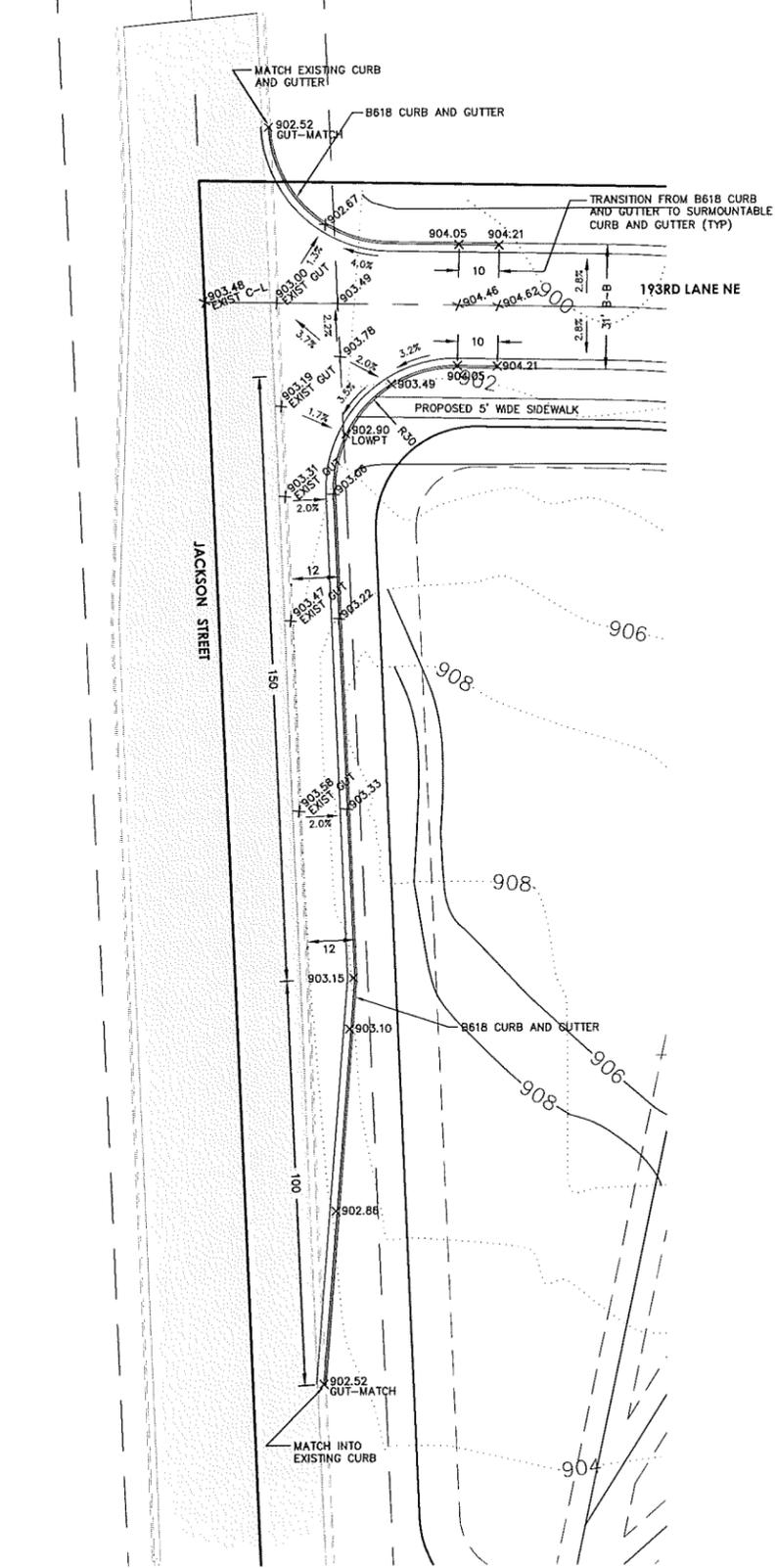
VIKING PRESERVE
EAST BETHEL, MN
PLAN PROFILE (STORM SEWER)
MISCELLANEOUS

PREPARED FOR:
SHAW TRUCKING, INC.

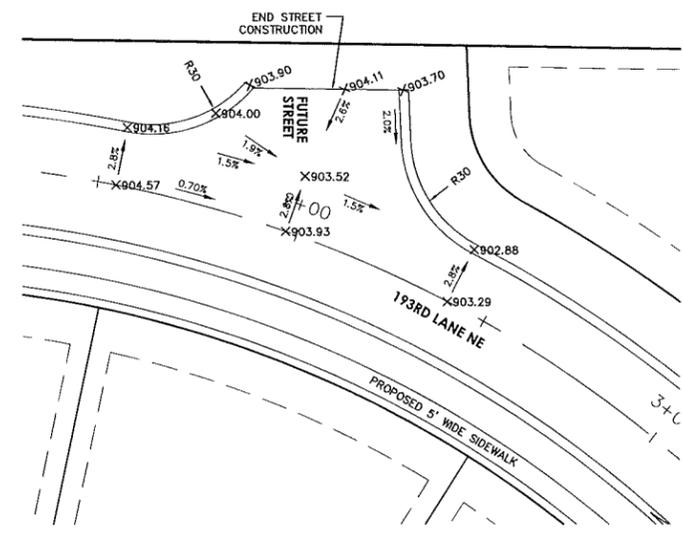
SITE PLANNING & ENGINEERING

PLOWE
ENGINEERING, INC.
8776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701

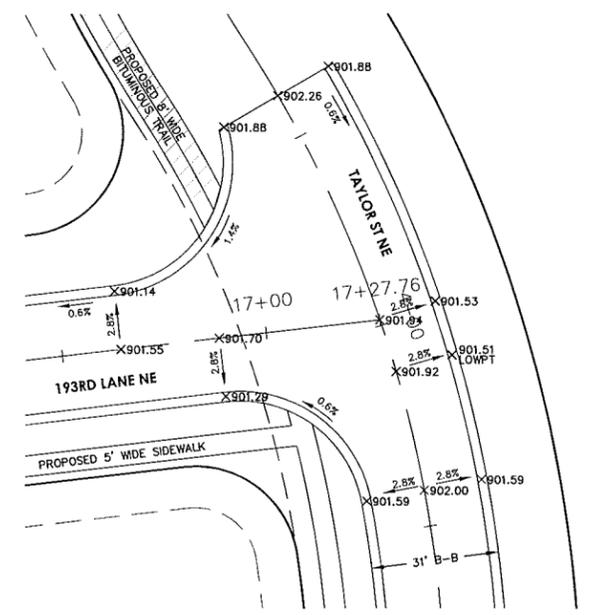
C1.8



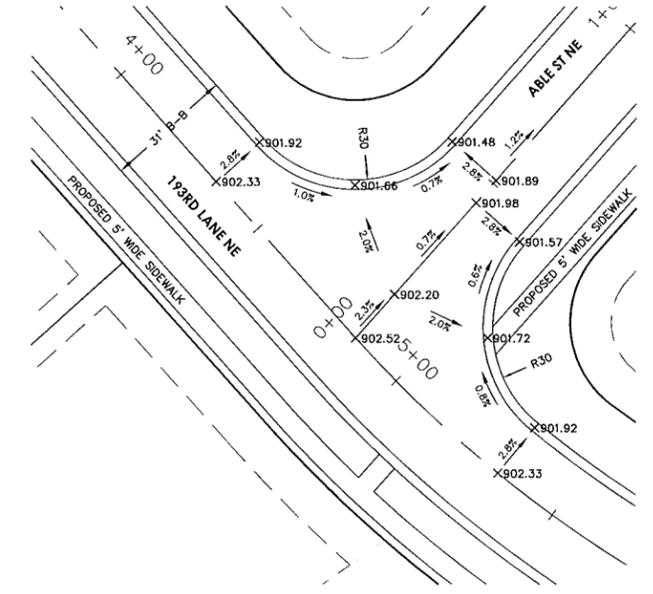
○ DETAIL A - JACKSON ST / 193RD LANE NE



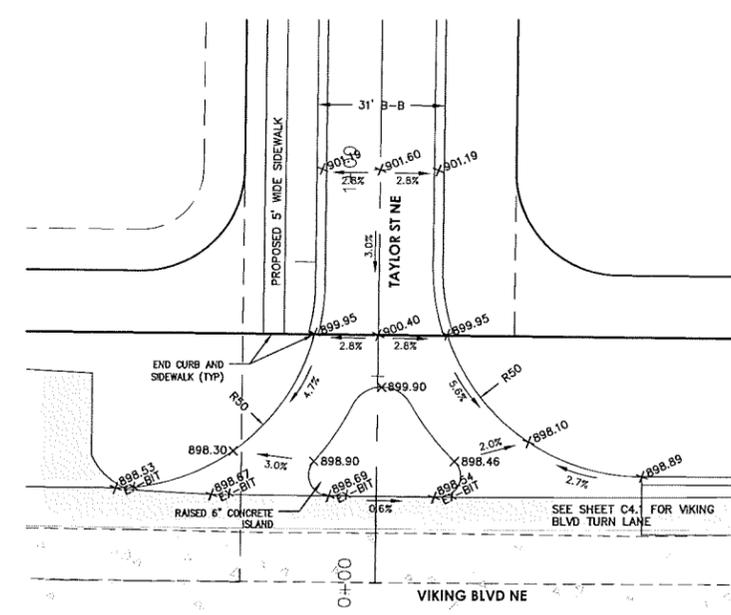
○ DETAIL B - 193RD LANE NE / FUTURE STREET



○ DETAIL D - 193RD LANE NE / TAYLOR ST NE



○ DETAIL C - 193RD LANE NE / ABLE ST NE



○ DETAIL E - VIKING BLVD NE / TAYLOR ST NE

DRAWN BY: A.G. DESIGN BY: A.G.
 CHCKD BY: PROJ. NO. 13-1445
 C.W.P. 13-1445
 ORIGINAL DATE: NOVEMBER 12, 2013

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
7-11-14	CITY REVIEW #2

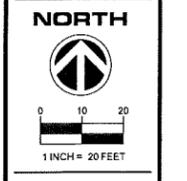
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Adam Gankel
 ADAM GANKEL
 LIC. NO. 43963
 DATE: 02.03.2014

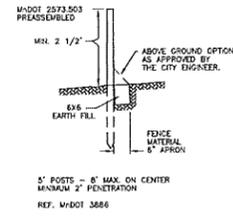
VIKING PRESERVE
 EAST BETHEL, MN
 STREET INTERSECTION DETAILS

PREPARED FOR:
 SHAW TRUCKING, INC.

PLOWE
 ENGINEERING, INC.
 6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014

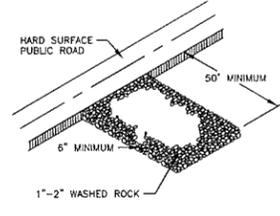
PHONE: (651) 361-9210
 FAX: (651) 361-8701





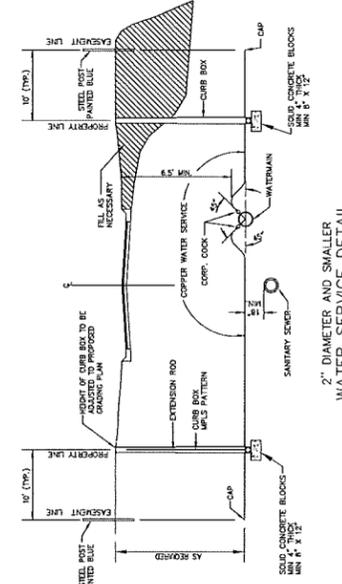
SILT FENCE INSTALLATION
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 501
REVISED 10-07-13		



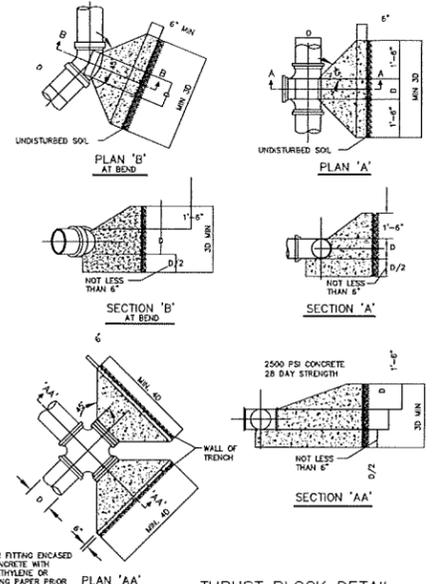
ROCK CONSTRUCTION ENTRANCE
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 505
REVISED		



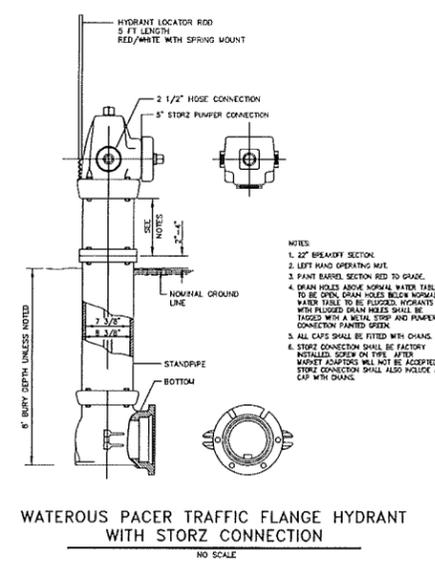
**2" DIAMETER AND SMALLER
WATER SERVICE DETAIL**
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 200
REVISED 10-07-13		



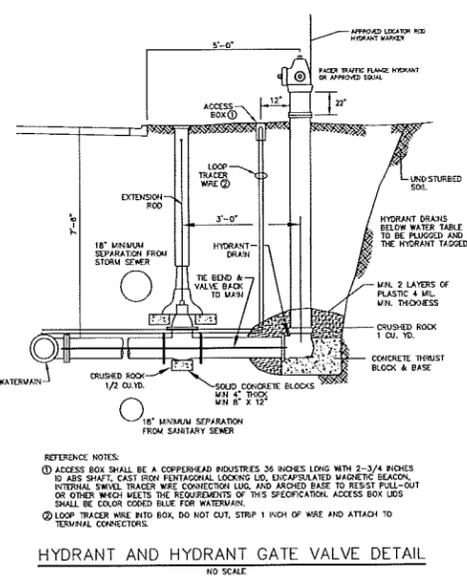
THRUST BLOCK DETAIL
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 202
REVISED		



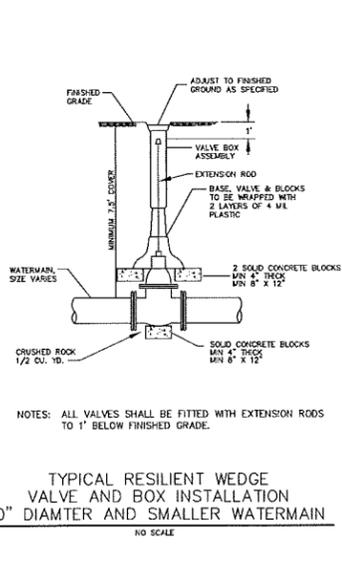
**WATEROUS PACER TRAFFIC FLANGE HYDRANT
WITH STORZ CONNECTION**
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 203
REVISED 10-07-13		



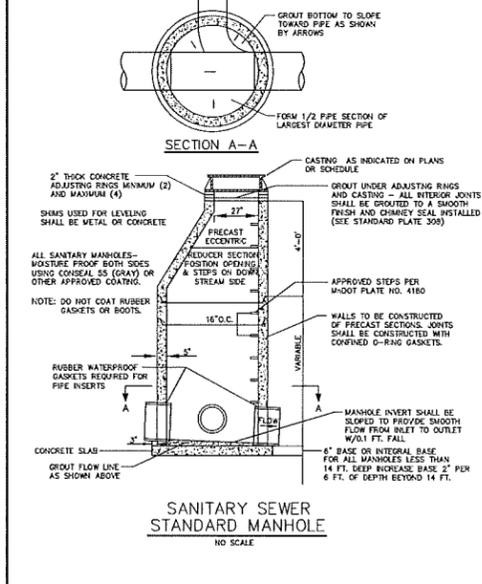
HYDRANT AND HYDRANT GATE VALVE DETAIL
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 204
REVISED 10-07-13		



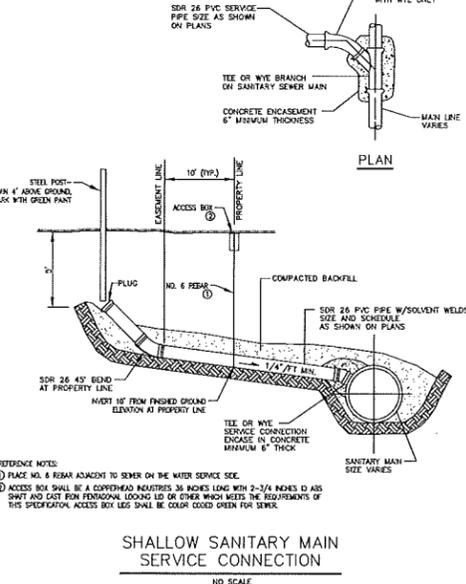
**TYPICAL RESILIENT WEDGE
VALVE AND BOX INSTALLATION
10" DIAMETER AND SMALLER WATERMAIN**
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 205
REVISED 10-07-13		



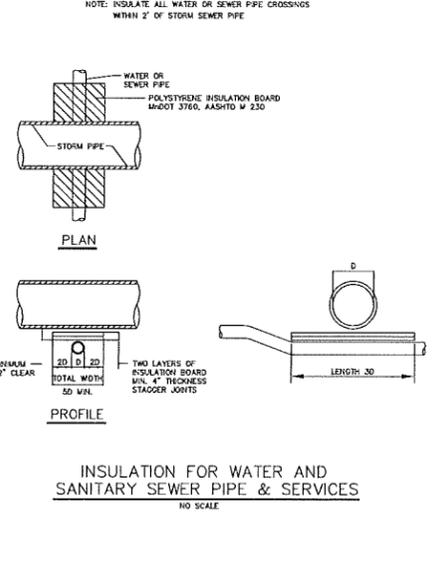
**SANITARY SEWER
STANDARD MANHOLE**
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 300
REVISED 10-07-13		



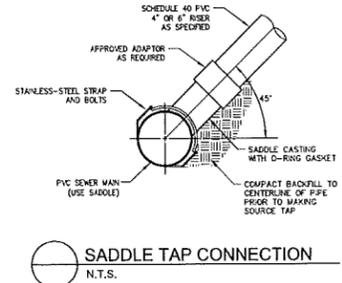
**SHALLOW SANITARY MAIN
SERVICE CONNECTION**
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 302
REVISED 10-07-13		



**INSULATION FOR WATER AND
SANITARY SEWER PIPE & SERVICES**
NO SCALE

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 304
REVISED		



SADDLE TAP CONNECTION
N.T.S.

DRAWN BY: A.G.	DESIGN BY: A.G.
CHECKED BY: C.W.P.	PROJ. NO. 13-1445
ORIGINAL DATE: NOVEMBER 12, 2013	
DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET, LOT, AND POND LAYOUT D.I.
7-11-14	CITY REVIEW #2

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

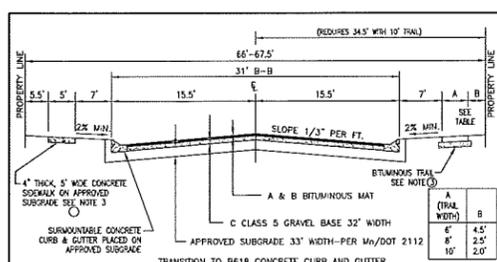
Adam Gankel
ADAM GANKEL
DATE: 02-03-2014 LIC. NO. 45985

VIKING PRESERVE
EAST BETHEL, MN
DETAILS

PREPARED FOR:
SHAW TRUCKING, INC.

SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.
8776 LAKE DRIVE
SUITE 110
LINDO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701

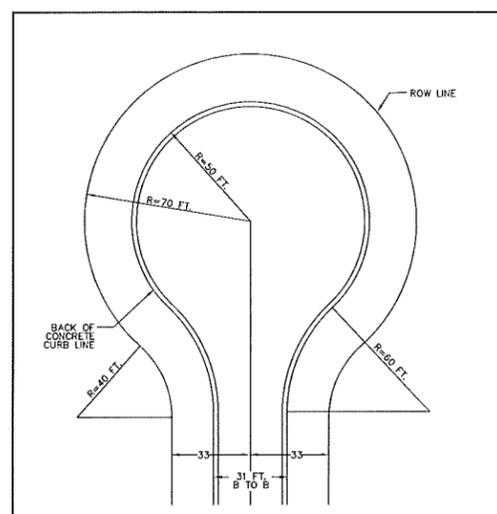


R VALUE	ESALS	BITUMINOUS SURFACE	AGGREGATE BASE
R-70 to R-35	200,000	1 1/2" MIN.	4" CLASS 5/8
R-30	175,000	1 1/2" MIN.	4" CLASS 5/8
R-20	150,000	1 1/2" MIN.	4" CLASS 5/8
R-10	125,000	1 1/2" MIN.	4" CLASS 5/8
R-5	100,000	1 1/2" MIN.	4" CLASS 5/8

* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER
 ** MINIMUM ALLOWABLE DESIGN THICKNESS
 NOTES: ① R VALUE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD.
 ② CUMULATIVE DESIGN LANE 18 KIP ESAL'S IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.
 ③ REFER TO STANDARD PLATE 106 FOR SIDEWALK OR TRAIL REQUIREMENTS.

