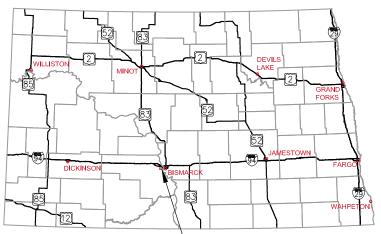
# **LAKEWOOD 9TH ADDITION**

## GRADING IMPROVEMENTS MANDAN, NORTH DAKOTA

SEPTEMBER 15, 2015



STATE OF NORTH DAKOTA

PROJECT LOCATION

### **UTILITY COMPANIES**

GAS:

MONTANA-DAKOTA UTILITIES CO. 308 1ST STREET NW MANDAN, ND 58554 PH: 701-663-8713

ELECTRIC:

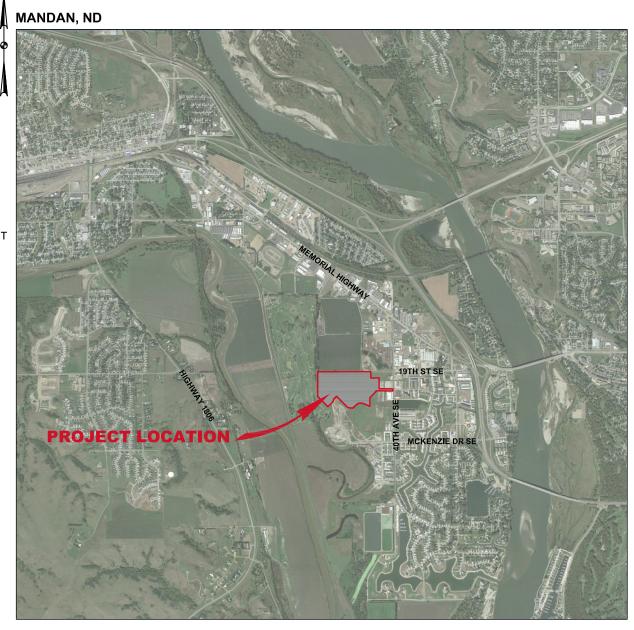
MOR-GRAN-SOU ELECTRIC COOP. INC. 2816 37TH ST. NW MANDAN, ND 58554 PH: 701-663-0297

CABLE

MIDCONTINENT COMMUNICATIONS 719 MEMORIAL HIGHWAY BISMARCK, ND 58501 PH: 1-800-888-1300

PHONE: CENTURYLINK

1101 16TH STREET NE MANDAN, ND 58554 PH: 701-222-6820 CITY OF MANDAN
PUBLIC WORKS DEPARTMENT
411 6TH AVENUE SW
MANDAN, ND 58554
PH: 701-667-3240
JEFF WRIGHT



### **VICINITY MAP**

NO SCALE

### ONE CALL BEFORE DIGGING 1-800-795-0555

### **BASIS OF SURVEY**

ALL CONTOURS, ELEVATIONS, AND COORDINATES FOR THE PROJECT ARE BASED ON NAD83 STATE PLANE COORDINATE SYSTEM, NORTH DAKOTA SOUTH ZONE INTERNATIONAL FEET, AND NAVD 88.

## **INDEX OF SHEETS**

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- 12-13 AMITY CIRCLE SE SUBGRADE PLAN & PROFILE

This document(s) was originally issued and sealed by Jon R. Pauna, Registration Number 6253 on SEPTEMBER 15, 2015 and the original documents are stored at KLJ, Fargo ND.

3203 32ND AVE S, SUITE 201 FARGO, ND 58103 PH: 701.232.5353 FAX: 855.288.8055 www.kljeng.com

	LEGEND	
EXISTING	ITEM	PROPOSED
w	WATER MAIN	w
- <u></u> -	FIRE HYDRANT	-
$\otimes$	GATE VALVE	
X	CURB STOP	×
V	BEND	<b>y</b>
$\boxtimes$	TEE	
$\mathbb{R}$	CROSS	*
$\bowtie$	REDUCER	
(W)	WATER MANHOLE	(W)
® 4	SPRINKLER HEAD	<u></u>
(W) (W)	WATER METER	
s	SANITARY SEWER MAIN	
<u>(S)</u>	SANITARY MANHOLE	<u>(S)</u>
(i)	CLEANOUT	0
ST	STORM SEWER MAIN	
(ST)	STORM SEWER MANHOLE	(ST)
	CURB INLET	
(1)	CATCH BASIN	<u> </u>
E —	UNDER GROUND ELECTRIC	—— E——
E(0) —	OVERHEAD ELECTRIC	E(0) —
	POWER POLE	-
←	GUY WIRE	<u> </u>
*	LIGHT POLE	*
	ELECTRICAL JUNCTION BOX	
Ē _	ELECTRICAL METER	<b>D</b>
(1)	ELECTRICAL OUTLET/PLUG-IN	•
	UNDERGROUND TELEPHONE	
(1)	TELEPHONE MANHOLE	
	TELEPHONE PEDESTAL	
TV	UNDERGROUND CABLE TV	
0	CABLE TV PEDESTAL	•
©	GAS METER	<b>©</b>
G	GAS LINE	G
FUEL	FUEL LINE	FUEL
	CONCRETE CURB & GUTTER	
	EDGE OF ASPHALT SURFACE	
	EDGE OF GRAVEL SURFACE	
	BITUMINOUS/CONCRETE SURFACE	
	BUILDING	
	SILT FENCE	——s F—
<del></del>	CHAIN LINK FENCE	<u> </u>
	WOOD FENCE	
x	BARB WIRE FENCE	x
<b>★ #</b>	TREES CONIFEROUS/ DECIDUOUS	* 0
£	BUSH	
DETTT	CULVERT	
~~	DRAINAGE DIRECTION	<b>→</b>
d	SIGN	•
· ·	MAIL BOX	
•	PROPERTY PIN	•
~	***	+

### ALIGNMENT TABLE - 21ST STREET SE

Number Type	Length	Radius	Direction	Start Station	End Station	Delta angle	Chord length	Chord Direction	Start Point	End Point
1 Line	357.539'		N44° 51' 42.00"E	0+00.00'	3+57.54'				1881618.0255',415004.8005'	1881870.2325',415258.2283'
2 Curve	663.517	833.000'		3+57.54'	10+21.06'	45.6383 (d)	646.115'	N67° 40' 51.00"E	1881870.2325',415258.2283'	1882467.9420',415503.6005'
3 Line	1328.944'		S89° 30' 00.00"E	10+21.06'	23+50.00'				1882467.9420',415503.6005'	1883796.8355',415492.0034'

### ALIGNMENT TABLE - AMITY CIRCLE SE

Number Type	Length	Radius	Direction	Start Station	End Station	Delta angle C	Chord length	Chord Direction	Start Point	End Point
1 Line	381.907'		N0° 14' 31.00"W	45+00.00'	48+81.91'				1882324.5858',415458.9724'	1882322.9732',415840.8760'
2 Curve	106.814'	68.000'		48+81.91'	49+88.72"	90.0000 (d) 9	6.167'	N44° 45' 29.00"E	1882322.9732',415840.8760'	1882390.6854',415909.1625'
3 Line	170.000'		N89° 45' 29.00"E	49+88.72'	51+58.72'				1882390.6854',415909.1625'	1882560.6839',415909.8804'
4 Curve	106.814'	68.000'		51+58.72'	52+65.54'	90.0000 (d) 9	6.167'	S45° 14' 31.00"E	1882560.6839',415909.8804'	1882628.9704',415842.1681'
5 Line	384.465'		S0° 14' 31.00"E	52+65.54'	56+50.00'				1882628.9704',415842.1681'	1882630.5939',415457.7068'

### ALIGNMENT TABLE - 34TH AVENUE SE

Number Type	Length	Radius	Direction	Start Station	<b>End Station</b>	Delta angle	Chord length	Chord Direction	Start Point	End Point
1 Line	548.014'		S0° 12' 04.13"E	25+00.00'	30+48.01'				1881291.9101',416131.4602'	1881293.8340',415583.4493'
2 Curve	196.311'	250.000'		30+48.01'	32+44.33'	44.9911 (d)	191.306'	\$22° 38' 34.00"E	1881293.8340',415583.4493'	1881367.4838',415406.8887'
3 Line	755.675'		S45° 08' 18.00"E	32+44.33'	40+00.00'				1881367.4838',415406.8887'	1881903.1153',414873.8375'

### **BASIS OF SURVEY**

ALL CONTOURS, ELEVATIONS, AND COORDINATES FOR THE PROJECT ARE BASED ON NAD83 STATE PLANE COORDINATE SYSTEM, NORTH DAKOTA SOUTH ZONE INTERNATIONAL FEET, AND NAVD 88.