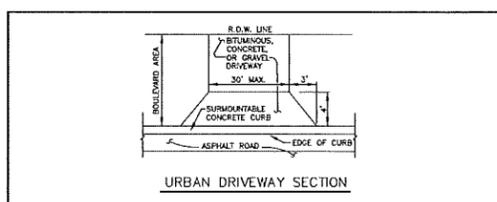
LOCAL RESIDENTIAL URBAN STREET SECTION - 9 TON

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 101
REVISED 8-28-07		

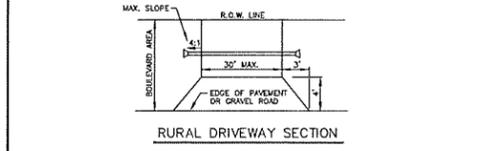


RESIDENTIAL CUL DE SAC URBAN SECTION

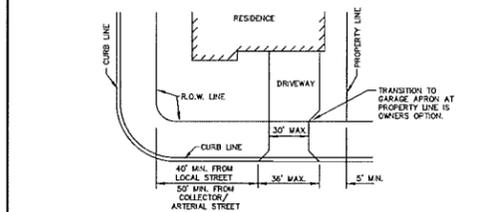
APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 104
REVISED		



URBAN DRIVEWAY SECTION

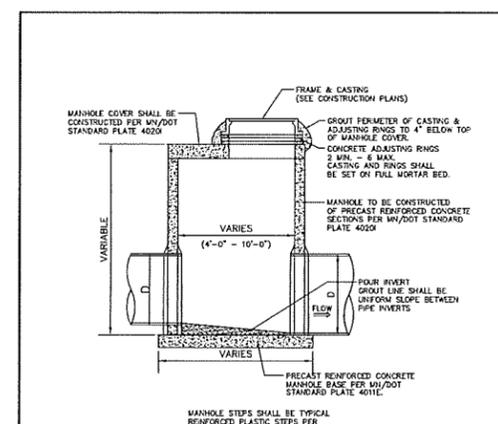


RURAL DRIVEWAY SECTION



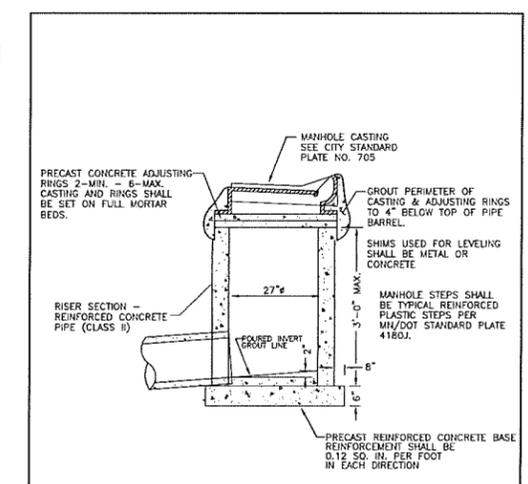
TYPICAL DRIVEWAY SECTIONS

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 105
REVISED		



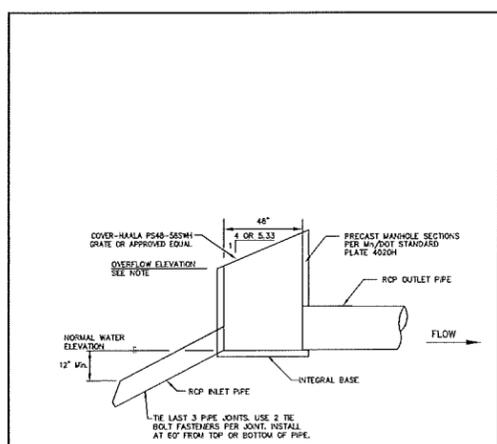
SLAB TOP MANHOLE (STORM SEWER) 4'-0" THROUGH 10'-0" INSIDE DIAMETER

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 400
REVISED		



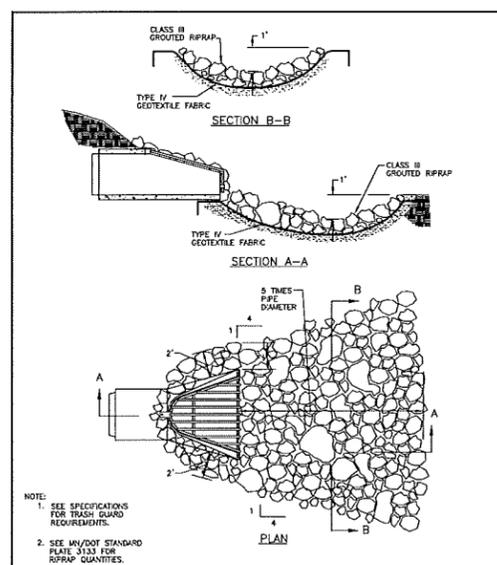
SHALLOW CATCH BASIN

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 401
REVISED		



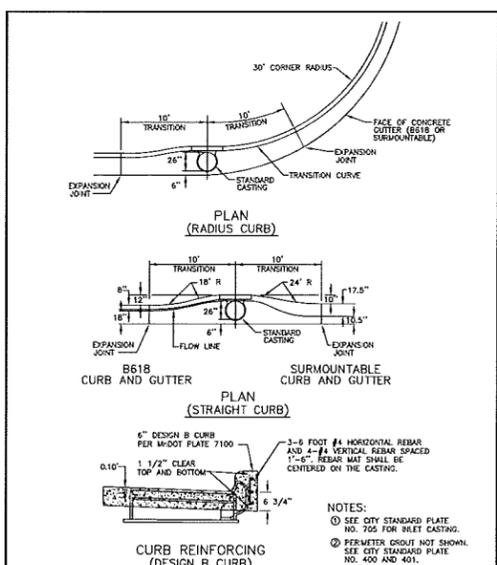
SKIMMER STRUCTURE (PREFERRED DESIGN)

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 402
REVISED 10-07-13		



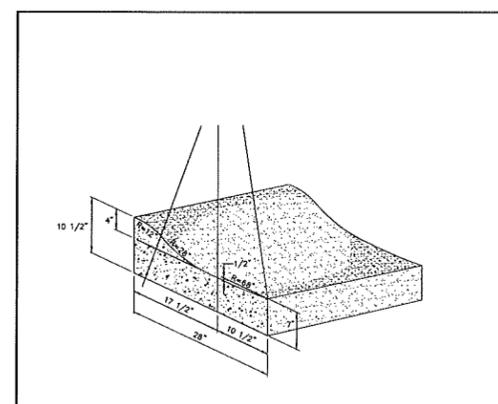
RIPRAP PLACEMENT AT OUTLETS

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 500
REVISED		



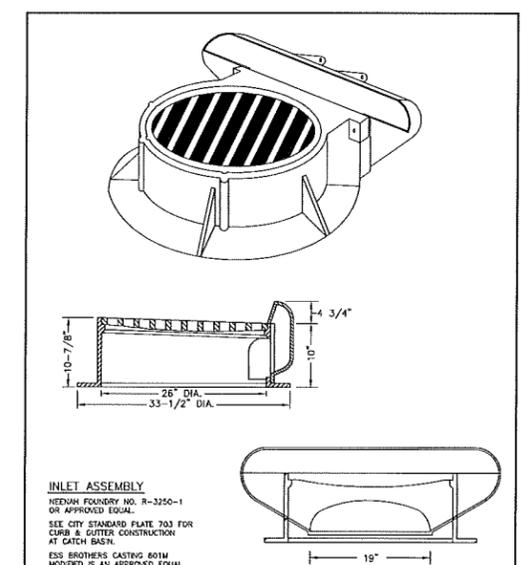
CURB AND GUTTER CONSTRUCTION AT CATCH BASIN

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 703
REVISED		



SURMOUNTABLE CONCRETE CURB AND GUTTER

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 704
REVISED		



INLET CASTING

APPROVED 3-02-05	CITY OF EAST BETHEL	STANDARD PLATE No. 705
REVISED		

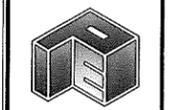
DRAWN BY: A.G.
 CHECKED BY: A.G.
 C.W.P. PROJ. NO. 13-1445
 ORIGINAL DATE: NOVEMBER 12, 2013

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-9-14	STREET, LOT, AND POND LAYOUT DL
7-11-14	CITY REVIEW #2

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.
Adam Gankel
 ADAM GANKEL
 DATE: 09.03.2014 LIC. NO. 43968

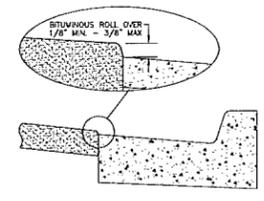
VIKING PRESERVE
 EAST BETHEL, MN
 DETAILS

PREPARED FOR:
SHAW TRUCKING, INC.

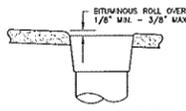


SITE PLANNING & ENGINEERING

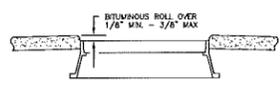
PLOWE
 ENGINEERING, INC.
 6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701



PAVING AT CURB DETAIL
NO SCALE

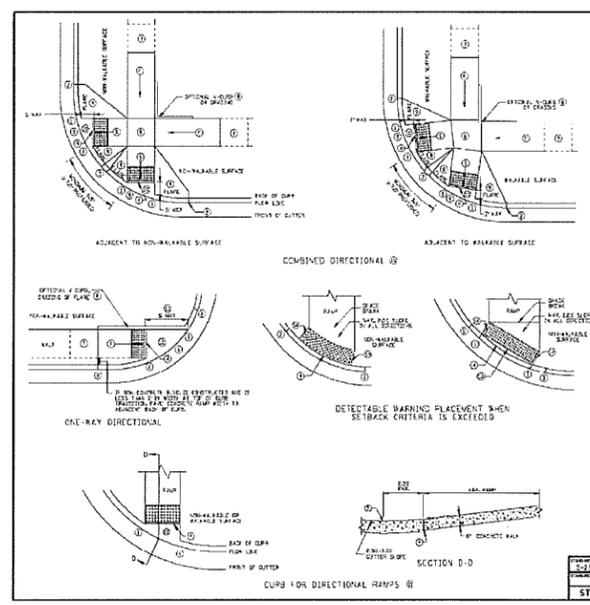


PAVING AT VALVE BOX DETAIL
NO SCALE



PAVING AT MANHOLE DETAIL
NO SCALE

APPROVED 3-02-05
REVISED
CITY OF EAST BETHEL
STANDARD PLATE No. 706

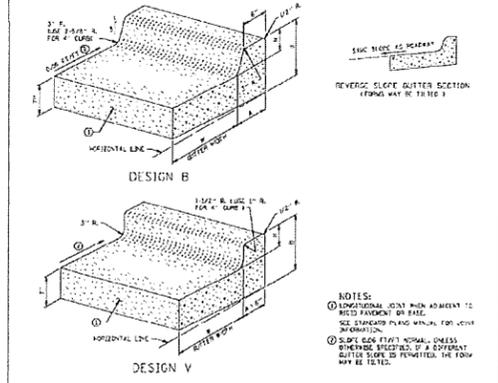


ALL TRAILS AND SIDEWALKS THAT ACCESS CITY STREETS SHALL INCLUDE TRUNCATED DOMES EPOXY COATED RED IN COLOR

- NOTES:
1. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 2. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 3. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 4. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 5. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 6. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 7. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 8. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 9. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 10. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 11. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 12. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 13. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 14. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 15. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 16. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 17. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 18. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 19. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>
 - 20. ALL CURB RAMP SURFACES SHALL BE CONSTRUCTED USING ALL EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR. THE TRUNCATED DOME SHALL BE 1/4\"/>

LEGEND
1. EPOXY BLENDED TRUNCATED DOMES EPOXY COATED RED IN COLOR
2. 1/4\"/>

APRIL 10, 2013 5-297.250 (2 OF 5)

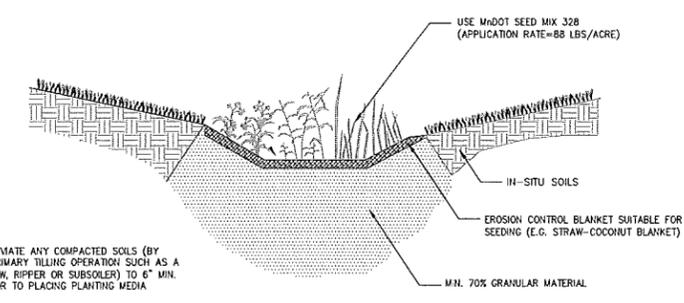


DESIGN B	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE
1. 12\"/>						
2. 12\"/>						
3. 12\"/>						
4. 12\"/>						
5. 12\"/>						
6. 12\"/>						
7. 12\"/>						
8. 12\"/>						
9. 12\"/>						
10. 12\"/>						
11. 12\"/>						
12. 12\"/>						
13. 12\"/>						
14. 12\"/>						
15. 12\"/>						
16. 12\"/>						
17. 12\"/>						
18. 12\"/>						
19. 12\"/>						
20. 12\"/>						

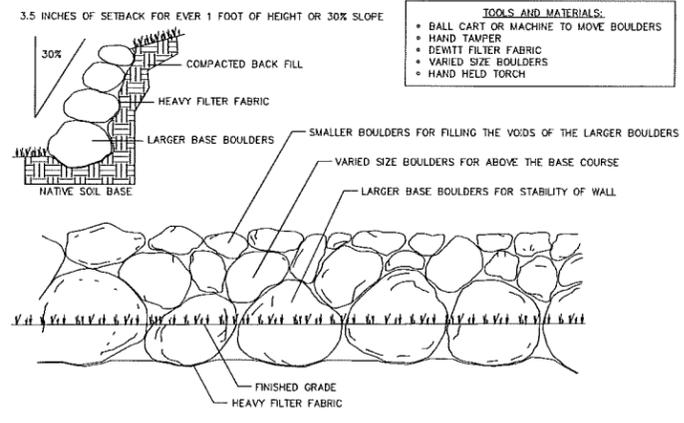
DESIGN V	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE
1. 12\"/>						
2. 12\"/>						
3. 12\"/>						
4. 12\"/>						
5. 12\"/>						
6. 12\"/>						
7. 12\"/>						
8. 12\"/>						
9. 12\"/>						
10. 12\"/>						
11. 12\"/>						
12. 12\"/>						
13. 12\"/>						
14. 12\"/>						
15. 12\"/>						
16. 12\"/>						
17. 12\"/>						
18. 12\"/>						
19. 12\"/>						
20. 12\"/>						

APPROVED MARCH 11, 2014
R.P. Campbell
REGISTERED PROFESSIONAL ENGINEER
STATE OF MINNESOTA
CONCRETE CURB AND GUTTER
DESIGN B AND DESIGN V
SPECIFICATION REFERENCE: 7100H
REVISION DATE: 7-28-14

- INFILTRATION BASIN NOTES:
1. CONTRACTOR TO MARK-OFF BASIN AREA WITH SILT FENCE OR OTHER VISIBLE MARKER.
 2. NO MINING OF SANDY SOILS IN BASIN AREA.
 3. MINIMIZE COMPACTION BY USING LOW-IMPACT EARTH MOVING EQUIPMENT (E.G. WIDE TRACK OR MARSH TRACK EQUIPMENT OR LIGHT EQUIPMENT WITH TURF-TYPE TIRES).
 4. FINAL GRADE ONLY UPON STABILIZATION OF UPSTREAM DRAINAGE AREAS.
 5. ALLEVIATE ANY COMPACTED SOILS AT BOTTOM OF BASIN BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER OR SUBSOILER TO 6\"/>
 - 6. MIN. 70% GRANULAR MATERIAL.



INFILTRATION BASIN
N.T.S.



BOULDER RETAINING WALL
N.T.S.

DRAWN BY: A.G.
DESIGN BY: A.G.
CHKD BY: C.W.P.
PROJ. NO. 13-1446

ORIGINAL DATE: NOVEMBER 12, 2013

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET, LOT, AND POND LAYOUT D.I.
7-11-14	CITY REVIEW #2

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.
ADAM GANKE
LIC. NO. 439683
DATE: 02.03.2014

VIKING PRESERVE
EAST BETHEL, MN
DETAILS

PREPARED FOR:
SHAW TRUCKING, INC.

SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-6210
FAX: (651) 361-6701



Know what's below.
Call before you dig.

DRAWN BY:	DESIGN BY:
A.G.	A.G.
CHCKD BY:	PROJ. NO.
C.W.P.	13-1445
ORIGINAL DATE:	
	NOVEMBER 12, 2013

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-3-14	STREET, LOT, AND FOND LAYOUT D.I.
7-11-14	CITY REVIEW #2

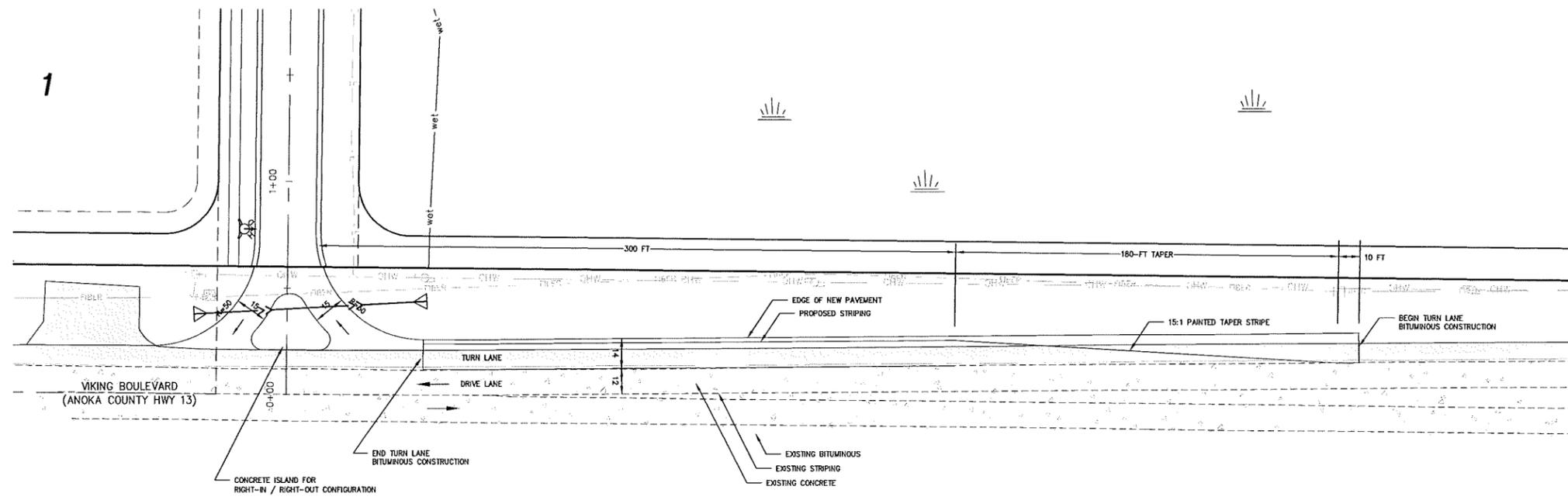
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Adam Gankel
ADAM GANKEL
DATE: 02.03.2014
LIC. NO. 43963

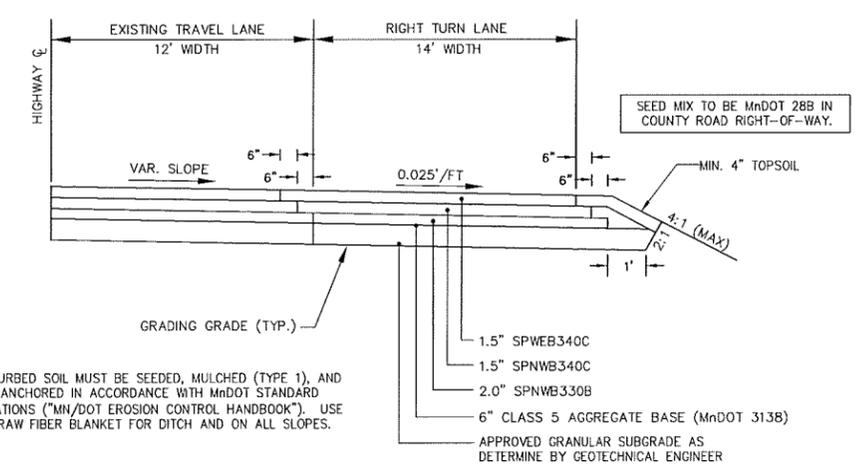
VIKING PRESERVE
EAST BETHEL, MN
PLAN PROFILE (SANITARY/WATER)
193RD LANE NE

PREPARED FOR:
SHAW TRUCKING, INC.

SITE PLANNING & ENGINEERING
PLOWE
ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 381-8210
FAX: (651) 381-8701



TYPICAL SECTION – RIGHT TURN LANE
(NOT TO SCALE)



ALL DISTURBED SOIL MUST BE SEEDED, MULCHED (TYPE 1), AND DISK ANCHORED IN ACCORDANCE WITH MnDOT STANDARD SPECIFICATIONS ("MN/DOT EROSION CONTROL HANDBOOK"). USE ALL STRAW FIBER BLANKET FOR DITCH AND ON ALL SLOPES.

GENERAL NOTES:

- 1) THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE TO THESE UTILITIES.

STREET AND BITUMINOUS NOTES:

- 1) SAW-CUT (FULL-DEPTH) EXISTING BITUMINOUS TO PROVIDE BUTT-JOINT.
- 2) REMOVAL AND DISPOSAL OF EXISTING STREET MATERIALS AS REQUIRED FOR CONSTRUCTION IS INCIDENTAL.

TURN LANE NOTES:

- 1) EXISTING COUNTY ROAD TO BE STRIPED TO SHOW DRIVE LANE AND NEW TURN LANE.
- 2) EXISTING STREET SIGNAGE TO BE RELOCATED AS NECESSARY. EXISTING POWER POLES TO BE RELOCATED AS NECESSARY.
- 3) EXISTING CENTERLINE STRIPE ALONG COUNTY ROAD TO REMAIN.
- 4) CONTRACTOR SHALL ENSURE THAT EXISTING DRIVE LANES HAS MINIMUM 12' WIDTH.
- 5) EPOXY TURN LANE MARKINGS SHALL BE USED.
- 6) SEED TYPE SHALL BE 28B IN DITCH AREAS AND 60B IN BOULEVARD AREAS. MULCH TYPE SHALL BE TYPE 1.
- 7) USE ALL STRAW FIBER BLANKET FOR DITCH AND ON ALL SLOPES.

COUNTY HIGHWAY MODIFICATIONS SHALL FOLLOW THE MnDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2005 EDITION.

PART II.C. -- TERMINATION OF COVERAGE

- 1. TERMINATION OF COVERAGE WHEN CONSTRUCTION IS COMPLETE: ALL PERMITEE(S) MUST SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCA ON A FORM PROVIDED BY THE COMMISSIONER WITHIN 30 DAYS AFTER ALL ACTIVITIES REQUIRED FOR FINAL STABILIZATION (SEE PART IV.G.) ARE COMPLETE. THE PERMITEE(S)' COVERAGE UNDER THIS PERMIT TERMINATES AT MIDNIGHT ON THE SUBMISSION DATE OF THAT NOT.
- 2. TERMINATION OF COVERAGE WHEN TRANSFER OF OWNERSHIP OCCURS: ALL PERMITEE(S) MUST SUBMIT A NOT OF A FORM PROVIDED BY THE COMMISSIONER WITHIN 30 DAYS AFTER SELLING OR OTHERWISE LEGALLY TRANSFERRING THE ENTIRE SITE, INCLUDING PERMIT RESPONSIBILITY FOR ROADS (E.G., STREET SWEEPING) AND STORMWATER INFRASTRUCTURE FINAL CLEAN OUT, OR TRANSFERRING PORTIONS OF A SITE TO ANOTHER PARTY. THE PERMITEE(S)' COVERAGE UNDER THIS PERMIT TERMINATES AT MIDNIGHT ON THE SUBMISSION DATE OF THE NOT.
- 3. PERMITEE(S) MAY TERMINATE PERMIT COVERAGE PRIOR TO COMPLETION OF ALL CONSTRUCTION ACTIVITY IF ALL OF THE FOLLOWING CONDITIONS ARE MET: AFTER THE PERMIT IS TERMINATED UNDER THIS PART, IF THERE IS ANY SUBSEQUENT DEVELOPMENT ON THE REMAINING PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WAS NOT COMPLETE, NEW PERMIT COVERAGE MUST BE OBTAINED IF THE SUBSEQUENT DEVELOPMENT ITSELF OR AS PART OF THE REMAINING COMMON PLAN OF DEVELOPMENT OR SALE WILL RESULT IN LAND DISTURBING ACTIVITIES OF ONE (1) OR MORE ACRES IN SIZE.
A. CONSTRUCTION ACTIVITY HAS CEASED FOR AT LEAST 90 DAYS.
B. AT LEAST 90 PERCENT (BY AREA) OF ALL ORIGINALLY PROPOSED CONSTRUCTION ACTIVITY HAS BEEN COMPLETED AND PERMANENT COVER ESTABLISHED ON THOSE AREAS.
C. ON AREAS WHERE CONSTRUCTION ACTIVITY IS NOT COMPLETE, PERMANENT COVER HAS BEEN ESTABLISHED.
D. THE SITE IS IN COMPLIANCE WITH PART IV.G.2. AND PART IV.G.3. AND WHERE APPLICABLE, PART IV.G.4. OR PART IV.G.5.
- 4. PERMITEE(S) MAY TERMINATE COVERAGE UPON APPROVAL BY THE MPCA IF INFORMATION IS SUBMITTED TO THE MPCA DOCUMENTING THAT TERMINATION IS APPROPRIATE BECAUSE THE PROJECT IS CANCELLED.

PART III.A.3 -- TRAINING DOCUMENTATION

- TRAINING DOCUMENTATION: THE PERMITEE(S) SHALL ENSURE THE INDIVIDUALS IDENTIFIED IN PART III.F. HAVE BEEN TRAINED IN ACCORDANCE WITH THIS PERMIT'S TRAINING REQUIREMENTS. THE PERMITEE(S) SHALL ENSURE THE TRAINING IS RECORDED IN OR WITH THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS THE PERSONNEL FOR THE PROJECT HAVE BEEN DETERMINED. DOCUMENTATION SHALL INCLUDE:
A. NAMES OF THE PERSONNEL ASSOCIATED WITH THIS PROJECT THAT ARE REQUIRED TO BE TRAINED PER PART III.F.1. OF THIS PERMIT.
B. DATES OF TRAINING AND NAME OF INSTRUCTOR(S) AND ENTITY PROVIDING TRAINING.
C. CONTENT OF TRAINING COURSE OR WORKSHOP INCLUDING THE NUMBER OF HOURS OF TRAINING.

PART III.B -- SWPPP AMENDMENTS

- THE PERMITEE(S) MUST AMEND THE SWPPP AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL BMPs THAT ARE DESIGNED TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER:
1. THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS.
2. INSPECTIONS OR INVESTIGATIONS BY SITE OWNER OR OPERATORS, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS OR THAT THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES (E.G., NUISANCE CONDITIONS AS DEFINED IN MINN. R. 7050.0210, SUBP. 2).
3. THE SWPPP IS NOT ACHIEVING THE GENERAL OBJECTIVES OF MINIMIZING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, OR THE SWPPP IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THIS PERMIT.
4. AT ANY TIME AFTER PERMIT COVERAGE IS EFFECTIVE, THE MPCA MAY DETERMINE THAT THE PROJECT'S STORMWATER DISCHARGES MAY CAUSE, HAVE REASONABLE POTENTIAL TO CAUSE, OR CONTRIBUTE TO ANY VIOLATION OF ANY APPLICABLE WATER QUALITY STANDARD, OR THAT THE SWPPP DOES NOT INCORPORATE THE APPLICABLE REQUIREMENTS IN PART III.A.B., (IMPAIRED WATERS AND TUDLS), IF A WATER QUALITY STANDARD CHANGES DURING THE TERM OF THIS PERMIT, THE MPCA WILL MAKE A DETERMINATION AS TO WHETHER A MODIFICATION OF THE SWPPP IS NECESSARY TO ADDRESS THE NEW STANDARD, IF THE MPCA MAKES SUCH DETERMINATIONS OR ANY OF THE DETERMINATIONS IN PARTS III.B.1.-3., THE MPCA WILL NOTIFY THE PERMITEE(S) IN WRITING. IN RESPONSE, THE PERMITEE(S) MUST AMEND THE SWPPP TO ADDRESS THE IDENTIFIED CONCERNS AND SUBMIT INFORMATION REQUESTED BY THE MPCA, WHICH MAY INCLUDE AN INDIVIDUAL PERMIT APPLICATION, IF THE MPCA'S WRITTEN NOTIFICATION REQUIRES A RESPONSE, FAILURE TO RESPOND WITHIN THE SPECIFIED TIMEFRAME CONSTITUTES A PERMIT VIOLATION.

PART III.C. -- TEMPORARY SEDIMENT BASINS

- WHERE FIVE (5) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, THE PERMITEE(S) MUST PROVIDE A TEMPORARY SEDIMENT BASIN TO PROVIDE TREATMENT TO THE RUNOFF BEFORE IT LEAVES THE CONSTRUCTION SITE OR ENTERS SURFACE WATERS. A TEMPORARY SEDIMENT BASIN MAY BE CONVERTED TO A PERMANENT BASIN AFTER CONSTRUCTION IS COMPLETE. THE TEMPORARY BASIN IS NO LONGER REQUIRED WHEN PERMANENT COVER HAS REDUCED THE ACREAGE OF DISTURBED SOIL TO LESS THAN FIVE (5) ACRES DRAINING TO A COMMON LOCATION. THE PERMITEE(S) IS/ARE ENCOURAGED, BUT NOT REQUIRED, TO INSTALL TEMPORARY SEDIMENT BASINS WHERE APPROPRIATE IN AREAS WITH STEEP SLOPES OR HIGHLY ERODIBLE SOILS EVEN IF LESS THAN FIVE (5) ACRES DRAIN TO ONE AREA. THE BASIN MUST BE DESIGNED AND CONSTRUCTED ACCORDING TO THE FOLLOWING REQUIREMENTS:
1. THE BASINS MUST PROVIDE LIVE STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A TWO-YEAR, 24-HOUR STORM FROM EACH ACRE DRAINING TO THE BASIN, EXCEPT THAT IN NO CASE SHALL THE BASIN PROVIDE LESS THAN 1,800 CUBIC FEET OF LIVE STORAGE FROM EACH ACRE DRAINING TO THE BASIN.
2. WHERE THE CALCULATION IN PART III.C.1. HAS NOT BEEN PERFORMED, A TEMPORARY SEDIMENT BASIN PROVIDING 3,600 CUBIC FEET OF LIVE STORAGE PER ACRE DRAINING TO THE BASIN SHALL BE PROVIDED FOR THE ENTIRE DRAINAGE AREA OF THE TEMPORARY BASIN.
3. TEMPORARY BASIN OUTLETS MUST BE DESIGNED TO PREVENT SHORT-CIRCUITING AND THE DISCHARGE OF FLOATING DEBRIS. THE BASIN MUST BE DESIGNED WITH THE ABILITY TO ALLOW COMPLETE BASIN DRAINDOWN FOR MAINTENANCE ACTIVITIES, AND MUST INCLUDE A STABILIZED EMERGENCY OVERTLOW TO PREVENT FAILURE OF POND INTEGRITY. THE OUTLET STRUCTURE MUST BE DESIGNED TO WITHDRAW WATER FROM THE SURFACE IN ORDER TO UNWIND THE DISCHARGE OF POLLUTANTS, EXCEPT THAT THE USE OF A SURFACE WITHDRAWAL MECHANISM FOR DISCHARGE OF THE BASIN MAY BE TEMPORARILY SUSPENDED DURING FROZEN CONDITIONS. ENERGY DISSIPATION MUST BE PROVIDED FOR THE BASIN OUTLET (SEE PART IV.B.).
4. SEDIMENT BASINS MUST BE SITUATED OUTSIDE OF SURFACE WATERS AND ANY BUFFER ZONE REQUIRED UNDER APPENDIX A.C.3, AND MUST BE DESIGNED TO AVOID DRAINING WATER FROM WETLANDS UNLESS THE IMPACT TO THE WETLAND IS IN COMPLIANCE WITH THE REQUIREMENTS OF APPENDIX A, PART D.
5. THE TEMPORARY BASINS MUST BE CONSTRUCTED AND MADE OPERATIONAL PRIOR TO 10 OR MORE ACRES OF DISTURBED SOIL DRAINING TO A COMMON LOCATION.
6. WHERE A TEMPORARY SEDIMENT BASIN MEETING THE REQUIREMENTS OF THIS PART IS INFEASIBLE, EQUIVALENT SEDIMENT CONTROLS SUCH AS SMALLER SEDIMENT BASINS, AND/OR SEDIMENT TRAPS, SILT FENCES, VEGETATIVE BUFFER STRIPS, OR ANY APPROPRIATE COMBINATION OF MEASURES ARE REQUIRED FOR ALL DOWN-SLOPE BOUNDARIES OF THE CONSTRUCTION AREA AND FOR SIDE-SLOPE BOUNDARIES AS DICTATED BY INDIVIDUAL SITE CONDITIONS. IN DETERMINING WHETHER INSTALLING A SEDIMENT BASIN IS INFEASIBLE, THE PERMITEE(S) MUST CONSIDER PUBLIC SAFETY AND MAY CONSIDER FACTORS SUCH AS SITE SOILS, SLOPE, AND AVAILABLE AREA ON SITE. THIS DETERMINATION OF INFEASIBILITY MUST BE DOCUMENTED IN THE SWPPP PER PART III.A.

PART III.E -- RECORD RETENTION

- THE SWPPP (ORIGINAL OR COPIES) INCLUDING, ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITEE(S) WHO HAS/HAVE OPERATIONAL CONTROL OF THAT PORTION OF THE SITE. THE SWPPP CAN BE KEPT IN EITHER THE FIELD OFFICE OR IN AN ON-SITE VEHICLE DURING NORMAL WORKING HOURS.
ALL OWNER(S) MUST KEEP THE FOLLOWING RECORDS ON FILE FOR THREE (3) YEARS AFTER SUBMITTAL OF THE NOT AS OUTLINED IN PART III.C. THIS DOES NOT INCLUDE ANY RECORDS AFTER SUBMITTAL OF THE NOT.
1. THE FINAL SWPPP
2. ANY OTHER STORMWATER RELATED PERMITS REQUIRED FOR THE PROJECT
3. RECORDS OF ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION (PART IV.E. INSPECTIONS AND MAINTENANCE)

PART III.E -- RECORD RETENTION (CONT)

- 4. ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL RIGHT-OF-WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE AND
5. ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS.
PART III.F. -- TRAINING REQUIREMENTS
THE PERMITEE(S) SHALL ENSURE THE FOLLOWING INDIVIDUALS IDENTIFIED IN THIS PART HAVE BEEN TRAINED IN ACCORDANCE WITH THIS PERMIT'S TRAINING REQUIREMENTS.
1. WHO MUST BE TRAINED
A. INDIVIDUAL(S) PREPARING THE SWPPP FOR THE PROJECT
B. INDIVIDUAL(S) OVERSEEING IMPLEMENTATION OF, REMEDIATING, AND AMENDING THE SWPPP AND INDIVIDUAL(S) PERFORMING INSPECTIONS AS REQUIRED IN PART IV.E. ONE OF THESE INDIVIDUAL(S) MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA.
C. INDIVIDUAL(S) PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPs. AT LEAST ONE INDIVIDUAL ON A PROJECT MUST BE TRAINED IN THESE JOB DUTIES.
2. TRAINING CONTENT: THE CONTENT AND EXTENT OF TRAINING MUST BE COMMENSURATE WITH THE INDIVIDUALS' JOB DUTIES AND RESPONSIBILITIES WITH REGARD TO ACTIVITIES COVERED UNDER THIS PERMIT FOR THE PROJECT. AT LEAST ONE INDIVIDUAL PRESENT ON THE PERMITTED PROJECT SITE (OR AVAILABLE TO THE PROJECT SITE IN 72 HOURS) MUST BE TRAINED IN THE JOB DUTIES DESCRIBED IN PART III.F.1.B. AND PART III.F.1.C.
3. THE PERMITEE(S) SHALL ENSURE THAT THE INDIVIDUALS ARE TRAINED BY LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ENGINEERS, OR OTHER QUALIFIED INDIVIDUALS WITH TRAINING IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER MANAGEMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT. AN UPDATE REFRESHER-TRAINING MUST BE ATTENDED EVERY THREE (3) YEARS STARTING THREE (3) YEARS FROM THE ISSUANCE DATE OF THIS PERMIT.

IV.B. EROSION PREVENTION PRACTICES

- 1. THE PERMITEE(S) MUST PLAN FOR AND IMPLEMENT APPROPRIATE BMPs SUCH AS CONSTRUCTION PHASING, VEGETATIVE BUFFER STRIPS, HORIZONTAL SLOPE GRADING, INSPECTION AND MAINTENANCE OF PART IVE, AND OTHER CONSTRUCTION PRACTICES THAT MINIMIZE EROSION AS NECESSARY TO COMPLY WITH THIS PERMIT AND PROTECT WATERS OF THE STATE. THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE DELINEATED (E.G., WITH FLAGS, STAKES, SIGNS, SILT FENCE ETC.) ON THE PROJECT SITE BEFORE WORK BEGINS. THE PERMITEE(S) MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT THAT HAVE STEEP SLOPES. THOSE SLOPED AREAS WHICH MUST BE DISTURBED, THE PERMITEE(S) MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES (E.G., SLOPE DRAINING AND TERRACING).
2. THE PERMITEE(S) MUST STABILIZE ALL EXPOSED SOIL AREAS (INCLUDING STOCKPILES). STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
3. IF USING STORMWATER CONVEYANCE CHANNELS, THE PERMITEE(S) MUST DESIGN THE CHANNELS TO ROUTE WATER AROUND UNSTABILIZED AREAS AND TO REDUCE EROSION, UNLESS INFEASIBLE. THE PERMITEE(S) MUST USE EROSION CONTROLS AND VELOCITY DISSIPATION DEVICES SUCH AS CHECK DAMS, SEDIMENT TRAPS, RIPRAP, OR GROUDED RIPRAP AT OUTLETS WITHIN AND ALONG THE LENGTH OF ANY CONSTRUCTED STORMWATER CONVEYANCE CHANNEL, AND AT ANY OUTLET, TO PROVIDE A NON-EROSIVE FLOW VELOCITY, TO MINIMIZE EROSION OF CHANNELS AND THEIR EMBANKMENTS, OUTLETS, ADJACENT STREAM BANKS, SLOPES, AND DOWNSTREAM WATERS DURING DISCHARGE CONDITIONS.
4. THE PERMITEE(S) MUST STABILIZE THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER. STABILIZATION OF THE LAST 200 LINEAL FEET MUST BE COMPLETED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE.
THE PERMITEE(S) SHALL COMPLETE STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 7 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.
TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION (WITH PROPERLY DESIGNED ROCK-DITCH CHECKS, BIO ROLLS, SILT DIKES, ETC.) DO NOT NEED TO BE STABILIZED DURING THE TEMPORARY PERIOD OF ITS USE AS A SEDIMENT CONTAINMENT SYSTEM. THESE AREAS MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.

- APPLYING MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES IS NOT ACCEPTABLE STABILIZATION IN ANY PART OF A TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE.
5. PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.
6. UNLESS INFEASIBLE DUE TO LACK OF PERVIOUS OR VEGETATED AREAS, THE PERMITEE(S) MUST DIRECT DISCHARGES FROM BMPs TO VEGETATED AREAS OF THE SITE (INCLUDING ANY NATURAL BUFFERS) IN ORDER TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. THE PERMITEE(S) MUST USE VELOCITY DISSIPATION DEVICES IF NECESSARY TO PREVENT EROSION WHEN DIRECTING STORMWATER TO VEGETATED AREAS.

PART IV.C. -- SEDIMENT CONTROL PRACTICES

- 1. THE PERMITEE(S) MUST EMPLOY SEDIMENT CONTROL PRACTICES AS NECESSARY TO MINIMIZE SEDIMENT FROM ENTERING SURFACE WATERS, INCLUDING CURB AND GUTTER SYSTEMS AND STORM SEWER INLETS. A TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS THAT ARE DESIGNED AS PART OF A SEDIMENT CONTAINMENT SYSTEM (E.G., DITCHES WITH ROCK-CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS.
B. IF THE DOWN GRADIENT SEDIMENT CONTROLS ARE OVERLOADED (BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENT), THE PERMITEE(S) MUST INSTALL ADDITIONAL UPGRADED SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPs TO ELIMINATE THE OVERLOADING, AND THE SWPPP MUST BE AMENDED TO IDENTIFY THESE ADDITIONAL PRACTICES AS REQUIRED IN PART III.B. 1.-3.
2. SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS AND BE LOCATED UPGRADED OF ANY BUFFER ZONE. THE PERMETER SEDIMENT CONTROL PRACTICE MUST BE IN PLACE BEFORE ANY UPGRADED LAND-DISTURBING ACTIVITIES BEGIN. THESE PRACTICES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED IN ACCORDANCE WITH PART IV.G.
3. THE PERMITEE(S) SHALL RE-INSTALL ALL SEDIMENT CONTROL PRACTICES THAT HAVE BEEN ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES, IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. THE PERMITEE(S) SHALL COMPLETE ANY SHORT-TERM ACTIVITY THAT REQUIRES REMOVAL OF SEDIMENT CONTROL PRACTICES AS QUICKLY AS POSSIBLE. THE PERMITEE(S) MUST RE-INSTALL SEDIMENT CONTROL PRACTICES BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.
4. ALL STORM DRAIN INLETS MUST BE PROTECTED BY APPROPRIATE BMPs DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. INLET PROTECTION MAY BE REMOVED FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (STREET FLOODING/FREEZING) HAS BEEN IDENTIFIED BY THE PERMITEE(S) OR THE JURISDICTIONAL AUTHORITY (E.G., CITY/COUNTY/TOWNSHIP/MUNICIPAL ENGINEER). THE PERMITEE(S) MUST DOCUMENT THE NEED FOR REMOVAL IN THE SWPPP.
5. TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS, AND CANNOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.
6. WHERE VEHICLE TRAFFIC LEAVES ANY PART OF THE SITE (OR ONTO PAVED ROADS WITHIN THE SITE):
A. THE PERMITEE(S) MUST INSTALL A VEHICLE TRACKING BMP TO MINIMIZE THE TRACK OUT OF SEDIMENT FROM THE CONSTRUCTION SITE. EXAMPLES OF VEHICLE TRACKING BMPs INCLUDE (BUT ARE NOT LIMITED TO) ROCK PADS, MUD MATS, SLASH MULCH, CONCRETE OR STEEL WASH RACKS, OR EQUIVALENT SYSTEMS.
B. THE PERMITEE(S) MUST USE STREET SWEEPING IF SUCH VEHICLE TRACKING BMPs ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET (SEE PART IV.E.5.D.).
7. THE PERMITEE(S) MUST INSTALL TEMPORARY SEDIMENTATION BASINS AS REQUIRED IN PART III.C. OF THIS PERMIT.