	ESTIMATED QUANTITIES								
ltem No.	Description	Unit	Quantity						
1	MOBILIZATION	LS	1						
2	SILT FENCE	LF	8419						
3	INLET PROTECTION	EA	18						
4	ROCK CONSTRUCTION ENTRANCE	LS	1						
5	UNCLASSIFIED EXCAVATION	CY	178556						
6	TOPSOILING	CY	47096						
7	SEEDING TYPE I	ACRE	53						
8	MULCHING	ACRE	53						

FOR THE PURPOSE OF CALCULATING EARTHWORK QUANTITIES, IT HAS BEEN ASSUMED THAT THERE IS APPROXIMATELY 6" OF EXISTING TOPSOIL THAT WILL BE NEED TO BE SALVAGED, STOCKPILED AND SPREAD AFTER ENBANKMENT IS COMPLETED.

### **BENCHMARKS**

PT#	DESCRIPTION	NORTHING	EASING	ELEVATION
11	MA NAIL IN ASPHALT #154	416073.473	1881325.653	1637.066
13	3/4" RBR LATA 5008	414878.664	1883085.464	1635.584
400	2 1/2" AL CAP IN MON. BOX	416112.792	1883763.046	1634.374
404	YLW CAP LS 4623	415115.200	1883473.954	1639.669
405	3" BRASS CAP	416101.722	1881119.378	1636.951
406	1" AL CAP RLS 2615	414788.122	1881622.916	1637.288

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DAAFTED JA REVIEWED JP PROJECT NUMBER 146151336

LAKEWOOD 9TH ADDITION
VE LAND COMPANY LLC.
MANDAN, NORTH DAKOTA

9/15/15

SHEET

#### GENERAL

- ALL CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS; THE CITY OF MANDAN STANDARD SPECIFICATIONS AND DETAILS; AND THE CONSTRUCTION DOCUMENTS TITLED PLAINVIEW HEIGHTS 14TH ADDITION STREET IMPROVEMENT PROJECT 2013-12 DISTRICT 180, MANDAN, NORTH DAKOTA
- 2. THESE NOTES APPLY TO THE ENTIRE PROJECT EXCEPT AS INDICATED OTHERWISE. CONTRACTOR SHOULD NOTE THAT ADDITIONAL CONSTRUCTION NOTES ARE INCI UDED ON INDIVIDUAL DRAWINGS.
- 3. THESE NOTES ARE FOR GENERAL REFERENCE IN CONJUNCTION WITH AND AS A SUPPLEMENT TO THE WRITTEN SPECIFICATIONS, DETAILS, ADDENDA AND CHANGE ORDERS ASSOCIATED WITH THE CONTRACT DOCUMENTS.
- 4. REQUESTS BY THE CONTRACTOR OR OWNER SHALL BE APPROVED IN WRITING BY THE ENGINEER AND CITY PRIOR TO IMPLEMENTATION.
- 5. ANY ERRORS OR OMISSIONS DISCOVERED BY THE CONTRACTOR IN THE PLAN SET SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER WHEN DISCOVERED. THE CONTRACTOR SHALL ALLOW TIME FOR CLARIFICATION.
- 6. ITEMS NOT INCLUDED IN THE PLANS AS A PAY ITEM BUT INCLUDED ELSEWHERE IN THE PLANS SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER AND SHALL BE CONSIDERED INCIDENTAL ITEMS.
- 7. THIS PLAN SET HAS A LIST OF GENERAL ABBREVIATIONS AND SYMBOLS AND MATERIALS LEGENDS LISTED ON IT. SOME SYMBOLS, MATERIALS AND ABBREVIATIONS MAY NOT BE UTILIZED ON THIS SPECIFIC PROJECT.
- 8. THE CONTRACTOR SHALL PROVIDE A ONE (1) WEEK NOTICE TO THE ENGINEER, OWNER AND THE CITY OF MANDAN PRIOR TO BEGINNING ANY CONSTRUCTION.
- ALL DITCH GRADES, CONTOURS AND CROSS SECTIONS REPRESENT THE FINISHED GRADE (TOP OF THE TOPSOIL). IN AREAS WHERE TOPSOIL IS TO BE PLACED, THE GRADING SHALL BE COMPLETED BY CUTTING OR FILLING EARTHWORK TO A POINT 6 INCHES BELOW THE FINAL GRADE; WITH TOPSOIL BRINGING THE GRADING TEMPLATE TO FINISHED GRADE ELEVATIONS. THE EARTHWORK SHALL BE CONSTRUCTED TO THE LINES AND GRADES AS SHOWN ON THE PLANS.

### PROTECTION OF EXISTING UTILITIES AND MONUMENTS

- 10. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR IT'S REPRESENTATIVES, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. UNDERGROUND LOCATES MAY BE MADE USING THE "ONE CALL" NUMBER 1-800-795-0555 OR 811.
- 11. WHERE EXISTING UTILITY WIRES (TELEPHONE, ELECTRIC) ARE LOCATED ADJACENT TO OR ABOVE THE PROPOSED WATER OR SEWER MAIN, THE CONTRACTOR SHALL TEMPORARILY SUPPORT EXISTING WIRES AND INSTALL MAIN PIPING UNDER EXISTING WIRES. ANY DECISION TO HAVE THE EXISTING UTILITIES MOVED WILL BE AT THE CONTRACTORS EXPENSE.
- 12. THE CONTRACTOR SHALL PROTECT ALL SURVEY MONUMENTS. MONUMENTS DISTURBED OR DESTROYED SHALL BE REPLACED BY THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

#### REMOVALS

- 13. MISCELLANEOUS ITEMS SUCH AS AND NOT LIMITED TO: MAILBOXES, STREET LIGHTS, TRAFFIC LIGHTS, SIGNS, FENCES, POLES, ETC. SHALL BE PROTECTED OR REMOVED AND REINSTALLED BY THE CONTRACTOR WITH THE OWNER'S AND PROPERTY OWNER'S PERMISSION, AND THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.
- 14. ANY EXISTING STRUCTURES DISTURBED BY CONSTRUCTION ARE TO BE RESTORED TO THEIR ORIGINAL LOCATION AND CONDITION. ALL STRUCTURES SUCH AS CURB AND GUTTER, CONCRETE AND BITUMINOUS SIDEWALKS, PAVING BRICKS, FENCING, RETAINING WALLS, ETC., CROSSED BY THE PROPOSED WATER, SEWER, CULVERTS AND ROADWAYS MAY NOT BE INDICATED.
- 15. EXCESS EXCAVATED MATERIAL INCLUDING PIPE, STUMPS, ROOTS, SOIL MATERIALS AND ANY OTHER ITEMS THE OWNER DOES NOT WISH TO SALVAGE SHALL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY, INCIDENTAL TO THE CONTRACT. ASPHALT AND CONCRETE SHALL BE DISPOSED OF OFFSITE AT A LICENSED LANDFILL, INCIDENTAL TO THE CONTRACT.
- 16. THE CONTRACTOR SHALL FULL DEPTH SAW CUT ALL CURB AND GUTTER, SIDEWALK, AND PAVEMENT PRIOR TO REMOVAL.