PART IV.C. -- SEDIMENT CONTROL PRACTICES (CONT.)

- 8. THE PERMITEE(S) MUST MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL. MINIMIZING SOIL COMPACTION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA OF THE SITE REQUIRES THAT IT BE COMPACTED.
9. THE PERMITEE(S) MUST PRESERVE A 50 FOOT NATURAL BUFFER OR (IF A BUFFER IS INFEASIBLE ON THE SITE) PROVIDE REDUNDANT SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 100 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. NATURAL BUFFERS ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STORM DRAIN INLETS, AND SEDIMENT BASINS. THE PERMITEE(S) IS/ARE NOT REQUIRED TO ENHANCE THE QUALITY OF THE VEGETATION ALREADY EXISTS IN THE BUFFER OR PROVIDE VEGETATION IF NONE EXISTS. HOWEVER, PERMITEE(S) CAN IMPROVE THE NATURAL BUFFER WITH VEGETATION.
PART IV.D. -- DEWATERING AND BASIN DRAINING
1. THE PERMITEE(S) MUST DISCHARGE TURBID OR SEDIMENT-LOADED WATERS RELATED TO DEWATERING OR BASIN DRAINING (E.G. TRENCH DISCHARGES, TRENCH/JOCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. THE PERMITEE(S) MAY DISCHARGE FROM THE TEMPORARY OR PERMANENT SEDIMENTATION BASINS TO SURFACE WATERS IF THE BASIN WATER HAS BEEN VISUALLY CHECKED TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED IN THE BASIN AND THAT NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMPs, SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM PROPERTIES. IF THE PERMITEE(S) MUST DISCHARGE WATER THAT CONTAINS OIL OR GREASE, THE PERMITEE(S) MUST USE AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE (E.G. CARTRIDGE FILTERS, ABSORBENTS PADS) PRIOR TO DISCHARGING THE WATER. THE PERMITEE(S) MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEETING, OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES.
2. ALL WATER FROM DEWATERING OR BASIN-DRAINING ACTIVITIES MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.
3. IF THE PERMITEE(S) IS/ARE USING FILTERS WITH BACKWASH WATER, THE PERMITEE(S) MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL. RETURN THE BACKWASH WATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. THE PERMITEE(S) MAY DISCHARGE BACKWASH WATER TO THE SANITARY SEWER IF PERMISSION IS GRANTED BY THE SANITARY SEWER AUTHORITY. THE PERMITEE(S) MUST REPLACE AND CLEAN THE FILTER MEDIA USED IN DEWATERING DEVICES WHEN REQUIRED TO RETAIN ADEQUATE FUNCTION.

PART IV.E. -- INSPECTIONS AND MAINTENANCE

- 1. THE PERMITEE(S) MUST ENSURE THAT A TRAINED PERSON (AS IDENTIFIED IN PART III.A.3.A.) WILL ROUTINELY INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING PERMANENTLY OR TEMPORARILY CEASED CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. FOLLOWING AN INSPECTION THAT OCCURS WITHIN 24 HOURS AFTER A RAINFALL EVENT, THE NEXT INSPECTION MUST BE CONDUCTED WITHIN SEVEN (7) DAYS AFTER THE RAINFALL EVENT.
2. ALL INSPECTIONS AND MAINTENANCE CONDUCTED DURING CONSTRUCTION MUST BE RECORDED WITHIN 24 HOURS IN WRITING AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP IN ACCORDANCE WITH PART III.E. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY SHALL INCLUDE:
A. DATE AND TIME OF INSPECTIONS
B. NAME OF PERSON(S) CONDUCTING INSPECTIONS
C. FINDINGS OF INSPECTIONS, INCLUDING THE SPECIFIC LOCATION WHERE CORRECTIVE ACTIONS ARE NEEDED
D. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES)
E. DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 1/2 INCH (0.5 INCHES) IN 24 HOURS. RAINFALL AMOUNTS MUST BE OBTAINED BY A PROPERLY MAINTAINED RAIN GAUGE INSTALLED ONSITE, A WEATHER STATION THAT IS WITHIN 1 MILE OF YOUR LOCATION OR A WEATHER REPORTING SYSTEM THAT PROVIDES SITE SPECIFIC RAINFALL DATA FROM RADAR SUMMARIES.
F. IF ANY DISCHARGE IS OBSERVED TO BE OCCURRING DURING THE INSPECTION, A RECORD OF ALL PORTIONS OF THE PROPERTY FROM WHICH THERE IS A DISCHARGE MUST BE MADE, AND THE DISCHARGE SHOULD BE DESCRIBED (I.E., COLOR, ODOR, FLOATING, SETTLED, OR SUSPENDED SOLIDS, FOAM, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS) AND PHOTOGRAPHED.
G. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN PART III.B. WITHIN SEVEN (7) CALENDAR DAYS.
3. INSPECTION FREQUENCY ADJUSTMENT
A. WHERE PARTS OF THE PROJECT SITE HAVE PERMANENT COVER, BUT WORK REMAINS ON OTHER PARTS OF THE SITE, THE PERMITEE(S) MAY REDUCE INSPECTIONS OF THE AREAS WITH PERMANENT COVER TO ONCE PER MONTH.
B. WHERE CONSTRUCTION SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AREAS AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, THE SITE MUST BE INSPECTED DURING NON-FROZEN GROUND CONDITIONS AT LEAST ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS. FOLLOWING THE TWELFTH MONTH OF PERMANENT COVER AND NO CONSTRUCTION ACTIVITY, INSPECTIONS MAY BE TERMINATED UNTIL CONSTRUCTION ACTIVITY IS ONCE AGAIN INITIATED UNLESS THE PERMITEE(S) IS/ARE NOTIFIED IN WRITING BY THE MPCA THAT EROSION ISSUES HAVE BEEN DETECTED AT THE SITE AND INSPECTIONS NEED TO RESUME.
C. WHERE WORK HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE INSPECTIONS MAY BE SUSPENDED. THE REQUIRED INSPECTIONS AND MAINTENANCE SCHEDULE MUST BEGIN WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE OR 24 HOURS PRIOR TO RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.
4. THE PERMITEE(S) IS/ARE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPs, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs, UNTIL ANOTHER PERMITEE HAS OBTAINED COVERAGE UNDER THIS PERMIT ACCORDING TO PART III.B. OR THE PROJECT HAS UNDERGONE FINAL STABILIZATION, AND AN NOT HAS BEEN SUBMITTED TO THE MPCA.
5. THE PERMITEE(S) MUST INSPECT ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs AND POLLUTION PREVENTION MANAGEMENT MEASURES TO ENSURE INTEGRITY AND EFFECTIVENESS DURING ALL ROUTINE AND POST-RAINFALL EVENT INSPECTIONS. ALL NONFUNCTIONAL BMPs MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPs BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS UNLESS ANOTHER TIME FRAME IS SPECIFIED BELOW. THE PERMITEE(S) MUST INVESTIGATE AND COMPLY WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS:
A. ALL PERMETER CONTROL DEVICES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-HALF (1/2) OF THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR THEREAFTER AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
B. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES ONE-HALF (1/2) THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS (SEE PART IV.D.).
C. SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION DURING EACH INSPECTION. THE PERMITEE(S) MUST REMOVE ALL DEBRIS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND STABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. THE PERMITEE(S) SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. THE PERMITEE(S) IS/ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.
D. CONSTRUCTION SITE VEHICLE EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES BOTH ON AND OFF SITE WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, WITHIN A SHORTER TIME TO COMPLY WITH PART IV.E.6.
E. STREETS AND OTHER AREAS ADJACENT TO THE PROJECT MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE ACCUMULATIONS OF SEDIMENT. IF SEDIMENT IS PRESENT, IT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS).
6. ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITY IS REACHING THE INFILTRATION AREA. INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT EQUIPMENT IS NOT BEING DRIVEN ACROSS THE INFILTRATION AREA.

PART IV.F. -- POLLUTION PREVENTION MANAGEMENT MEASURES

- THE PERMITEE(S) SHALL IMPLEMENT THE FOLLOWING POLLUTION PREVENTION MANAGEMENT MEASURES ON THE SITE:
1. STORAGE, HANDLING, AND DISPOSAL OF CONSTRUCTION PRODUCTS, MATERIALS, AND WASTES: THE PERMITEE(S) SHALL COMPLY WITH THE FOLLOWING TO MINIMIZE THE EXPOSURE TO STORMWATER OF ANY OF THE PRODUCTS, MATERIALS, OR WASTES: PRODUCTS OR WASTES WHICH ARE EITHER NOT A SOURCE OF CONTAMINATION TO STORMWATER OR ARE DESIGNED TO BE EXPOSED TO STORMWATER ARE NOT HELD TO THIS REQUIREMENT:
A. BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS MUST BE UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) TO PREVENT THE DISCHARGE OF POLLUTANTS OR PROTECTED BY A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
B. PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS MUST BE UNDER COVER (E.G. PLASTIC SHEETING OR TEMPORARY ROOFS) TO PREVENT THE DISCHARGE OF POLLUTANTS OR PROTECTED BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
C. HAZARDOUS MATERIALS, TOXIC WASTE, (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) MUST BE PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE OR HAZARDOUS MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE.
D. SOLID WASTE MUST BE STORED, COLLECTED AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINN. R. CH. 7035.
E. PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH. 7041.
2. FUELING AND MAINTENANCE OF EQUIPMENT OR VEHICLES: SPILL PREVENTION AND RESPONSE: THE PERMITEE(S) SHALL TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE. THE PERMITEE(S) MUST CONDUCT FUELING IN A CONTAINED AREA UNLESS INFEASIBLE. THE PERMITEE(S) MUST ENSURE ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. THE PERMITEE(S) MUST REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINN. STAT. § 115.061, USING DRY CLEAN UP MEASURES WHERE POSSIBLE.
3. VEHICLE AND EQUIPMENT WASHING: IF THE PERMITEE(S) WASH THE EXTERIOR OF VEHICLES OR THE EQUIPMENT ON THE PROJECT SITE, WASHING MUST BE LIMITED TO A DESIGN AREA OF THE SITE. RUNOFF FROM THE WASHING AREA MUST BE CONTAINED IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND WASTE FROM THE WASHING ACTIVITY MUST BE PROPERLY DISPOSED OF. THE PERMITEE(S) MUST PROPERLY USE AND STORE SOAPS, DETERGENTS, OR SOLVENTS. NO ENGINE DEGREASING IS ALLOWED ON SITE.
4. CONCRETE AND OTHER WASHOUTS WASTE: THE PERMITEE(S) MUST PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE CONSTRUCTION ACTIVITY. THE LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND, AND THE CONTAINMENT MUST BE DESIGNED SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA RULES. A SIGN MUST BE INSTALLED ADJACENT TO LEACH WASHOUT FACILITY THAT REQUIRES SITE PERSONNEL TO UTILIZE THE PROPER FACILITIES FOR DISPOSAL OF CONCRETE AND OTHER WASHOUT WASTES.

PART IV.G. FINAL STABILIZATION

- THE PERMITEE(S) MUST ENSURE FINAL STABILIZATION OF THE SITE. FINAL STABILIZATION IS NOT COMPLETE UNTIL ALL REQUIREMENTS OF PARTS IV.G.1.-5. ARE COMPLETE:
1. ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND ALL SOILS ARE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROUND DENSITY OVER THE ENTIRE PERVIOUS SURFACE AREA, OR OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER EROSION CONDITIONS.
2. THE PERMANENT STORMWATER MANAGEMENT SYSTEM IS CONSTRUCTED, MEETS ALL REQUIREMENTS IN PART III.D. AND IS OPERATING AS DESIGNED. TEMPORARY OR PERMANENT SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS HAVE BEEN CLEANED OF ANY ACCUMULATED SEDIMENT. ALL SEDIMENT HAS BEEN REMOVED FROM CONVEYANCE SYSTEMS AND DITCHES ARE STABILIZED WITH PERMANENT COVER.
3. ALL TEMPORARY SYNTHETIC AND STRUCTURAL EROSION PREVENTION AND SEDIMENT CONTROL BMPs (SUCH AS SILT FENCE) HAVE BEEN REMOVED ON THE PORTIONS OF THE SITE FOR WHICH THE PERMITEE(S) IS/ARE RESPONSIBLE. BMPs DESIGNED TO DECOMPOSE ON SITE (SUCH AS SOME COMPOST LOGS) MAY BE LEFT IN PLACE.
4. FOR RESIDENTIAL CONSTRUCTION ONLY, INDIVIDUAL LOTS ARE CONSIDERED FINALLY STABILIZED IF THE STRUCTURE(S) ARE FINISHED AND TEMPORARY EROSION PROTECTION AND DOWNGRADENT PERMETER CONTROL HAS BEEN COMPLETED AND THE RESIDENCE HAS BEEN SOLD TO THE HOMEOWNER. ADDITIONALLY, THE PERMITEE HAS DISTRIBUTED THE MPCA'S 'HOMEOWNER FACT SHEET' TO THE HOMEOWNER TO INFORM THE HOMEOWNER OF THE NEED FOR, AND BENEFITS OF, PERMANENT COVER.
5. FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND (E.G., PIPELINES ACROSS CROP, FIELD PASTURE OR RANGE LAND) THE DISTURBED LAND HAS BEEN RETURNED TO ITS PRECONSTRUCTION AGRICULTURAL USE.

DRAWN BY: A.G. DESIGN BY: A.G.
CHKCD BY: PROJ. NO. 13-1445
C.W.P.
ORIGINAL DATE: NOVEMBER 12, 2013

REVISION DESCRIPTION
DATE
1-7-14 CITY REVIEW #1
2-9-14 STREET, LOT, AND POND LAYOUT DL
2-11-14 CITY REVIEW #2

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.
Adam Gankel
DATE: 02-03-2014 LIC. NO. 43983

VIKING PRESERVE
EAST BETHEL, MN
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

PREPARED FOR: SHAW TRUCKING, INC.



SITE PLANNING & ENGINEERING
PLOWE ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014

PHONE: (651) 361-8210
FAX: (651) 361-8701

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
VIKING PRESERVE
05.1

SITE SPECIFIC INFORMATION

PROJECT NAME
VIKING PRESERVE

PROJECT LOCATION
NORTH SIDE OF VIKING BLDG (CSAH 22), EAST OF JACKSON ST NE, EAST BETHEL

PROJECT OWNER
SHAW TRUCKING, INC.
18530 BUCHANAN ST NE
EAST BETHEL, MN 55011

CONSTRUCTION ACTIVITY DESCRIPTION

THE SITE HAS BEEN USED AS FOR SAND WINING, AND AS SUCH INCLUDES AN EXISTING LARGE POND. A LARGE WETLAND COMPLEX OCCUPIES THE EASTERN ONE-HALF OF THE SITE, AND TWO SMALLER WETLANDS DOT THE WESTERN PROPERTY LINE. THE TWO SMALL WETLANDS OVERFLOW TO THE LARGE WETLAND, WHICH IN TURN DRAINS TO THE EAST VIA A CULVERT. A THIRD WETLAND (ON THE SOUTH PROPERTY LINE ADJACENT TO CSAH 22) OVERFLOWS TO THE CSAH 22 DITCH SYSTEM. THE CSAH 22 DITCH SYSTEM COLLECTS A SMALL PORTION OF THE SITE AND ROUTES IT THROUGH A CULVERT UNDER CSAH 22.

THE PROPOSED SITE HAS 48 SINGLE-FAMILY LOTS WITH PUBLIC STREETS AND UTILITIES. TO MEET STORM WATER REQUIREMENTS, MOST OF THE ROADWAY AND LOT FRONTAGE IS COLLECTED AND ROUTED TO SEVERAL NEW NURP PONDS. THESE NURP PONDS OUTLET TO THE EXISTING WINING POND, WHICH WILL BE ADJUSTED TO PROVIDE 4:1 SLOPES ABOVE THE NWL AND A 10:1 BENCH AND WILL PROVIDE RATE CONTROL FOR THE SITE (BUT IS NOT CONSIDERED A NURP POND). A SMALL INFILTRATION BASIN IS PROPOSED TO TREAT A PORTION OF THE REAR YARD LOT DRAINAGE.

SITE AREAS

	BEFORE CONSTRUCTION	AFTER CONSTRUCTION
TOTAL SITE AREA	58.92 ACRES	
TOTAL ESTIMATED IMPERVIOUS	0.62 ACRES	7.59 ACRES
TOTAL ESTIMATED PERVIOUS	58.30 ACRES	51.33 ACRES

TOTAL DISTURBED AREA
29.0 ACRES

RECEIVING WATERS WITHIN ONE MILE

NAME OF WATER BODY	TYPE OF WATER BODY	SPECIAL WATER	IMPAIRED WATER
UNNAMED WETLAND	WETLAND	NO	NO
CROOKED BROOK	CREEK	NO	NO
COUNTY DITCH 28	DITCH	NO	NO

NO SPECIAL OR IMPAIRED WATERS WITHIN 1 MILE OF SITE BOUNDARIES.

SITE MAP AND DESIGN CALCULATIONS
SEE STORM WATER DRAINAGE REPORT FOR QUANTIFICATION OF STORM WATER MANAGEMENT REQUIREMENTS AND DRAINAGE AREA MAPS.

SOILS, SLOPES, VEGETATION
SOIL TYPE(S): ON-SITE SOIL BORINGS WERE TAKEN BY ALIED TESTING. BORINGS SHOW SILTY SAND (SM) WITH VARYING WATER TABLE ELEVATIONS.

SLOPES: PROPOSED SLOPES WILL BE GENERALLY MODERATE AND ARE NOT EXPECTED TO EXCEED 3:1.

VEGETATION: IMPROVEMENT AREA IS MOSTLY OPEN SPACE. SEED AND MULCH IS PROPOSED FOR DISTURBED AREAS. TREES, SHRUBS, AND PERENNIALS ARE PROPOSED.

PERSON WHO PREPARED SWPPP ("DESIGNER")
ADAM GNKEL, P.E.
PLOWE ENGINEERING, INC.
6776 LAKE DRIVE
LINO LAKES MN 55014
(651) 361-8200

PERSON WHO WILL OVERSEE IMPLEMENTATION OF SWPPP ("CONTRACTOR")
TBD

PERSON(S) WHO WILL INSPECT ON-SITE ESC MEASURES ("INSPECTOR")
TBD

TRAINING DOCUMENTATION
DOCUMENTATION MUST ACCOMPANY THE SWPPP INDICATING THAT THE INDIVIDUALS IDENTIFIED IN PART III.F. HAVE BEEN TRAINED IN ACCORDANCE WITH THE REQUIREMENTS OF PART III.F. DOCUMENTATION SHALL INCLUDE:

- A. NAMES OF THE PERSONNEL ASSOCIATED WITH THIS PROJECT THAT ARE REQUIRED TO BE TRAINED PER PART III.F.1. OF THIS PERMIT.
- B. DATES OF TRAINING AND NAME OF INSTRUCTOR(S) AND ENTITY PROVIDING TRAINING.
- C. CONTENT OF TRAINING COURSE OR WORKSHOP INCLUDING THE NUMBER OF HOURS OF TRAINING.

SITE SEQUENCING & ESC NOTES

PRIOR TO ANY LAND-DISTURBING ACTIVITY, THE CONTRACTOR MUST INSTALL ROCK CONSTRUCTION ENTRANCE(S) (LOCATIONS TO BE DETERMINED - COORDINATE WITH OWNER) AND DOWN-GRADE PERIMETER SILT FENCE AS SHOWN ON PLAN. (CONTACT CITY TO INSPECT EROSION CONTROL MEASURES PRIOR TO GRADING OPERATIONS, IF NECESSARY.) ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL CONDITIONS REQUIRE. THESE PRACTICES SHALL REMAIN IN-PLACE UNTIL THE FINAL STABILIZATION HAS BEEN ESTABLISHED IN ACCORDANCE WITH PART IV.G.