#### **GRADING NOTES**

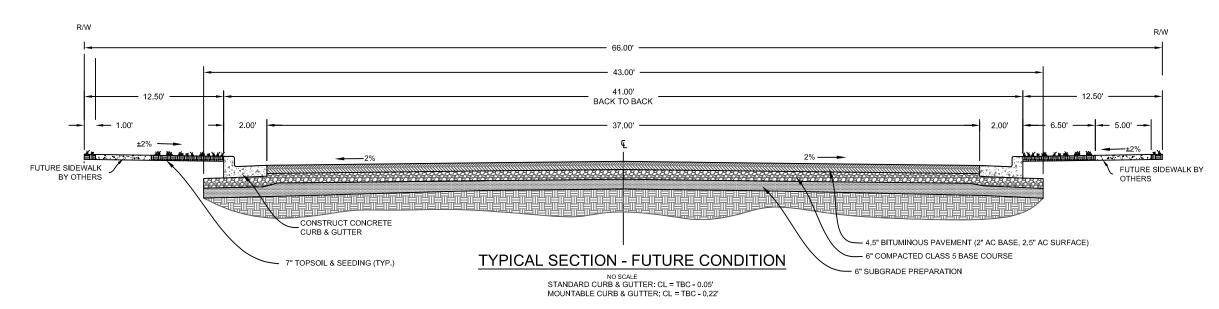
- 17. SILT FENCING OR APPROPRIATE EROSION CONTROL MEASURES SHALL BE INSTALLED ON DOWNSTREAM SIDES OF STOCKPILES TO PROTECT RECEIVING WATERS FROM SEDIMENTATION. TOPSOIL STOCKPILES SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
- 18. IF EXCESS FILL MATERIAL IS PRESENT FOLLOWING APPROVAL OF EMBANKMENT COMPACTION THE CONTRACTOR SHALL CONTACT THE ENGINEER TO DETERMINE A SUITABLE LOCATION FOR EXCESS FILL DISPOSAL.
- 19. ALL UTILITY TRENCHES ARE TO BE BACKFILLED & COMPACTED TO THE PROPOSED SUBGRADE.
- 20. THE CONTRACTOR SHALL STRIP TOPSOIL TO THE EXTENTS OF THE PROPOSED CONTOURS. STRIPPING LIMITS SHALL BE STAKED BY THE ENGINEER. PROPOSED CONTOURS ARE SHOWN AT FINISHED GRADE ELEVATIONS.
- 21. EXISTING CONTOURS ARE SHOWN AT EXISTING GRADE.
- 22. CURB GRADES SHOWN ARE ACTUAL FINISHED CURB GRADES AT THE TOP-BACK OF CURB
- 23. ALL ROCK ENCOUNTERED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFESITE.

#### TRAFFIC CONTROL AND SIGNAGE

- 24. THE CONTRACTOR SHALL MAINTAIN INGRESS/EGRESS ACCESS TO INDIVIDUAL PROPERTY OWNERS AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE DETOURS AND ANY TEMPORARY CLOSURES WITH EACH PROPERTY OWNER AND THE CITY OF MANDAN ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL KEEP THE DURATION OF ALL CLOSURES AND DETOURS TO A MINIMUM.
- 25. THE CONTRACTOR SHALL MAINTAIN TEMPORARY DETOUR ROADS UNTIL DETOUR IS NO LONGER NECESSARY. MAINTENANCE COSTS SHALL BE INCIDENTAL TO THE CONTRACT.
- 26. THE CONTRACTOR SHALL FOLLOW THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND GUIDES FOR TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION
- 27. THE CONTRACTOR SHALL FOLLOW NORTH DAKOTA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS WHEN SETTING UP THE TRAFFIC CONTROL DEVICES.

#### STORM WATER POLLUTION PREVENTION

- 28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A GENERAL PERMIT (NPDES) FROM THE NORTH DAKOTA DEPARTMENT OF HEALTH. AN APPLICATION PACKAGE WITH ALL RELATED AND SUBSEQUENT REQUIREMENTS MAY BE ACQUIRED BY CONTACTING THE NORTH DAKOTA DEPARTMENT OF HEALTH AT 701-328-5210.
- 29. THE CONTRACTOR SHALL NOT DISTURB EXISTING SILT FENCE AND WEIGHTED FIBER ROLL. IF SILT FENCE OR WEIGHTED FIBER ROLL HAS BEEN DISTURBED OR HAS DETERIORATED THE CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT. THE COST OF REPLACING SILT FENCE AND WEIGHTED FIBER ROLL SHALL BE INCIDENTAL TO THE CONTRACT
- 30. THE CONTRACTOR IS RESPONSIBLE FOR MINIMIZING TRACKING OF SOIL AND DEBRIS ONTO ADJACENT PROPERTIES AND ROADWAYS. TRACKING MUST BE REMOVED BY THE END OF EACH DAY.
- 31. THE CONTRACTOR SHALL BE REQUIRED TO CLEAN STREETS AND SIDEWALKS AND REPAIR TO THE CONDITION THEY WERE IN PRIOR TO THE START OF CONSTRUCTION BEFORE OPENING UP TO TRAFFIC.
- 32. THE CONTRACTOR SHALL INSTALL A CENTRAL CONCRETE WASHOUT LOCATION AND PROVIDE A SIGN TO IDENTIFY THE CONCRETE WASHOUT AREA. THE CONTRACTOR SHALL CONSTRUCT A PIT TO PREVENT WASHOUT WATER FROM FLOWING TO THE STORM WATER COLLECTION SYSTEM.



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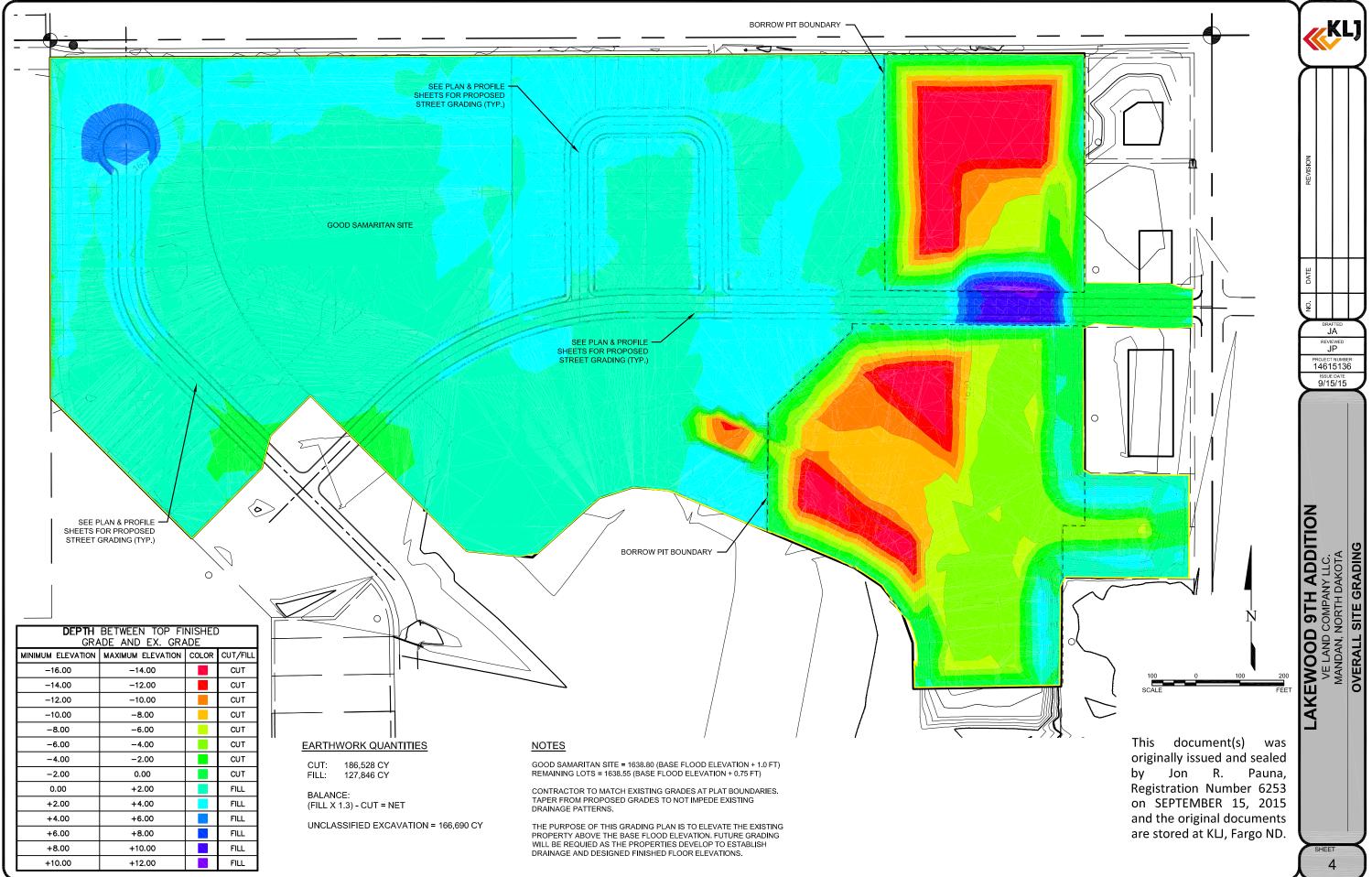
**KLJ** 