THE CONTRACTOR SHALL PERFORM SITE GRADING ON AN AREA-BY-AREA BASIS TO MINIMIZE UNSTABILIZED AREAS. AS EACH AREA IS COMPLETED, ALL EXPOSED SOILS MUST HAVE TEMPORARY EROSION CONTROL PROTECTION OR PERMANENT COVER WITHIN SEVEN (7) DAYS.

THE CONTRACTOR SHALL PROVIDE ALL SOO, SEED, MULCH AND FERTILIZER WHICH SHALL CONFORM WITH THE FOLLOWING MNDOT SPECIFICATIONS AS MODIFIED BELOW.

ITEM	MNDOT SPECIFICATION/NOTES
SOD	3878
SEED **	3876
* FOR TURF ESTABLISHMENT	MNDOT MIXTURE 260 (100 LBS/ACRE) - OR - MNDOT MIXTURE 270 (120 LBS/ACRE)
TEMPORARY FALL COVER	MNDOT MIXTURE 100B (100 LBS/ACRE)
TEMPORARY SPRING/SUMMER	MNDOT MIXTURE 110 (AT 100 LBS/ACRE)
1-2 YEARS COVER	MNDOT MIXTURE 150 (AT 40 LBS/ACRE)
2-5 YEARS COVER	MNDOT MIXTURE 190 (AT 60 LBS/ACRE)
MULCH	3882 (TYPE 1 - DISC ANCHORED)
FERTILIZER	3881
WOOD FIBER BLANKET	3885 (CATEGORY 2)

* MOW A MINIMUM OF ONCE PER 2 WEEKS
** SEEDED AREAS SHALL BE EITHER MULCHED OR COVERED BY FIBROUS BLANKETS TO PROTECT SEEDS AND LIMIT EROSION.

TEMPORARY OR PERMANENT MULCH MUST BE UNIFORMLY APPLIED BY MECHANICAL OR HYDRAULIC MEANS AND STABILIZED BY DISC-ANCHORING OR USE OF HYDRAULIC SOIL STABILIZERS.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS OR IMPLEMENTED IN THE FIELD SHALL BE IN ACCORDANCE WITH THE CITY AND NPDES PHASE II PERMIT REQUIREMENTS, AND THE MPCA'S "PROTECTING WATER QUALITY IN URBAN AREAS BEST MANAGEMENT PRACTICES FOR MINNESOTA."

THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ALL ADJACENT PROPERTY LINES AND MAKE SURE THE EROSION CONTROL PRACTICES INPLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES.

THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF BUILDING CONSTRUCTION. SILT FENCE TO BE REMOVED ONLY AFTER COMPLETION OF BUILDING CONSTRUCTION AND UPON ESTABLISHMENT OF VEGETATION.

THE CONTRACTOR SHALL PROVIDE WOOD FIBER BLANKET FOR ALL AREAS OF CONCENTRATED FLOW AND FOR ALL SLOPES 3:1 OR GREATER.

PROTECT ALL STORM WATER MANAGEMENT FACILITIES FROM CONSTRUCTION RUN-OFF. CONTRACTOR TO INSTALL AND CONSTRUCT SAID FACILITIES ONCE SITE HAS BEEN STABILIZED.

IF ANY SLOPES APPEAR TO BE FAILING, THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILT FENCE, BIOROLLS AND EROSION CONTROL BLANKET AS NEEDED.

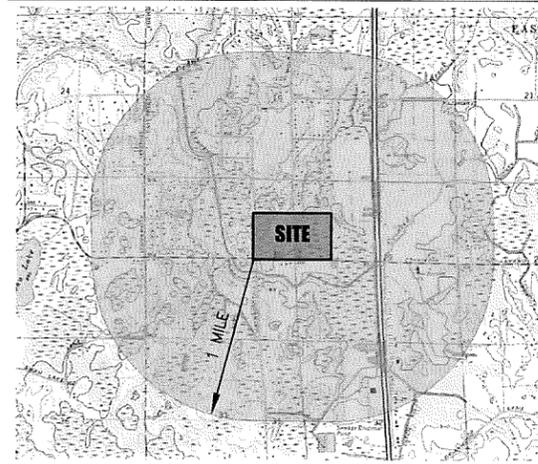
THE CONTRACTOR SHALL FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS.

THE CONTRACTOR SOO ALL DISTURBED DRAINAGE AREAS, INCLUDING SWALES, OVERFLOWS, AROUND STORM SEWER FLARED-END SECTIONS, AND OFF-STREET CATCH BASINS.

UPON GRADING COMPLETION THE CONTRACTOR SHALL PROVIDE NATIVE TOPSOIL, SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN 48 HOURS OF FINAL GRADING. EXCESS SOIL SHOULD BE TREATED LIKE OTHER EXPOSED SOIL AND STABILIZED WITHIN 72 HOURS. ANY SOIL STOCKPILES ARE TO HAVE SILT FENCE PLACED ON DOWNSTREAM SIDES AND SHALL NOT BE PLACED IN SURFACE WATERS.

ADJACENT STREETS SHALL BE KEPT CLEAN OF CONSTRUCTION MATERIALS, DIRT, AND OTHER UNDESIRABLE MATERIALS. WHEN MATERIALS OR DEBRIS HAVE WASHED/FLOWED ONTO ADJACENT STREETS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SWEEP/SCRAPE STREETS AS NECESSARY OR AS DIRECTED BY THE CITY.

MAP OF SURFACE WATERS



NO IMPAIRED OR SPECIAL WATERS ARE NOTED WITHIN 1 MILE OF PROJECT BOUNDARY.

DRAWN BY: A.G. DESIGN BY: A.G.
CHECKED BY: C.W.F. PROJ. NO. 13-1445
ORIGINAL DATE: NOVEMBER 12, 2013

REVISION DESCRIPTION

DATE	REVISION DESCRIPTION
1-7-14	CITY REVIEW #1
2-9-14	STREET, LOT, AND POND LAYOUT D.J.
7-11-14	CITY REVIEW #2

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.

ADAM GNKEL
L.C. NO. 43963
DATE: 02.03.2014

VIKING PRESERVE
EAST BETHEL, MN
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

PREPARED FOR:
SHAW TRUCKING, INC.

PLOWE ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701

VIKING PRESERVE

City of East Bethel
County of Anoka
Sec. 29 & 30, T33, R23

KNOW ALL PERSONS BY THESE PRESENTS: That Shaw Trucking, Inc., a Minnesota corporation, owner of the following described property:

The Southwest Quarter of the Northwest Quarter of Section 29, Township 33, Range 23 except the North 300 feet of the West 726 feet thereof and also except that part platted as Anoka County Highway Right-of-Way Plat No. 13.

AND

The Southeast Quarter of the Northeast Quarter of Section 30, Township 33, Range 23, except the West 370 feet of the North 888.56 feet and also except that part platted as Anoka County Highway Right-of-Way Plat No. 13.

EXCEPT

That part of the Southeast Quarter of the Northeast Quarter of Section 30, Township 33, Range 23, Anoka County, Minnesota, described as follows:

Beginning at the Northeast corner of said Southeast Quarter of the Northeast Quarter; thence on an assumed bearing of South 02 degrees 16 minutes 18 seconds East along the East line of said Southeast Quarter of the Northeast Quarter, a distance of 485.94 feet; thence North 90 degrees 00 minutes 00 seconds West a distance of 48.35 feet; thence Northwest a distance of 418.48 feet along a non-tangential curve, concave to the Southwest, having a radius of 639.00 feet, a central angle of 37 degrees 31 minutes 23 seconds, a chord distance of 411.04 feet and a chord bearing of North 55 degrees 04 minutes 53 seconds West; thence North 24 degrees 32 minutes 38 seconds West, not tangent to said curve, a distance of 157.41 feet; thence North 90 degrees 00 minutes 00 seconds West a distance of 150.00 feet; thence North 00 degrees 52 minutes 14 seconds East to the North line of said Southeast Quarter of the Northeast Quarter; thence Easterly along said North line to the point of beginning.

AND

That part of the Southwest Quarter of the Northwest Quarter of Section 29, Township 33, Range 23, Anoka County, Minnesota, lying South of the North 300.00 feet thereof, lying Westerly of the hereinafter described Line A, and lying Northerly of the hereinafter described Line B and its extensions.

Line A.

Commencing at the Southwest corner of said Southwest Quarter of the Northwest Quarter; thence on an assumed bearing of South 89 degrees 25 minutes 45 seconds East along the South line of said Southwest Quarter of the Northwest Quarter, a distance of 194.31 feet; thence North 00 degrees 35 minutes 11 seconds East a distance of 300.02 feet; thence Northwest a distance of 156.63 feet along a tangential curve, concave to the Southwest, having a radius of 267.00 feet and a central angle of 33 degrees 39 minutes 16 seconds to the point of beginning of the line to be described; thence Northerly a distance of 426.03 feet along a reverse curve, concave to the East, having a radius of 333.00 feet and a central angle of 73 degrees 18 minutes 09 seconds; thence Northeasterly a distance of 184.93 feet along a reverse curve, concave to the northwest, having a radius of 267.00 feet and a central angle of 39 degrees 41 minutes 06 seconds; thence North 00 degrees 32 minutes 59 seconds East, tangent to said curve, to the North line of said Southwest Quarter of the Northwest Quarter and there terminating.

Line B.

Commencing at the Northwest corner of said Southwest Quarter of the Northwest Quarter; thence on an assumed bearing of South 02 degrees 16 minutes 18 seconds East along the West line of said Southwest Quarter of the Northwest Quarter, a distance of 485.94 feet to the point of beginning of the line to be described; thence North 90 degrees 00 minutes 00 seconds East a distance of 350.00 feet and there terminating.

AND ALSO EXCEPTING

That part of the Southeast Quarter of the Northeast Quarter of Section 30, Township 33, Range 23, Anoka County, Minnesota, described as follows:

Commencing at the Southwest corner of said Southeast Quarter of the Northeast Quarter; thence North 02 degrees 28 minutes 30 seconds West, bearing assumed, along the west line of said Southeast Quarter of the Northeast Quarter, 60.10 feet to the North line of Anoka County Highway Right-of-Way Plat No. 13, Anoka County, Minnesota; thence South 89 degrees 05 minutes 56 seconds East, along said North line, 33.06 feet to the East line of the West 33.00 feet of said Southeast Quarter of the Northeast Quarter, and the point of beginning of the parcel to be described; thence South 89 degrees 05 minutes 56 seconds East, along said North line, 20.03 feet; thence North 45 degrees 47 minutes 13 seconds West 29.16 feet to a point on said east line of the West 33.00 feet of the Southeast Quarter of the Northeast Quarter, distant 20.03 feet Northerly of the point of beginning; thence South 02 degrees 28 minutes 30 seconds East along said East line, 20.03 feet to the point of beginning.

Has caused the same to be surveyed and platted as VIKING PRESERVE and does hereby dedicate to the public for public use the public ways and the drainage and utility easements as shown by this plat. Also dedicating to the County of Anoka the right of access onto County State Aid Highway No. 22 as shown on this plat.

In witness whereof said Shaw Trucking, Inc., a Minnesota corporation, has caused these presents to be signed by its proper officer this _____ day of _____, 20____.

Shaw Trucking, Inc.

_____, President

Donald H. Shaw

STATE OF MINNESOTA
COUNTY OF _____

This instrument was acknowledged before me this _____ day of _____, 20____ by Donald H. Shaw, President of Shaw Trucking, Inc., a Minnesota corporation.

Notary Public, _____ County, Minnesota
My Commission Expires _____

I, Jason E. Rud do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey, that all mathematical data and labels are correctly designated on this plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

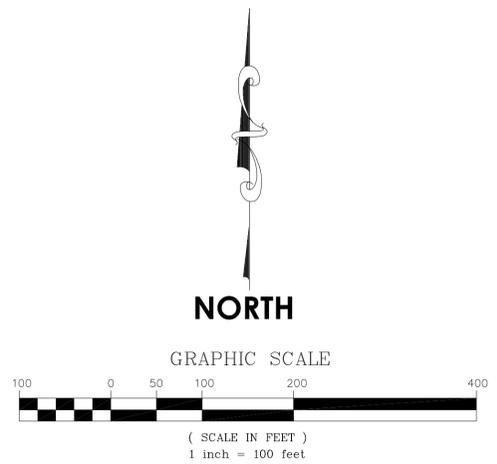
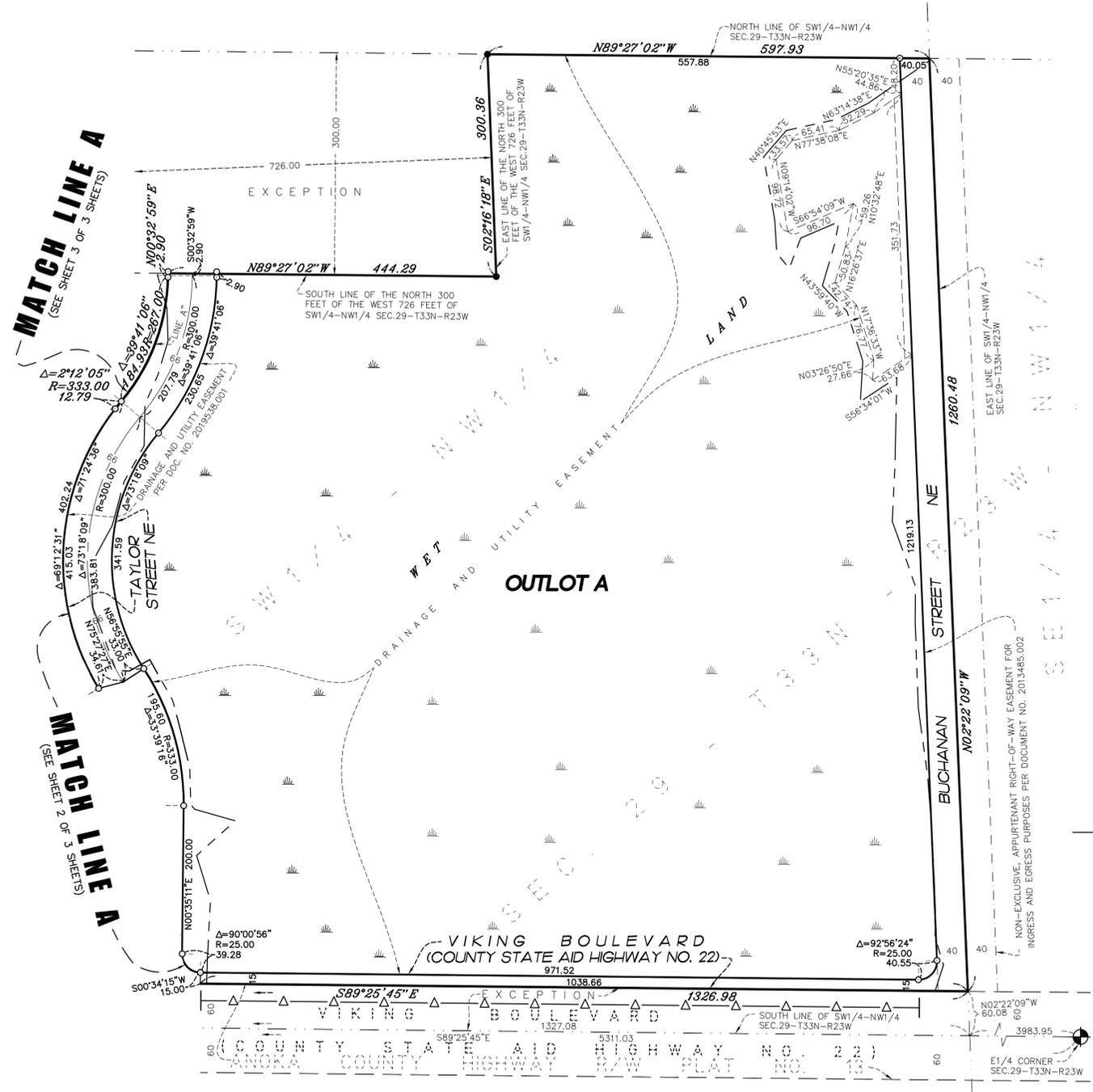
Dated this _____ day of _____, 20____.

Jason E. Rud, Licensed Land Surveyor
Minnesota License No. 41578

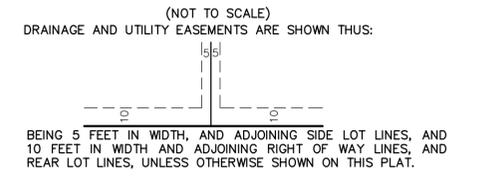
STATE OF MINNESOTA
COUNTY OF _____

This instrument was acknowledged before me this _____ day of _____, 20____ by Jason E. Rud.

Notary Public, _____ County, Minnesota
My Commission Expires _____



- DENOTES ANOKA COUNTY CAST IRON MONUMENT
 - DENOTES 1/4 INCH BY 14 INCH IRON PIPE MARKED BY RLS NO. 41578.
 - DENOTES FOUND IRON MONUMENT
 - △— DENOTES RIGHT OF ACCESS DEDICATED TO ANOKA COUNTY
- FOR THE PURPOSES OF THIS PLAT THE SOUTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 33, RANGE 23, IS ASSUMED TO HAVE A BEARING OF SOUTH 89 DEGREES 05 MINUTES 56 SECONDS EAST.



City Council, City of East Bethel, Minnesota
This plat of VIKING PRESERVE was approved and accepted by the City Council of the City of East Bethel, Minnesota at a regular meeting thereof held this _____ day of _____, 20____ and said plat is in compliance with the provisions of Minnesota Statutes, Section 505.03, Subd. 2.

City Council, City of East Bethel, Minnesota
By _____ Mayor
By _____ Clerk

County Surveyor
I hereby certify that in accordance with Minnesota Statutes, Section 505.021, Subd. 11, this plat has been reviewed and approved this _____ day of _____, 20____.

Larry D. Hoium
Anoka County Surveyor



VIKING PRESERVE

City of East Bethel
County of Anoka
Sec. 29 & 30, T33, R23



NORTH

GRAPHIC SCALE



(SCALE IN FEET)
1 inch = 60 feet

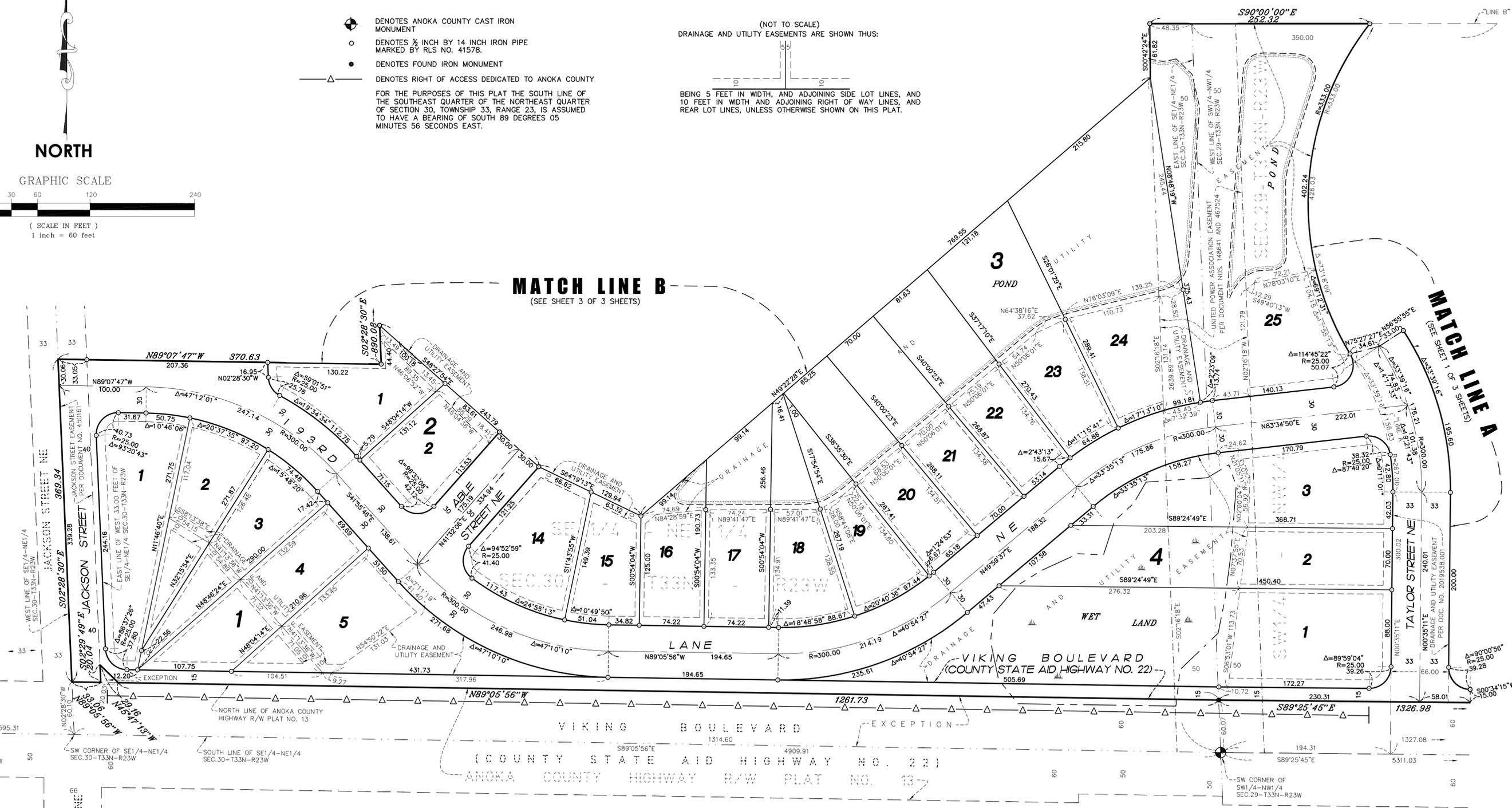
- ⊙ DENOTES ANOKA COUNTY CAST IRON MONUMENT
- DENOTES 1/2 INCH BY 14 INCH IRON PIPE MARKED BY RLS NO. 41578.
- DENOTES FOUND IRON MONUMENT
- △— DENOTES RIGHT OF ACCESS DEDICATED TO ANOKA COUNTY

FOR THE PURPOSES OF THIS PLAT THE SOUTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 33, RANGE 23, IS ASSUMED TO HAVE A BEARING OF SOUTH 89 DEGREES 05 MINUTES 56 SECONDS EAST.