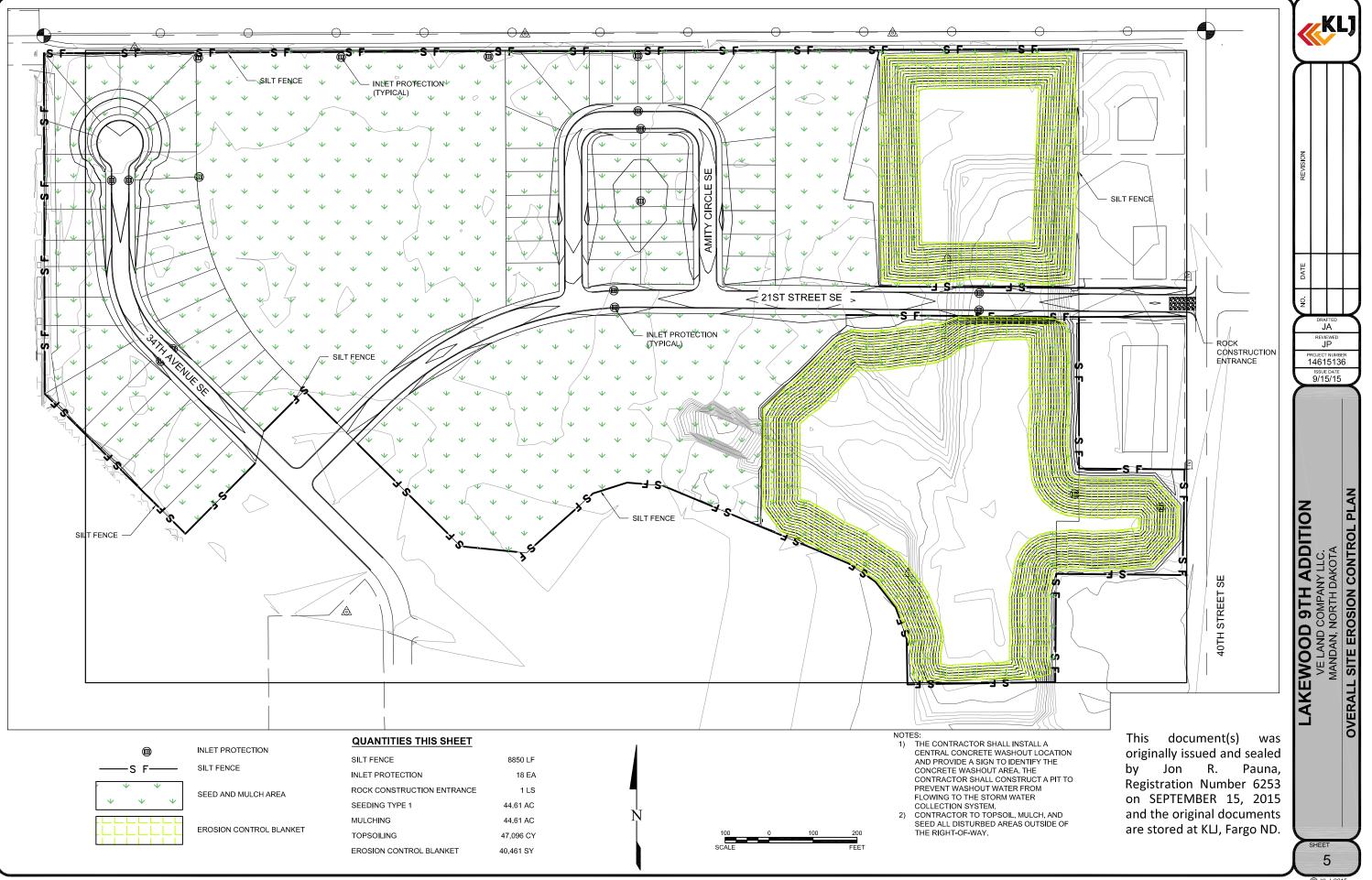
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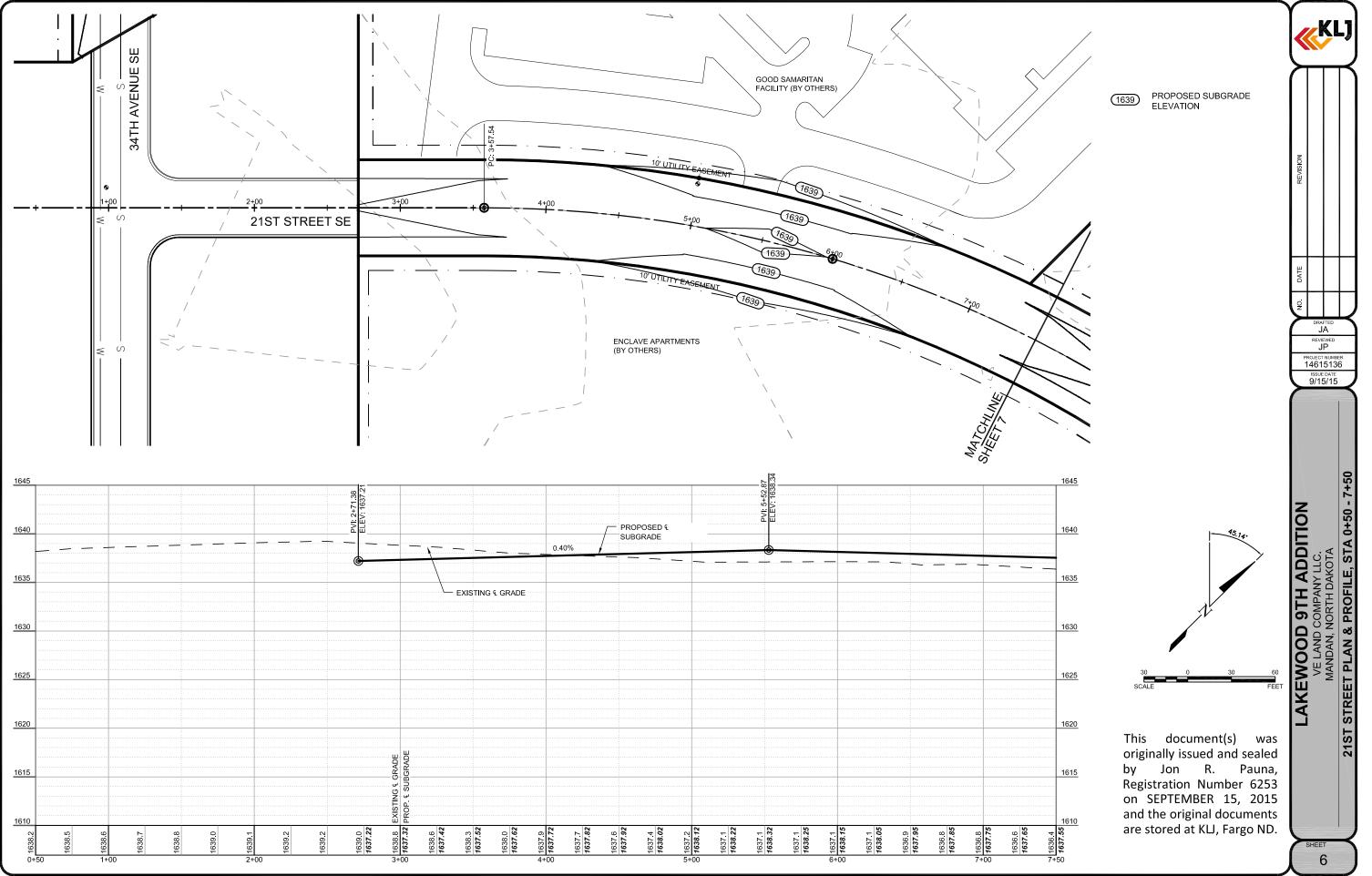
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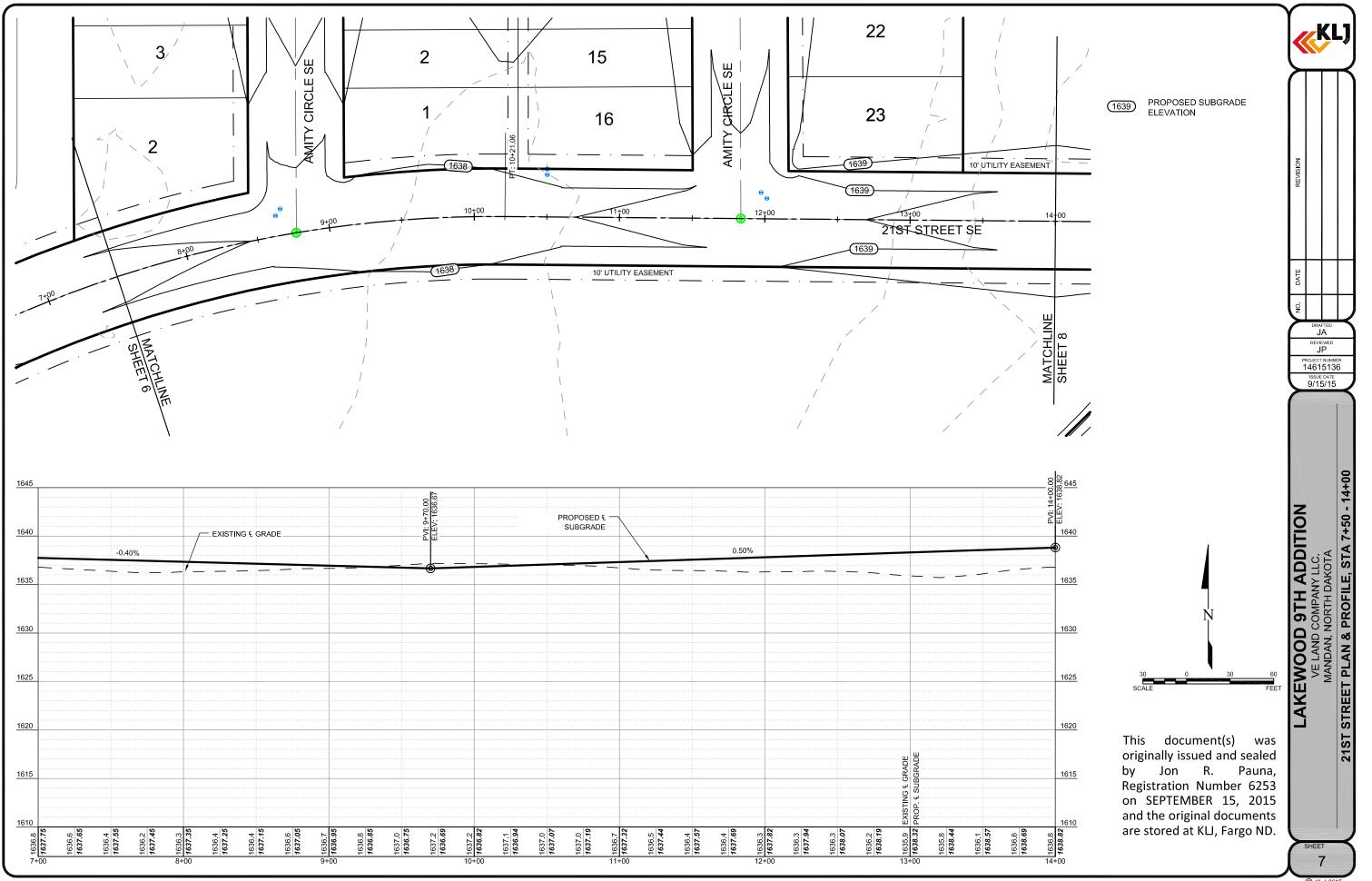
AKEWOOD 9TH ADDITION
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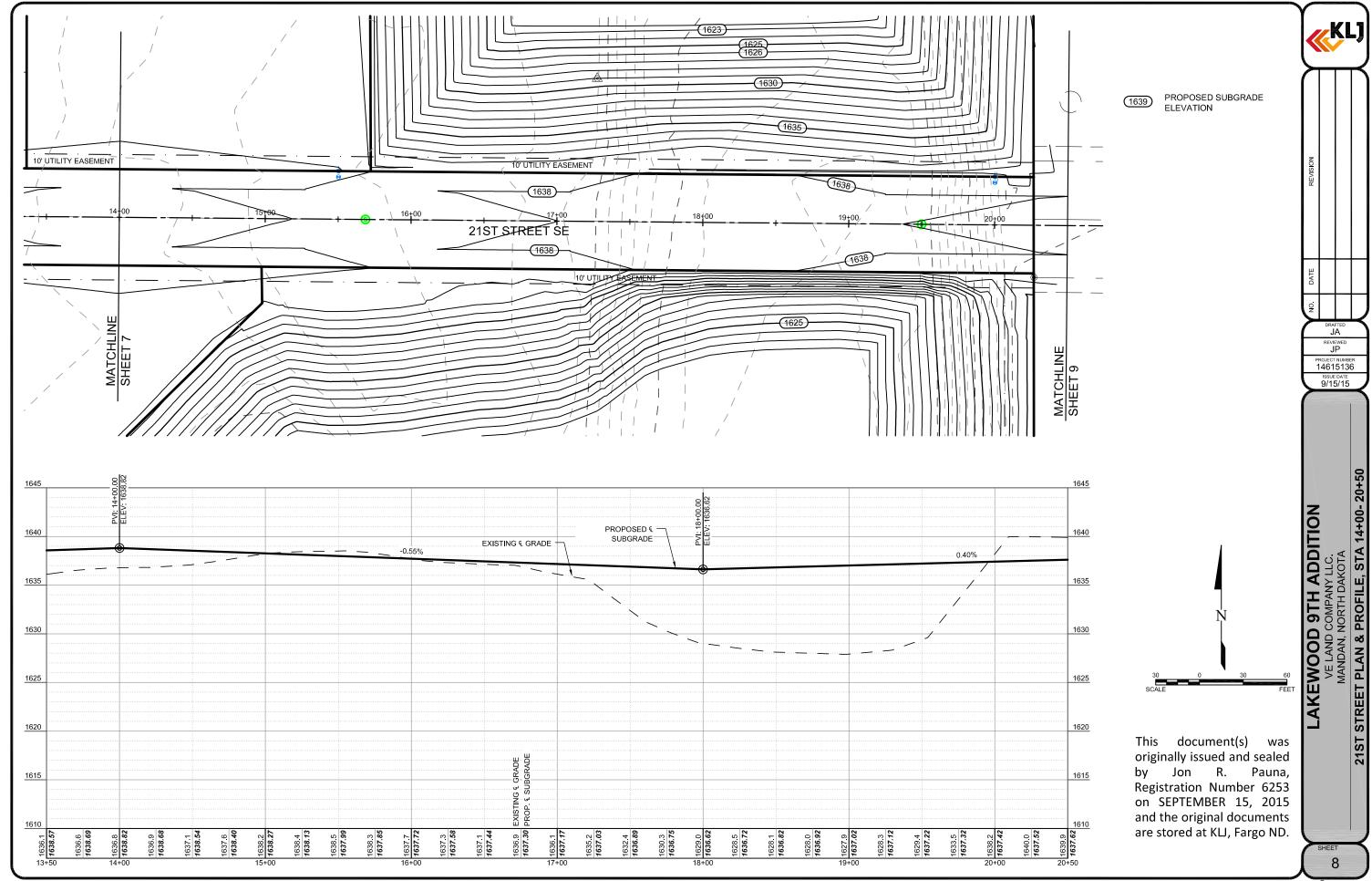
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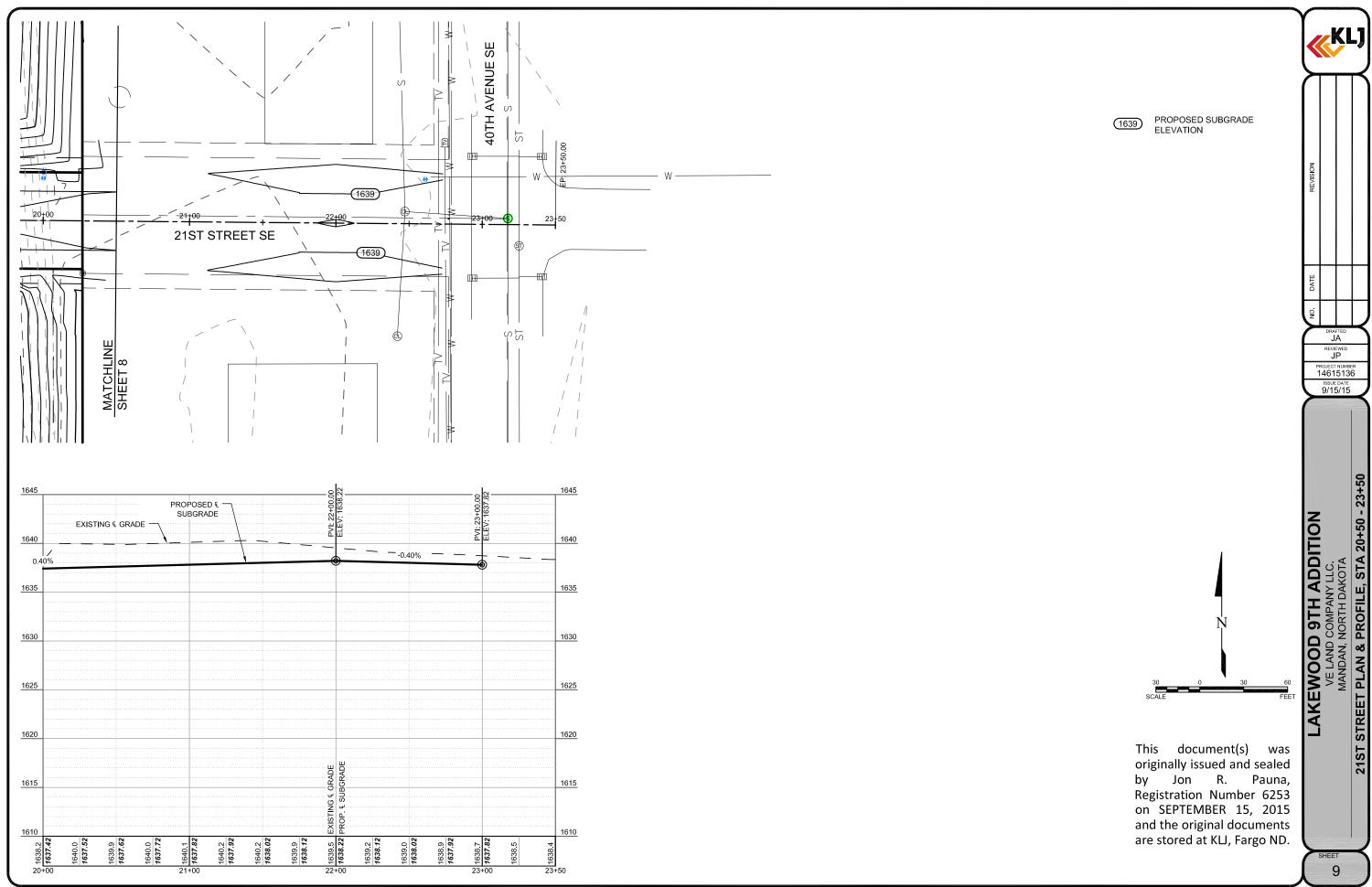