(NOT TO SCALE)
DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:



BEING 5 FEET IN WIDTH, AND ADJOINING SIDE LOT LINES, AND 10 FEET IN WIDTH AND ADJOINING RIGHT OF WAY LINES, AND REAR LOT LINES, UNLESS OTHERWISE SHOWN ON THIS PLAT.

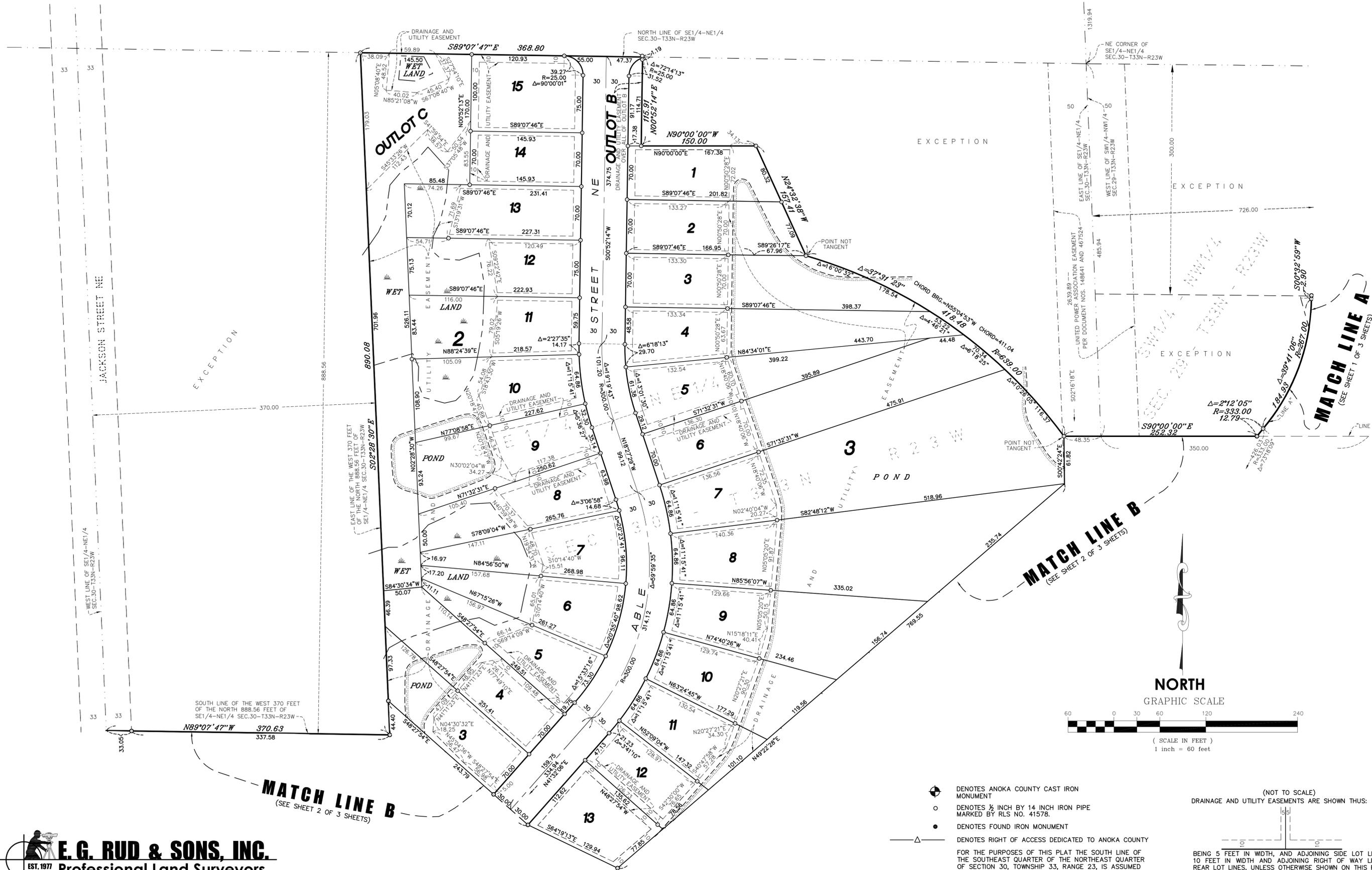


MATCH LINE B
(SEE SHEET 3 OF 3 SHEETS)

MATCH LINE A
(SEE SHEET 1 OF 3 SHEETS)

VIKING PRESERVE

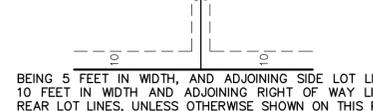
City of East Bethel
County of Anoka
Sec. 29 & 30, T33, R23



- DENOTES ANOKA COUNTY CAST IRON MONUMENT
- DENOTES 1/2 INCH BY 14 INCH IRON PIPE MARKED BY RLS NO. 41578.
- DENOTES FOUND IRON MONUMENT
- DENOTES RIGHT OF ACCESS DEDICATED TO ANOKA COUNTY

FOR THE PURPOSES OF THIS PLAT THE SOUTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 33, RANGE 23, IS ASSUMED TO HAVE A BEARING OF SOUTH 89 DEGREES 05 MINUTES 56 SECONDS EAST.

(NOT TO SCALE)
DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:

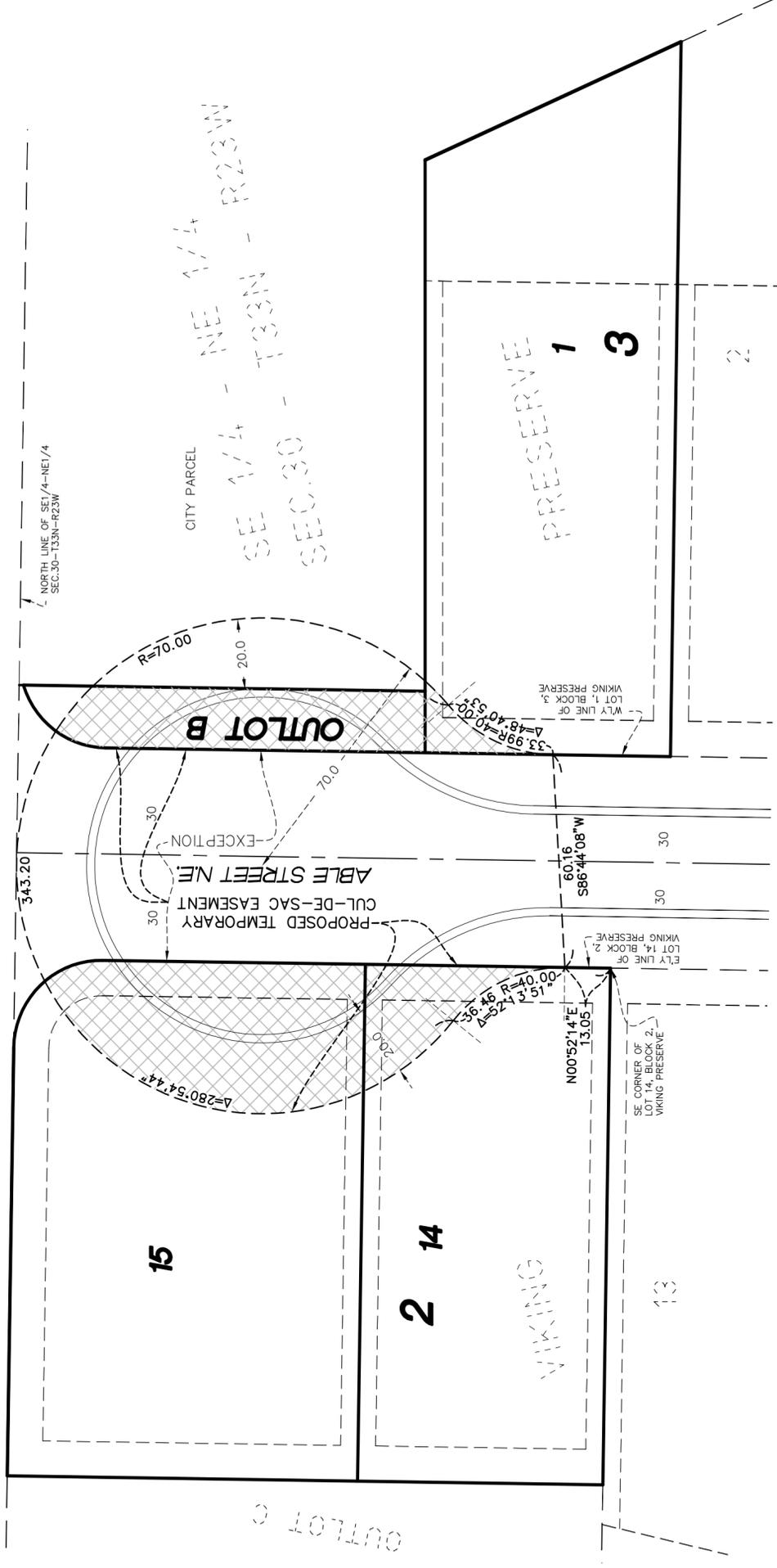
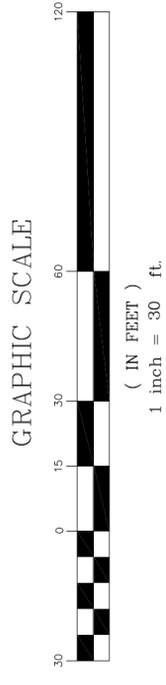


BEING 5 FEET IN WIDTH, AND ADJOINING SIDE LOT LINES, AND 10 FEET IN WIDTH AND ADJOINING RIGHT OF WAY LINES, AND REAR LOT LINES, UNLESS OTHERWISE SHOWN ON THIS PLAT.

SKETCH AND DESCRIPTION

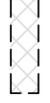
~of~ PROPOSED VIKING PRESERVE
TEMPORARY CUL-DE-SAC EASEMENT
FOR ABLE STREET N.E.

~for~ SHAW TRUCKING, INC.
18530 Buchanan Street N.E
East Bethel, MN 55011



NOTES

- Bearings shown are on the Anoka County Coordinate System.
- The Plot of VIKING PRESERVE is not recorded at this time.

 DENOTES PROPOSED TEMPORARY CUL-DE-SAC EASEMENT (5,979 S.F. OR 0.14 ACRES, MORE OR LESS)

 **EST. 1977**
E.G. RUD & SONS, INC.
Professional Land Surveyors
6776 Lake Drive NE, Suite 110
Lino Lakes, MN 55014
Tel. (651) 361-8200 Fax (651) 361-8701
www.egrud.com

DESCRIPTION OF PROPOSED TEMPORARY CUL-DE-SAC EASEMENT FOR ABLE STREET

A temporary easement for cul-de-sac purposes over, under and across that part of Lots 14 and 15, Block 2; Lot 1, Block 3; and Outlot B, VIKING PRESERVE, Anoka County, Minnesota, which lies within the description as follows:

Commencing at the southeast corner of said Lot 14, Block 2; thence on an assumed bearing of North 00 degrees 52 minutes 14 seconds East, along the easterly line of said Lot 14, Block 2, a distance of 13.05 feet to the point of beginning of said temporary easement to be described; thence northerly a distance of 36.46 feet along a tangential curve concave to the southwest having a radius of 40.00 feet and a central angle of 52 degrees 13 minutes 51 seconds; thence northerly, easterly and southerly a distance of 343.20 feet along a reverse curve concave to the south, having a radius of 70.00 feet and a central angle of 280 degrees 54 minutes 44 seconds; thence southerly a distance of 33.99 feet along a reverse curve concave to the southeast having a radius of 40.00 feet and a central angle of 48 degrees 40 minutes 53 seconds to the westerly line of said Lot 1, Block 3; thence South 86 degrees 44 minutes 08 seconds West, not tangent to last described curve, a distance of 60.16 feet to the point of beginning of said temporary easement.

Said temporary easement to expire once Able Street is extended, all restoration is completed and easement is no longer needed.

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


JASON E. RUD

Date: 7-10-14 License No. 41578

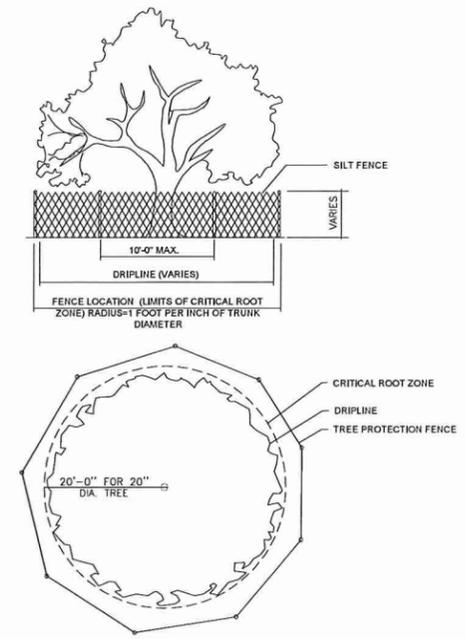
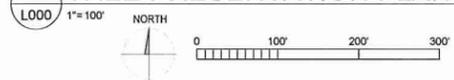
DRAWN BY: JEN	JOB NO: 13630PP	DATE: 7/07/14
CHECK BY: JER	SCANNED <input type="checkbox"/>	
1	2/03/14	Rev. layout & desc. JEN
2	7/10/14	Rev. per city comment. JEN
3		
NO.	DATE	DESCRIPTION
BY		



LEGEND:

—●—●—●— TREE PRESERVATION AREA

1 TREE PRESERVATION PLAN



2 TREE PROTECTION - ELEVATION/PLAN
L000 NOT TO SCALE

TREE PROTECTION NOTES:

1. LANDSCAPE ARCHITECT CREATED THIS PLAN WHILE THE REFERENCED TREES WERE DORMANT. THEREFORE, LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REVISIT THE HEALTH OF EACH INDIVIDUAL TREE REFERENCED IN THIS PLAN WHILE THE TREES ARE ACTIVELY GROWING DURING THE 2014 SEASON.

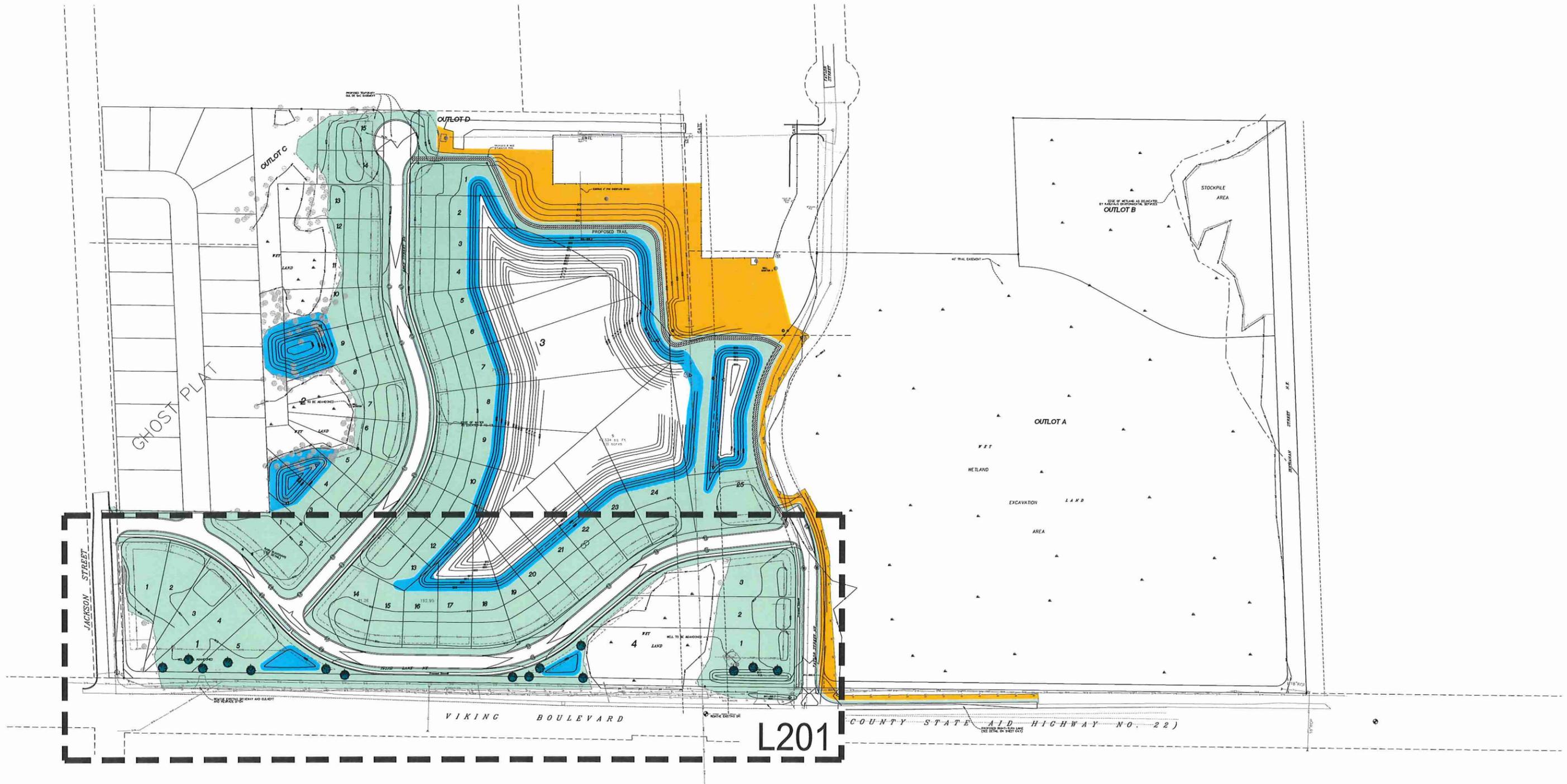
NO.	DATE	ISSUE/REVISION	DRWN	CHKD	NO.	DATE	ISSUE/REVISION	DRWN	CHKD

DATE: 01/26/14	I hereby certify that this landscape architectural document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Landscape Architect under the laws of the State of Minnesota. 01/26/2014 Stephen P. Mastey 40629 06/30/2014 ALL Pages or sheets covered by this seal
DRAWN: SPM	
DESIGNED: SPM	
CHECKED: SPM	
APPROVED: SPM	

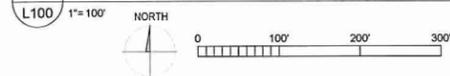
 LANDSCAPE ARCHITECTURE INCORPORATED WWW.LANDASTINC.COM	
---	--

PROJECT: VIKING PRESERVE EAST BETHEL, MN	
CLIENT: SHAW TRUCKING, INC. 18530 BUCHANAN STREET N.E. EAST BETHEL, MN 55011	

DRAWING TITLE: TREE PRESERVATION PLAN	
PROJECT NO. 101-2013	DRAWING NO. L000
SCALE: AS NOTED	



1 LANDSCAPE REFERENCE PLAN

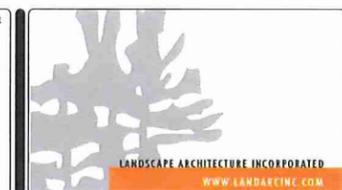


NO.	DATE	ISSUE/REVISION	DRWN	CHKD	NO.	DATE	ISSUE/REVISION	DRWN	CHKD

DATE:
01/26/14
DRAWN:
SPM
DESIGNED:
SPM
CHECKED:
SPM
APPROVED:
SPM

I hereby certify that this landscape architectural document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Landscape Architect under the laws of the State of Minnesota.