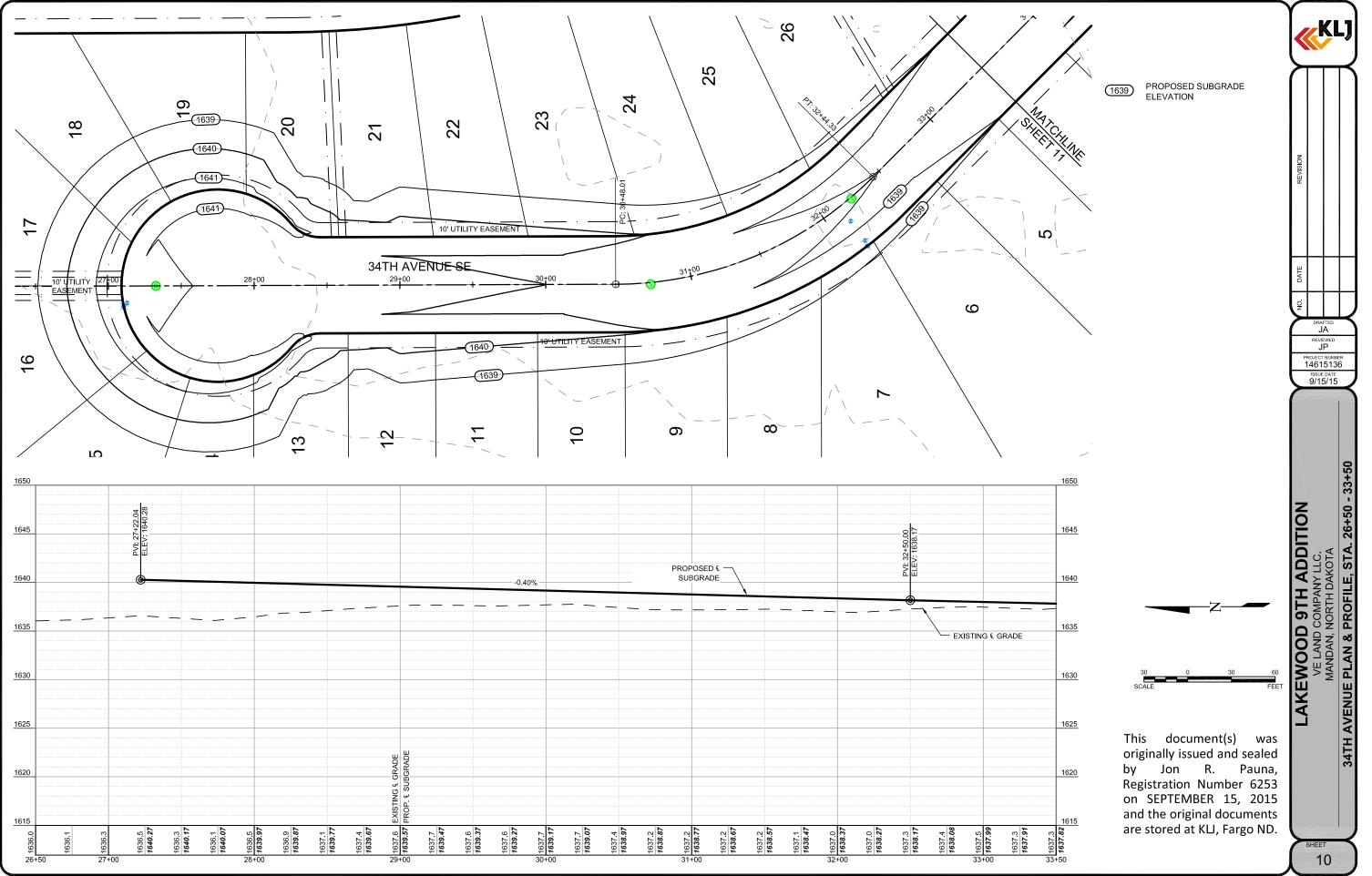


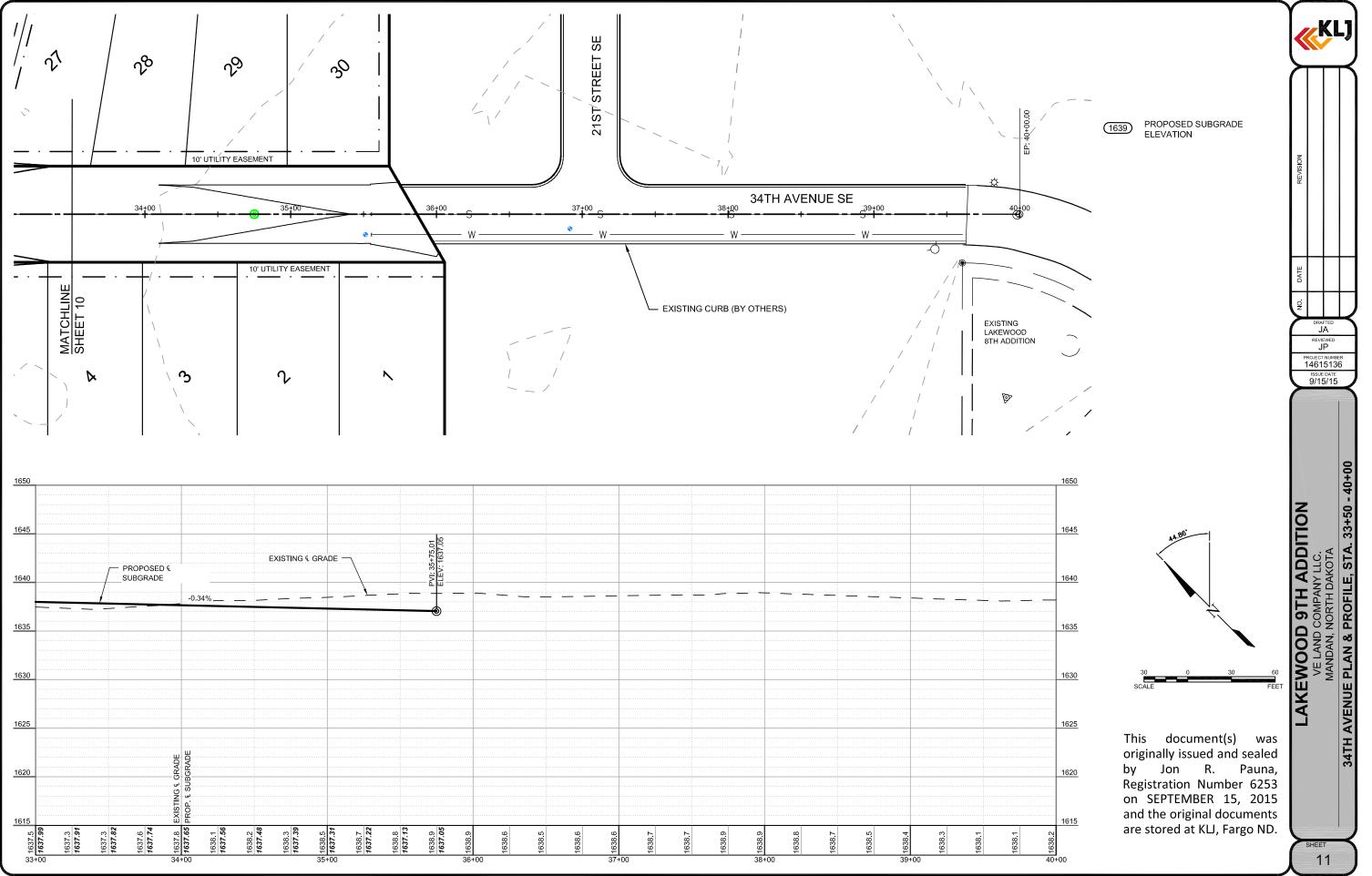


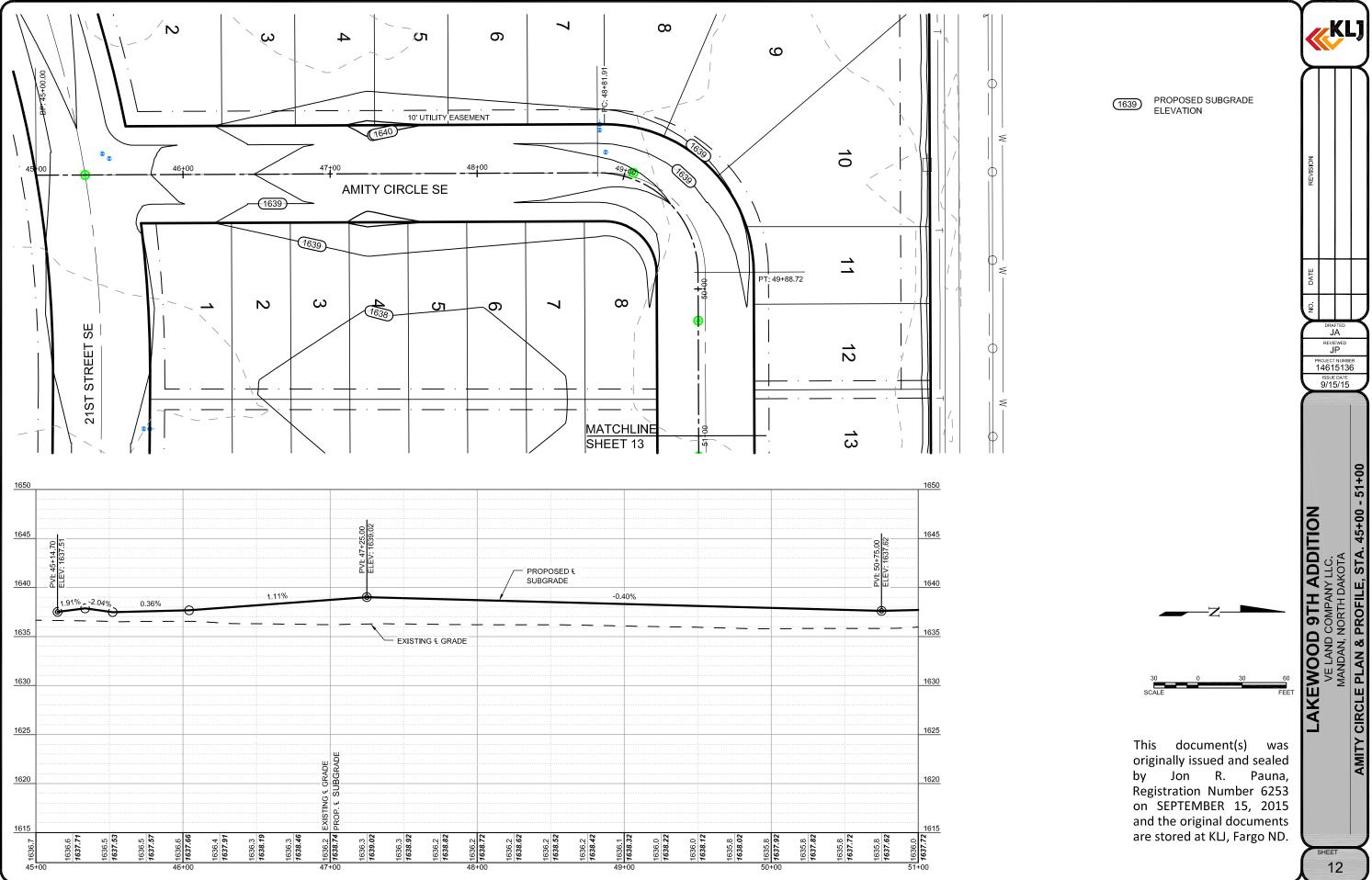


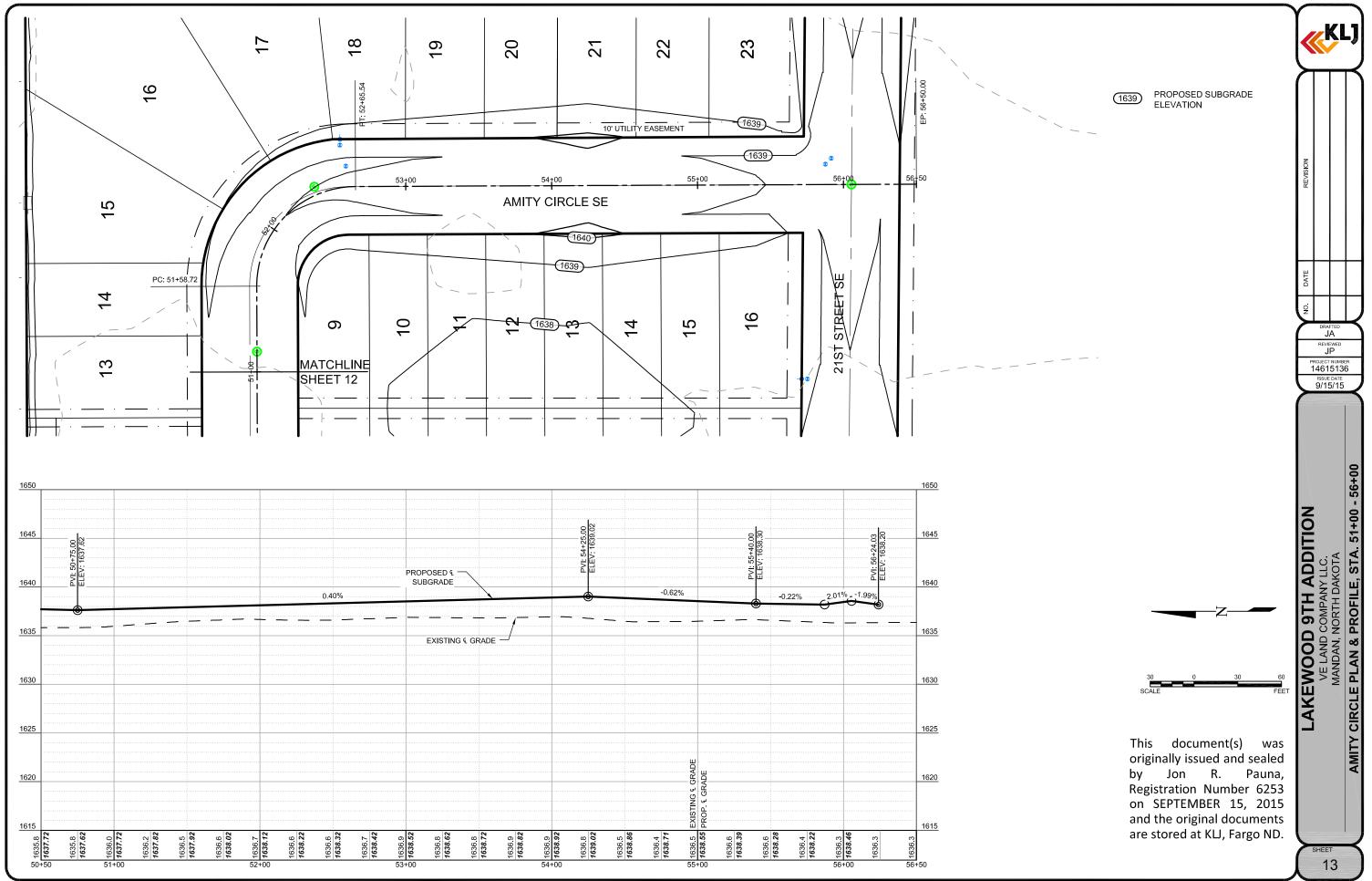


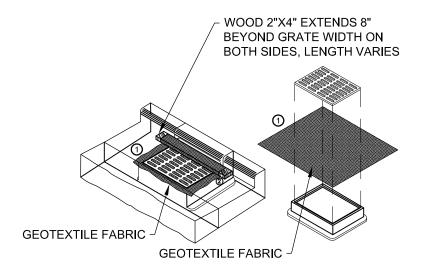










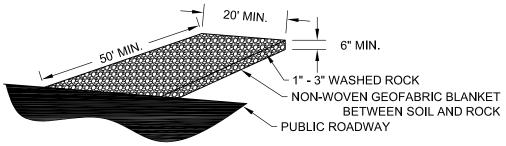


- 1. FABRIC SIZE SHALL BE MIN. 8" GREATER ON ALL SIDES OF INLET COVER TO PROVIDE A HAND HOLD WHEN MAINTENANCE OR REMOVAL IS REQUIRED.

  2. 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED
- WITH STAPLES.

## **CURB INLET PROTECTION**

NO SCALE



### NOTES:

- 1. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION.
- 2. PUBLIC ROADWAYS SHALL BE KEPT CLEAN AND FREE OF MUD, DIRT, AND DEBRIS AT ALL TIMES.

## **ROCK CONSTRUCTION ENTRANCE**

NO SCALE

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REVIEWEI JP PROJECT NUMBER 14615136 9/15/15

LAKEWOOD 9TH ADDITION
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