 01/26/2014
 Stephen P. Mastey
 40629
 06/30/2014
 ALL
 Pages or sheets covered by this seal



PROJECT
VIKING PRESERVE
EAST BETHEL, MN

CLIENT
SHAW TRUCKING, INC.
18530 BUCHANAN STREET N.E.
EAST BETHEL, MN 55011

DRAWING TITLE LANDSCAPE REFERENCE PLAN	
PROJECT NO. 101-2013	DRAWING NO. L100
SCALE: AS NOTED	



LEGEND:

FRONT YARD TREE PLANTING AREA

1 FRONT YARD TREE PLAN



STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT

WRAP TREE TRUNKS BY NOVEMBER 15 WITH A WRAP APPROVED BY THE LANDSCAPE ARCHITECT. REMOVE BY APRIL 1

MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER POSSIBLE

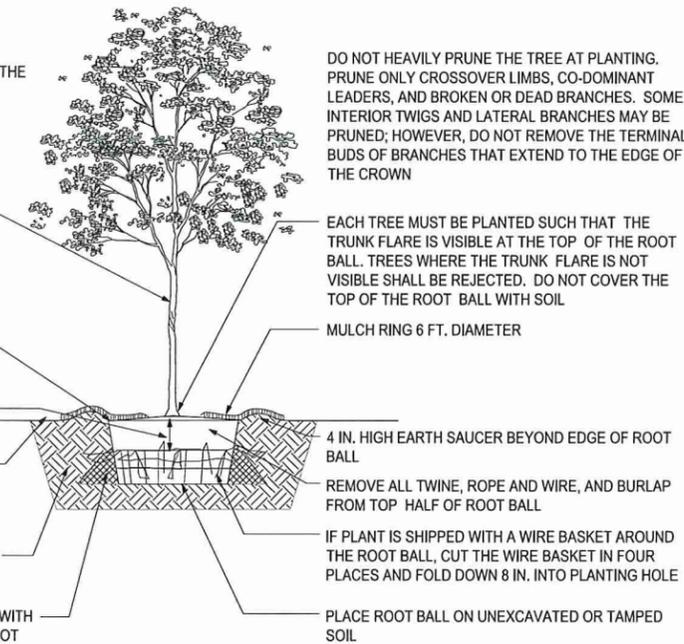
SET TOP OF ROOT BALL FLUSH TO GRADE OR 1-2 IN. HIGHER IN SLOWLY DRAINING SOILS

8 INCHES

4 IN. MULCH DEPTH. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK. MAINTAIN THE MULCH WEED-FREE FOR AFTER PLANTING

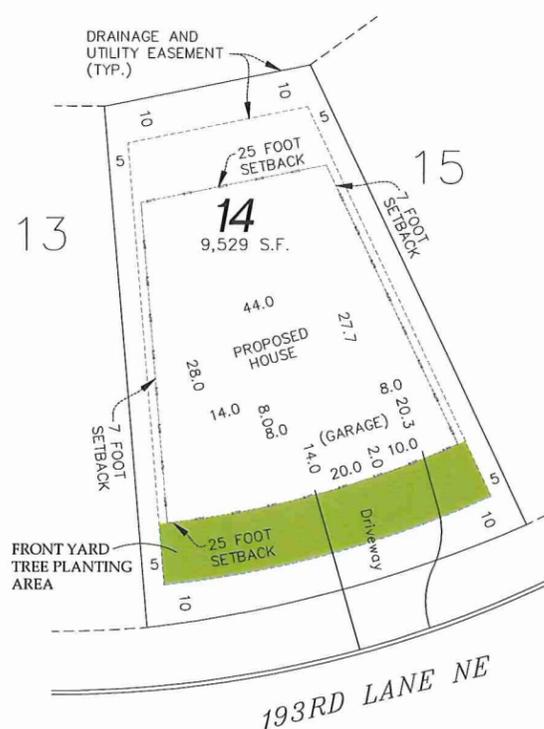
NOTE: FOR DIMENSIONS OF PLANTING AREAS SEE PLAN, SOIL BACKFILL PER SPEC.

TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT



2 TYPICAL FRONT YARD TREE PLANTING - BALLED AND BURLAPPED

L200 NOT TO SCALE



3 TYPICAL FRONT YARD TREE PLAN



PLANT MATERIALS SCHEDULE

DECIDUOUS TREES

KEY	COMMON / BOTANICAL NAME	SIZE	ROOT
FFM	Fire Fall Maple <i>Acer x freemanii 'AF#1'</i>	2.5" cal.	B&B
ABM	Autumn Blaze Maple <i>Acer x freemanii 'Jeffersred'</i>	2.5" cal.	B&B
AM	Armstrong Maple <i>Acer x freemanii 'Armstrong'</i>	2.5" cal.	B&B
MM	Marmo Maple <i>Acer x freemanii 'Marmo'</i>	2.5" cal.	B&B
SGM	Sienna Glen Maple <i>Acer x freemanii 'Sienna'</i>	2.5" cal.	B&B

PLANTING NOTES:

1. PLANT 2 TREES PER LOT; 4 TREES PER CORNER AND DOUBLE FRONTAGE LOTS.
2. SELECT ANY TREE COMBINATION FROM THE PLANT MATERIALS SCHEDULE ABOVE.

NO.	DATE	ISSUE/REVISION	DRWN	CHKD	NO.	DATE	ISSUE/REVISION	DRWN	CHKD

DATE: 01/26/14
 DRAWN: SPM
 DESIGNED: SPM
 CHECKED: SPM
 APPROVED: SPM

I hereby certify that this landscape architectural document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Landscape Architect under the laws of the State of Michigan.
 Stephen P. Mastey
 06/30/2014
 ALL
 Pages or sheets covered by this seal

PROJECT: VIKING PRESERVE EAST BETHEL, MN
 CLIENT: SHAW TRUCKING, INC. 18530 BUCHANAN STREET N.E. EAST BETHEL, MN 55011

DRAWING TITLE: FRONT YARD TREE PLAN
 PROJECT NO.: 101-2013 DRAWING NO.: L200
 SCALE: AS NOTED

STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT

WRAP TREE TRUNKS BY NOVEMBER 15 WITH A WRAP APPROVED BY THE LANDSCAPE ARCHITECT. REMOVE BY APRIL 1

MARK THE NORTH SIDE OF THE TREE IN THE NURSERY AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER POSSIBLE

SET TOP OF ROOT BALL FLUSH TO GRADE OR 1-2 IN. HIGHER IN SLOWLY DRAINING SOILS

4 IN. HIGH EARTH SAUCER BEYOND EDGE OF ROOT BALL

SET TREE PLUMB AND BACKFILL WITH 1:1:1 PLANTING SOIL MIX. FILL ALL VOIDS AND SETTLE PLANTING SOIL BY WATERING

WATER TREE THOROUGHLY WITHIN 2 HOURS OF PLANTING



DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN

EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE WILL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL

MULCH RING TO ENDS OF LOWER LIMBS; 4 IN. MULCH DEPTH DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK

SCARIFY SIDES AND BOTTOM OF HOLE

UTILIZE MINIMUM 85° TREE SPADE UNLESS APPROVED BY LANDSCAPE ARCHITECT

PLANT MATERIALS SCHEDULE

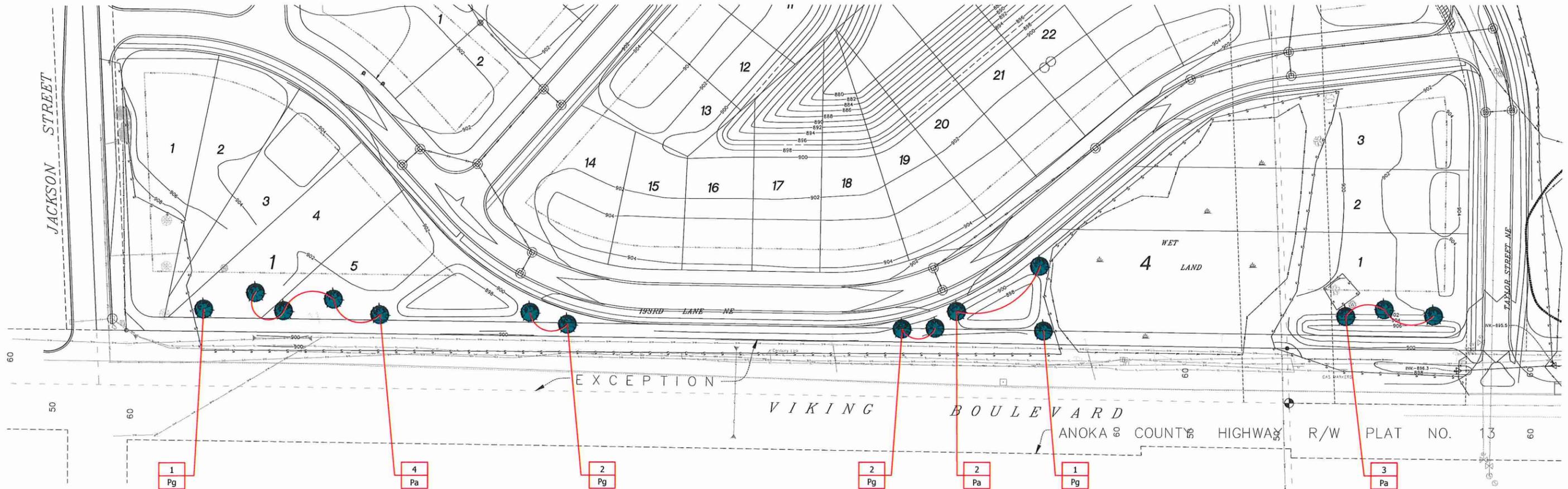
CONIFEROUS TREES				
KEY	KEY	COMMON / BOTANICAL NAME	SIZE	ROOT
Pa	9	Norway Spruce <i>Picea abies</i>	12' Ht.	Spaded
Pg	6	Black Hills Spruce <i>Picea glauca densata</i>	12' Ht.	Spaded

PLANTING NOTES:

- LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE FINAL ADJUSTMENT OF TREE SPECIES AND LOCATIONS IN THE FIELD IF REQUIRED TO CREATE A MORE SUCCESSFUL PLANT ESTABLISHMENT AND SCREENING OPPORTUNITY.

2 CONIFEROUS TREE PLANTING - MACHINE MOVED

L201 NOT TO SCALE



1 LANDSCAPE PLAN

L201 1"=50' NORTH

NO.	DATE	ISSUE/REVISION	DRWN	CHKD	NO.	DATE	ISSUE/REVISION	DRWN	CHKD

DATE: 01/26/14	<p>I hereby certify that this landscape architectural document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Landscape Architect under the laws of the State of Minnesota.</p> <p><i>Stephen P. Mastey</i> 01/26/2014</p> <p>STEPHEN P. MASTEY 40629</p> <p>06/30/2014</p> <p>ALL</p>
DRAWN: SPM	
DESIGNED: SPM	
CHECKED: SPM	
APPROVED: SPM	

PROJECT: VIKING PRESERVE EAST BETHEL, MN	<p>LANDSCAPE ARCHITECTURE INCORPORATED</p> <p>WWW.LANDARCINC.COM</p>
CLIENT: SHAW TRUCKING, INC. 18530 BUCHANAN STREET N.E. EAST BETHEL, MN 55011	

DRAWING TITLE: LANDSCAPE PLAN	PROJECT NO. 101-2013	DRAWING NO. L201
SCALE: AS NOTED		

SEEDING NOTES:

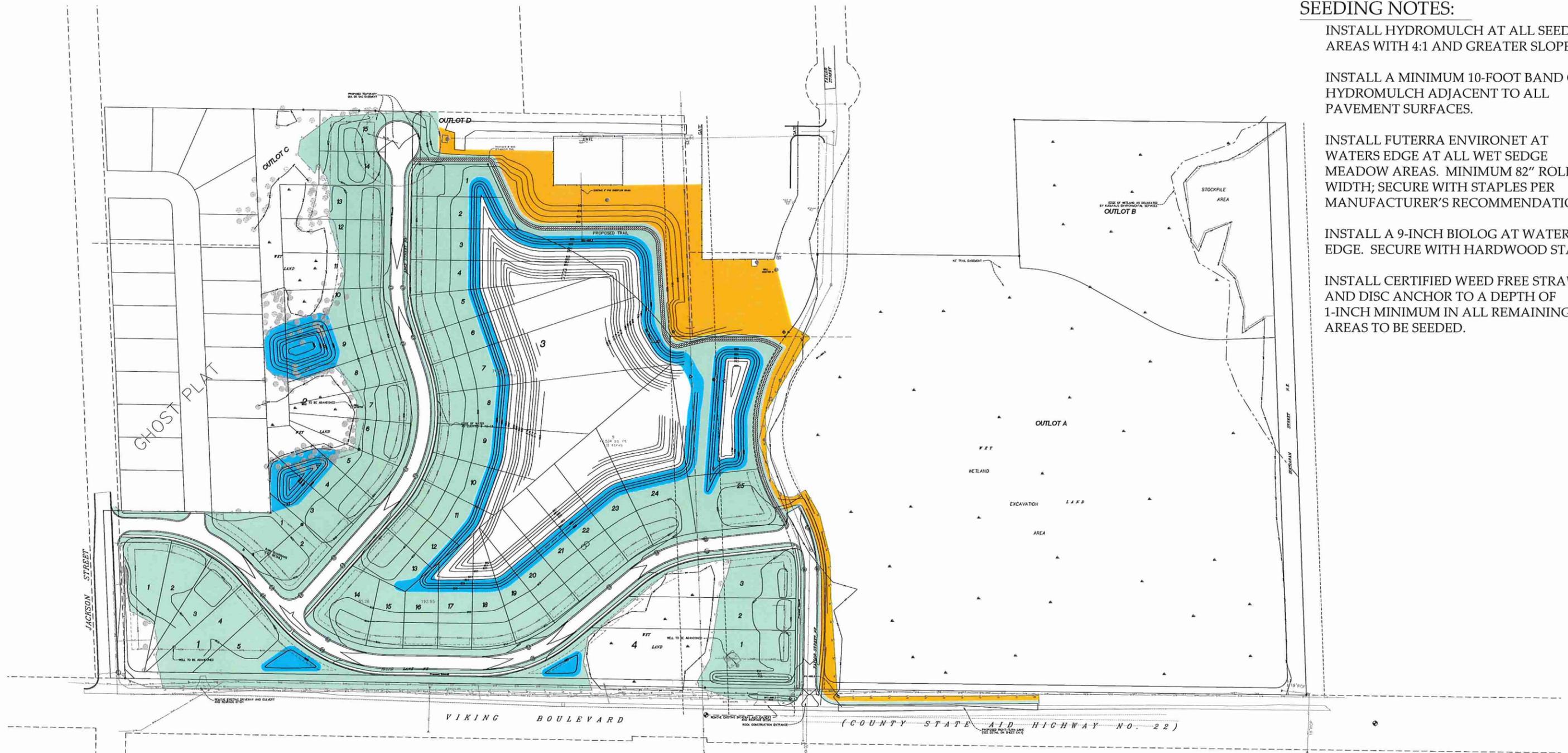
INSTALL HYDROMULCH AT ALL SEEDED AREAS WITH 4:1 AND GREATER SLOPES.

INSTALL A MINIMUM 10-FOOT BAND OF HYDROMULCH ADJACENT TO ALL PAVEMENT SURFACES.

INSTALL FUTERRA ENVIRONET AT WATERS EDGE AT ALL WET SEDGE MEADOW AREAS. MINIMUM 82" ROLL WIDTH; SECURE WITH STAPLES PER MANUFACTURER'S RECOMMENDATIONS.

INSTALL A 9-INCH BIOLOG AT WATERS EDGE. SECURE WITH HARDWOOD STAKES.

INSTALL CERTIFIED WEED FREE STRAW AND DISC ANCHOR TO A DEPTH OF 1-INCH MINIMUM IN ALL REMAINING AREAS TO BE SEEDED.



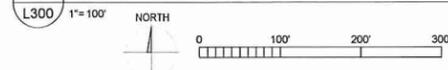
SHORT XERIC PRAIRIE GRASS
 MINNESOTA NATIVE LANDSCAPES MIX (G1)
 SEEDING RATE: 20 PLS/ACRE
 OATS COVER CROP: 100 LBS/ACRE
 832,290 SF 19.1 ACRES

TALL MESIC PRAIRIE
 MINNESOTA NATIVE LANDSCAPES MIX (G3+F3)
 SEEDING RATES: 15 PLS FOR GRASSES
 5 LBS. BULK FOR FORBS
 OATS COVER CROP: 100 LBS/ACRE
 290,860 SF 6.7 ACRES

WET SEDGE MEADOW
 MINNESOTA NATIVE LANDSCAPES MIX (G5+F5)
 SEEDING RATES: 15 PLS FOR GRASSES
 5 LBS. BULK FOR FORBS
 OATS COVER CROP: 100 LBS/ACRE
 363,580 SF 8.4 ACRES

SEED SUPPLIER: MINNESOTA NATIVE LANDSCAPES
 www.mnnativelandscapes.com 763-295-0010

1 SITE SEEDING PLAN



NO.	DATE	ISSUE/REVISION	DRWN	CHKD	NO.	DATE	ISSUE/REVISION	DRWN	CHKD

DATE: 01/28/14	I hereby certify that this landscape architectural document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Landscape Architect under the laws of the State of Minnesota. 01/26/2014 Stephen P. Mastey 40629 06/30/2014 ALL Pages or sheets covered by this seal
DRAWN: SPM	
DESIGNED: SPM	
CHECKED: SPM	
APPROVED: SPM	

PROJECT: VIKING PRESERVE EAST BETHEL, MN	DRAWING TITLE: SITE SEEDING PLAN
CLIENT: SHAW TRUCKING, INC. 18530 BUCHANAN STREET N.E. EAST BETHEL, MN 55011	PROJECT NO. 101-2013 DRAWING NO. L300
SCALE: AS NOTED	



City of East Bethel Planning Commission Agenda Information

Date:

July 22, 2014

Agenda Item Number:

Item 4.0

Agenda Item:

Zoning Map Amendment to the Official Map of the City of East Bethel

Requested Action:

Recommend Approval for the Rezoning of the following:

PID # - 203323430001

Address – 19801 Hwy 65 NE

Acreage – 33.5 acres

Current Use of Property – Central Wood Products, Rivard Contracting

Current Zoning – B2 & R2

Proposed Zoning – I1 (Light Industrial)

Background Information:

Central Wood Products/Rivard Contracting is a diverse company that provides land clearing services, quality wood mulch, tree services, and over the last six years expanded into home gardening products through their Gronomics line. It is the Gronomics part of their company that has seen tremendous expansion and with that, they have a need to expand their existing facilities. Currently their property has split zoning on it, the west ½ along Highway 65 is zoned B2 and the east ½ is zoned R2. Neither of these zoning designations reflects what exists there and has been there for a long time. If Rivard wanted to expand, they could not under either the B2 designation or the R2 designation. It makes the most sense to rezone this area to Light Industrial to reflect the existing business and also makes the most sense from a Comprehensive Planning perspective. As the corridor develops and as we have discussed in the past, we want to be able to allow for flexible zoning along the highway, with the need to consider the environment and overall design. By rezoning this property to I1 (light industrial) it would allow for a number of different types of businesses to be located here, including retail. The most important component is to work with Rivard to ensure that their design is uniform and matches what exists on their property today. There are very few wetlands on this property and the floodplain is located on the south side of the property away from the existing buildings. City Staff would work with the owners of Rivard companies to address any concerns related to design, runoff, parking, etc. at the time that additions or new buildings are built on the property. The property to the north, south and west of Rivard is all currently sod fields.

Recommendation:

City Staff requests Planning Commission to recommend approval to the City Council for Zoning Map Amendments to the Official Map of the City of East Bethel.

1. Final approval of the Zoning Map Amendments to the Official Map of the City of East Bethel is contingent of the final approval of the land use amendment to the City of East Bethel's 2030 Comprehensive Plan by the Metropolitan Council. The 2030 Comprehensive Plan Amendment will be submitted to Metropolitan Council for review upon final approval by City Council.

Attachments:

1. Location Map
2. Public hearing notice
3. Aerial photo

Planning Commission Action

Motion by: _____

Second by: _____

Vote Yes: _____

Vote No: _____

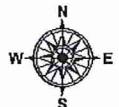
No Action Required: _____



Map

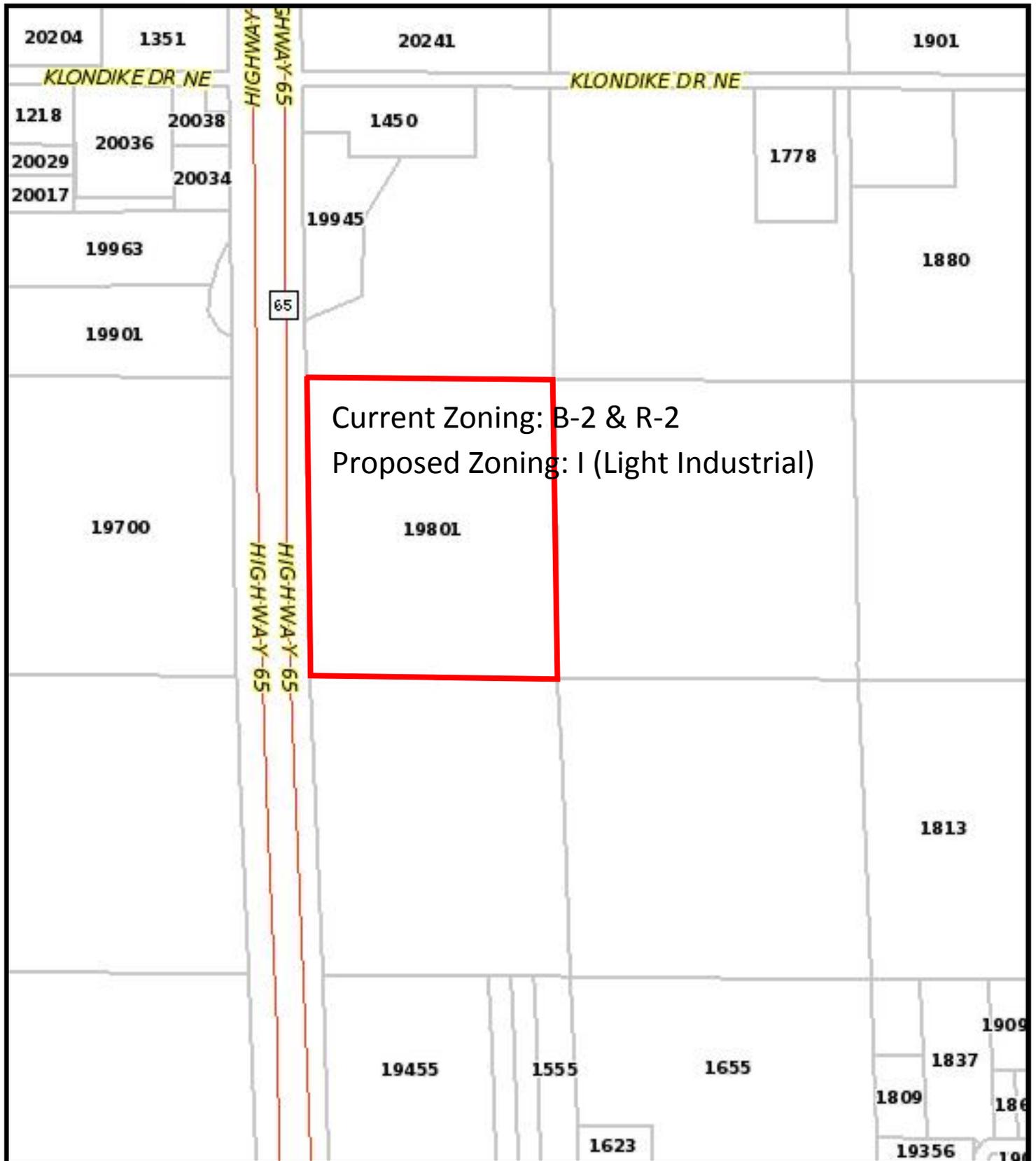


Disclaimer: Maps and documents made available to the public by the City of East Bethel are not legally recorded maps or surveys and are not intended to be used as such. The maps and documents are created as part of the Geographic Information System (GIS) that compiles records, information, and data from various city, county, state and federal resources.
Copyright © 2013 City of East Bethel, All Rights Reserved

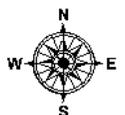




Map



Disclaimer: Maps and documents made available to the public by the City of East Bethel are not legally recorded maps or surveys and are not intended to be used as such. The maps and documents are created as part of the Geographic Information System (GIS) that compiles records, information, and data from various city, county, state and federal resources.
Copyright © 2013 City of East Bethel, All Rights Reserved





**NOTICE OF PUBLIC HEARING
CITY OF EAST BETHEL PLANNING COMMISSION
COUNTY OF ANOKA
STATE OF MINNESOTA**

NOTICE IS HEREBY GIVEN that the Planning Commission of the City of East Bethel will hold a public hearing for a Comprehensive Plan Amendment on Tuesday, July 22, 2014, 7:00 p.m. at the City Hall, 2241 221st Avenue NE, East Bethel, MN. The hearing will be to consider a proposed land use change in the City of East Bethel (please see attached map).

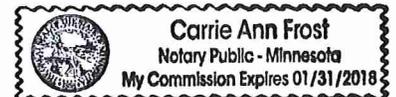
The hearing of this request is not limited to those receiving copies of this notice. If you know of any neighbor or interested property owner who for any reason has not received a copy, it would be appreciated if you would inform them of this public hearing.

Published in the Anoka County
Union Herald July 11, 2014.

Colleen Winter
Community Development Director

Subscribed and sworn to me
this 7th day of July 2014.

Carrie Frost
Notary Public





City of East Bethel Planning Commission Agenda Information

Date:

July 22, 2014

Agenda Item Number:

Item 5.0

Agenda Item:

Proposed Changes to Comprehensive Plan, City Ordinance, Zoning, Appendix A, Sections 41-44 and 56, 57

Requested Action:

Recommend changes to residential density regulations as required in Sections 41-14 and 56, 57 in the City Zoning Ordinance

Background Information:

The City Zoning Ordinance was amended on September 5, 2007 to restrict densities in unsewered residential areas to one unit per 10 acres or four units per 40 acres with no lot exceeding 2.0 acres. Since the adoption of this amendment there have been no subdivision plats filed in the City of East Bethel that do not have access to sewer service. The 2009 downturn in the housing market is a contributing factor in the cessation of plat filings but the “one in ten” density minimums are an equal cause for the lack of rural subdivision development in the City.

There has been discussion in regards to re-consider residential density requirements that would revert to the previous 2.5 acre standard. Given that the previous regulations provided protection against urban type densities and that the “one in ten” requirement was as much a tool to funnel residential development to the Highway 65 Corridor as it was to protect the rural nature of the City of East Bethel, it is appropriate to reexamine these issues. Items to consider regarding changes:

1. Lot size – 2 acre minimum
2. Lot density – 50% developable
3. Wetlands, floodplain
4. Buildable area – minimum of 12,500 square feet, room for on site septic system and alternative area, setbacks met, and well location.

Recommendation:

City Staff requests Planning Commission to recommend approval to the City Council for changes to Lot size, Lot density, and buildable areas, subject to Comprehensive Plan amendment and approval.

Attachments:

1. Map
2. PH notice
3. Current regulations

Planning Commission Action

Motion by: _____

Second by: _____

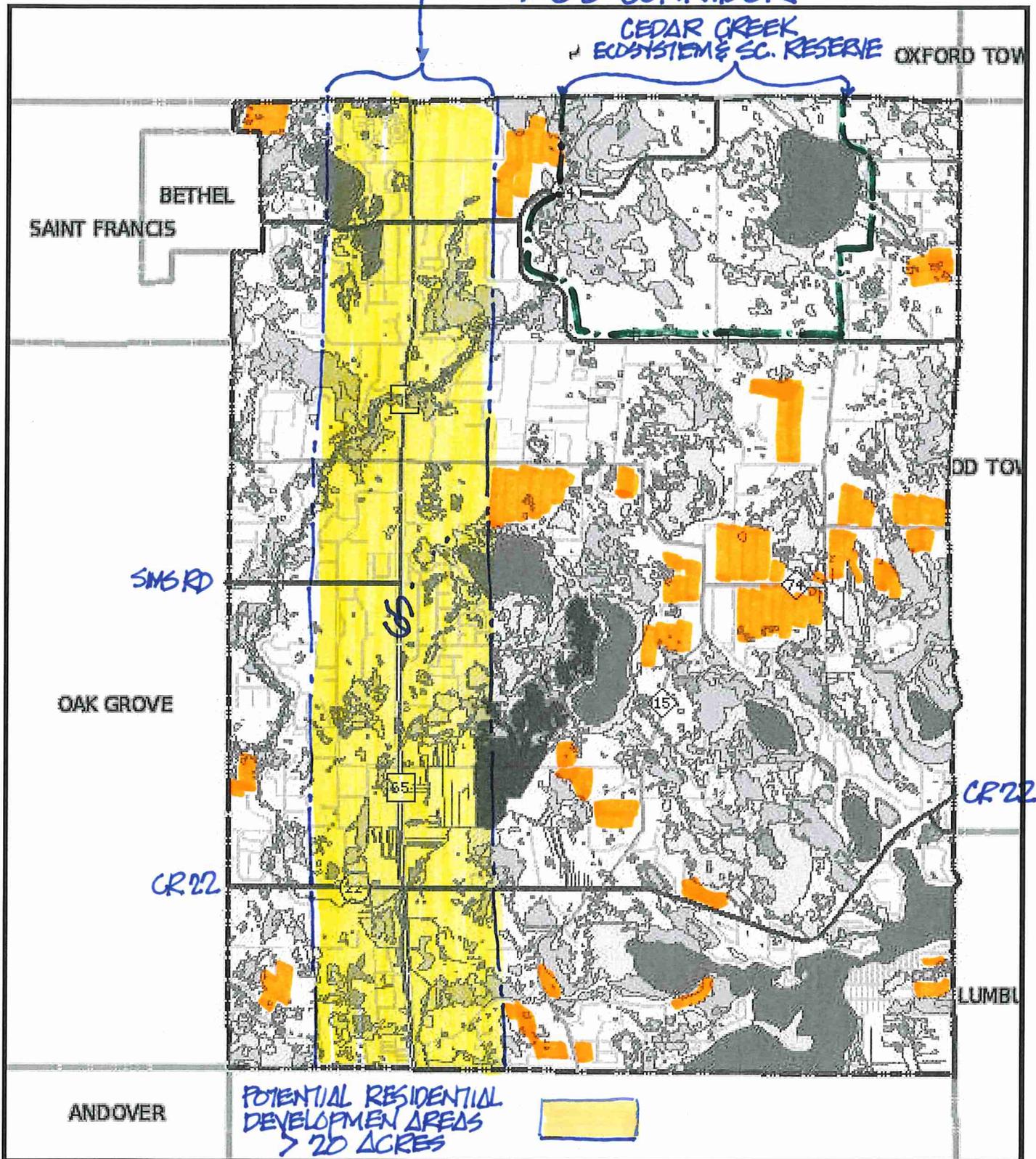
Vote Yes: _____

Vote No: _____

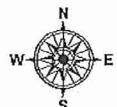
No Action Required: _____



Map



Disclaimer: Maps and documents made available to the public by the City of East Bethel are not legally recorded maps or surveys and are not intended to be used as such. The maps and documents are created as part of the Geographic Information System (GIS) that compiles records, information, and data from various city, county, state and federal resources.
 Copyright © 2013 City of East Bethel, All Rights Reserved



Development Standards in Areas not serviced by City Sewer and Water

Zoning Classification	Lot Area	Lot Width	Minimum Buildable Area	Notes
R1 - Single Family Residential	10 acres	300 ft. at Public ROW	23,000 square feet	very few places are outside corridor
R2 - One and Two family	10 acres	300 ft. at Public ROW	23,000 square feet	currently no places outside corridor
Rural Residential	Not less than two acres with a maximum residential density of one unit/ten acres	200 feet at public right-of-way, 200 feet at front building setback	23,000 square feet	primarily outside corridor
Commercial Areas	10 acres	100 - 300 ft.		



**NOTICE OF PUBLIC HEARING
CITY OF EAST BETHEL PLANNING COMMISSION
COUNTY OF ANOKA
STATE OF MINNESOTA**

NOTICE IS HEREBY GIVEN that the Planning Commission of the City of East Bethel will hold a public hearing for a Comprehensive Plan Amendment on Tuesday, July 22, 2014, 7:00 pm, at the City Hall, 2241 221st Avenue NE, East Bethel, MN. The hearing will be to consider changes to development density, lot area, lot width, and minimum buildable areas outside the Highway 65 corridor and municipal service area.

A copy of the proposed amendment is available at City Hall during regular hours between 8:00 A.M. to 4:00 P.M. for the public's review.

The public is invited to provide comment at the hearing. If you know of any neighbor or interested property owner who for any reason has not received notification, it would be appreciated if you would inform them of this public hearing.

Published in the Anoka County Union July 11, 2014.
Colleen Winter, Community Development Director

Subscribed and sworn to me this 7th day of July 2014.
Carrie Frost, Notary Public

EAST BETHEL PLANNING COMMISSION MEETING

June 24, 2014

The East Bethel Planning Commission met for a Regular Planning Commission Meeting on June 24, 2014 at 7:00 P.M for their regular meeting at City Hall.

MEMBERS PRESENT: Randy Plaisance Eldon Holmes Lorraine Bonin Tanner Balfany
Brian Mundle, Jr. Glenn Terry

MEMBERS ABSENT: Lou Cornicelli

ALSO PRESENT: Colleen Winter, Community Development Director

Call to Order & Adopt Agenda

Mundle motioned to adopt the June 24, 2014 agenda. Holmes seconded; all in favor, motion carries unanimously.

Public Hearing for Interim Use Permit – Cell Tower

Requested Action:

Consider approving a site for cell phone tower adjacent to East Bethel Public Works Building

Background Information:

Verizon is considering an area along Hwy. 65 between 221st Ave and 237th Ave. as a possible location for a cellular transmission tower. We have had preliminary discussions with Verizon regarding potential locations over the past months and have reviewed potential sites in this area including Castle Towers Sewer Plant, City property east of the Post Office, John Anderson, Booster and Bonde Parks and the MCES RIB at 229th and 65. Per our Ordinance, Telecommunications Facilities, Appendix A, Section 16, the following locations are identified by the city in order of priority as to the placement of telecommunications towers:

1. Antennas located upon public lands or structures, i.e., water towers and public facilities.
2. Co-location on existing antenna support structures.
3. Within the easement of high power overhead transmission lines (69 KV or greater).
4. Central business (B-2), highway business (B-3), and light industrial (I) districts within one-fourth mile of Trunk Highway 65.

A previous meeting with Verizon eliminated the Bonde, Booster West, John Anderson Parks, and Castle Towers Sewer Plant as potential sites. The City's preference is to attempt to have telecommunication towers locate their facilities on public properties, and with the potential availability of a site located in the vicinity of the Public Works Building this become a viable option.

City staff is conducting discussions with Verizon regarding a proposed lease. The proposed lease site would be 100' X 55' and within this area would the gravel access pad, 190' monopole tower and the equipment shelter, enclosed by a 6' chain link fence. The location of the facility at this site would not interfere

with any activities of the Public Works Department.

This proposal was presented to the Parks Commission at their April 8, 2014 meeting. The Parks Commission was not in favor of locating the facility in either Booster West or East Parks and recommended that if the proposal should move forward the Commission would prefer it be located adjacent to the southwest corner of the Public Works Building.

The location would be preferable due to the following:

- Existing vegetation provides screening for the base of the tower and shelter building
- There would be no disturbance to any Park facilities
- The nearest residence is 670' and is screened by the 30-40' pine and spruce trees along the eastern edge of Fire Station # 2/Public Works Building
- The view of the tower from the residences on Vermillion Street would be screened by the tree line along the eastern edge of Booster East Park
- This site would appear to have least impact on residential areas within Verizon's footprint of service.

The location of cellular transmission towers on public properties is a common practice. The City of Ham Lake and Roseville each have two towers adjacent to their City Halls and Andover has antennae's located on the water tower next to their City Hall and Community Center.

Staff requested that Verizon consider our water tower as a location but this site was not in the area required for their service needs.

Fiscal Impact:

The anticipated lease revenue from this tower would be a minimum of \$18,000-24,000 per year with the potential for additional revenue from future carriers co-locating on the tower.

Recommendation(s):

Staff recommends that the Planning Commission approve the IUP for a Verizon cell tower location as indicated in the attached materials. Subject to a successful lease agreement with Verizon.

We had talked about a site behind City hall, but that was too close to Booster East. The City would negotiate a lease with them, similar to the one by the hockey arena. The City didn't want a trifold tower, and wanted a mono tower.

Bonin asked are these towers from somewhere else? Winter said they put the simulation in the picture of the actual site. This is the site survey to show you the location. That is all there is to it. Again it is something we would have to successfully negotiate the lease. This tower had to be where it made sense for Verizon.

Public hearing opened at 7:07 p.m. Public hearing closed at 7:08 p.m.

Holmes said we have questions about the towers by the ice arena, wouldn't that work. Winter said yes there is a tower there, but it is outside their area. They need more coverage. Holmes said he has worked on these. The circumference of the area served is how many miles? Winter said she doesn't have that with. Holmes said it is 15 miles, and the ice arena is 3 miles. Winter said another company wants one by the Coon Lake. Bonin said can't they have different carriers on the one by the arena. Winter said yes, they are on the one at the ice arena. We would also like to have a lease agreement, and we would have separate ground leases with each one that comes in. Bonin asked do they interfere with each other. Winter said they don't.

Jerry Hanneman from Insite stated typically the manner of this tower is a radio frequency area. The one by the ice arena doesn't serve this area. Whoever may attach to the tower will not interfere with signals. It makes it link up. The money through the agreements will go through Verizon, but back to the City.

Holmes wanted to know if this had a connection building with it. Winter said it has a little building. Holmes said because you didn't show it on here. Some just have a monopoly. Winter asked on the site survey does it show where the building would be. Holmes said a lot of the times when we installed this, the main concern were the ponds of water, just because of the tower itself. Hanneman said there is no concern. Holmes said they have had to move them before because of the water. Hanneman said typically that falls into enviroscreening. We looked at the land to make sure it was suitable. The construction team discussed that back in March.

Holmes said we did one in White Bear Lake, and it was already leaning. Winter said they have had their engineering people out here a number of times. Terry said he is not seeing anywhere on the survey where there is a building and fencing proposed. Winter said it is a tiny building. Terry asked if the entire area would be fenced. Hanneman said yes. Balfany said the coverage objective form, trying to fill in the areas of white. If the white is in the middle, why isn't there a tower on Viking? Hanneman said he would have to look at the map. He knows Verizon is looking at putting in more of their infrastructure in this area. Balfany said if the object is to fill in the white. Hanneman said this is essentially the area. Winter said there were other areas within the search ring, and a number of them were not going to work out due to a number of reasons. Once we figured out this was in the search ring, we zeroed in the City grounds. Holmes asked is Verizon always on City land? Winter said that is our City ordinance. Holmes said he sees them on farm land.

Balfany motioned to approve the IUP for a Verizon cell tower location as indicated in the attached materials. Subject to a successful lease agreement with Verizon. Holmes seconded, all in favor, motion carries unanimously.

Balfany asked what the turnaround time for them being built. Hanneman said he would have to talk to Verizon about it. Winter said it will go pretty quick.

**Discussion regarding
July agenda items**

Discussion regarding July agenda items

- Rural subdivisions
- Rezoning
- Final Plat – Viking preserve

In July we are going to have a full agenda. We have to tackle rural subdivisions. We had the discussion at the previous meeting in the rural areas the acreage you can only do one per ten acres. We had discussed here it seems overly restrictive for development. Tomorrow night the City Council will have a work meeting they will be talking about. They will bring a recommendation back to the Planning Commission. We are probably going down to a 2 to 2 ½ acres. As we talked about before, doesn't mean you will be able to take a parcel and divide it into five residential lots. There are so many other factors you will have to take into consideration, primarily the flood plain and wetlands. The smaller acreage makes more sense with the topography. Met Council will be opposed to it. Terry said we did for future development and to not impede development. Winter said along the corridor is different than what we are talking about outside the corridor. We also are talking about the corridor plan. She does see these as two distinct issues. We are going to see growth and development happen in those areas. Outside of that, we do need to make sure we have options. It can definitely be a good discussion.

We had some clean up items with zoning. We have some lot splits we need cleaned up. There are some simple ones. One needs to come back to for a business expansion. Part of their zoning doesn't make sense. The zoning on part of their property is R2. It is one of those we might want to take look at. Viking Boulevard is another area to look at.

The last item we hopefully will have is the final plat for Viking Preserve.

She just wanted to give a heads up and get people thinking.

**Approval of Meeting
Minutes
May 27, 2014 – Regular
Meeting**

Terry said on page 6/10, the second paragraph, second sentence, it should say that would not be the case.

Holmes motion to approve the minutes. Balfany seconded; all in favor, motion carries unanimously.

**Other
Business/Council
Reports**

Mr. Kollar is not here.

Winter said for the first time this year, as part of Booster Day there will be a golf outing at Viking Meadows. There is additional information on the City's website.

Booster Days are July 18/19, 2014.

Terry had a question on the trucking place. He hasn't noticed any of the improvements. Winter said they have torn down the one building. We are there pretty consistently and they have pushed the envelope. We are counting the trailers. They are doing work internally. We are continuing to work with them. It has been extremely wet. The fencing and the other stuff was part of it. He drives by it every day. Bonin said the fencing doesn't hide those vehicles. They are way back where it is open. We may have to work with them for a different fencing.

Adjournment

Holmes made a motion to adjourn the meeting at 7:27 p.m. Balfany seconded; all in favor, motion carries.

Submitted by:
Jill Anderson
Recording Secretary

DRAFT