

# RECORD DRAWING

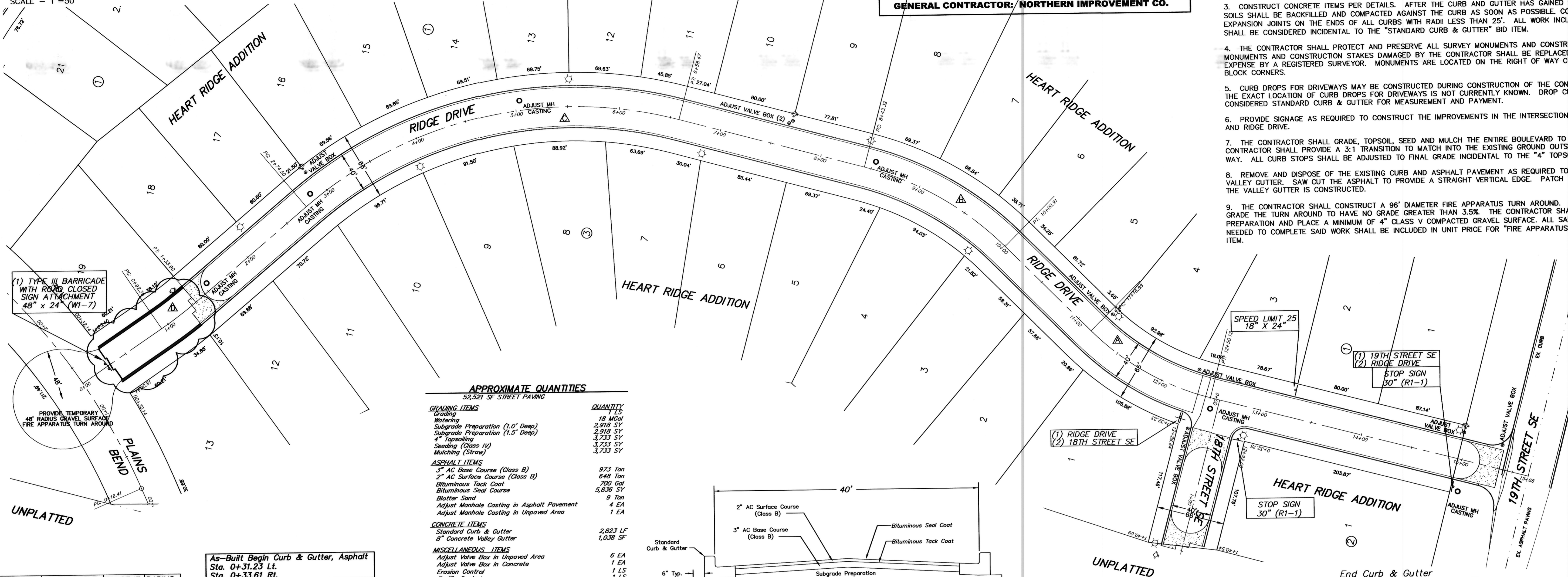
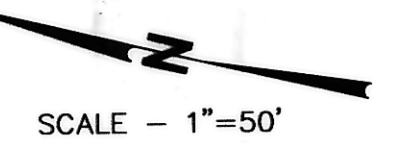
JANUARY 24, 2013

GENERAL CONTRACTOR: NORTHERN IMPROVEMENT CO.

### CONSTRUCTION NOTES (ALL SHEETS)

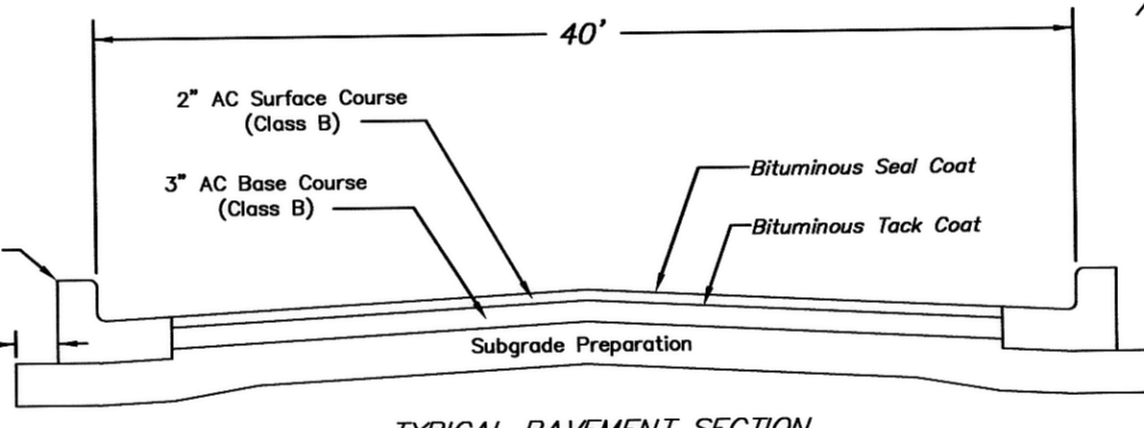
- GRADE, SHAPE AND COMPACT SUBGRADE FOR CURB & GUTTER, STREET AND RIGHT OF WAY CONSTRUCTION.
- EXCESS SOILS EXCAVATED DURING THE GRADING STAGE SHALL BE EVENLY SPREAD IN THE RIGHT OF WAY, BEHIND THE FUTURE CURB & GUTTER OR ON THE LOTS IF DIRECTED BY THE ENGINEER. THE BOULEVARD SHALL BE GRADED PER THE STREET CROSS SECTION AND FOR PLACEMENT OF 4" OF TOPSOIL IN THE BOULEVARDS.
- CONSTRUCT CONCRETE ITEMS PER DETAILS. AFTER THE CURB AND GUTTER HAS GAINED SUFFICIENT STRENGTH, SOILS SHALL BE BACKFILLED AND COMPACTED AGAINST THE CURB AS SOON AS POSSIBLE. CONSTRUCT 1/2" EXPANSION JOINTS ON THE ENDS OF ALL CURBS WITH RADI LESS THAN 25'. ALL WORK INCLUDING BACKFILLING SHALL BE CONSIDERED INCIDENTAL TO THE "STANDARD CURB & GUTTER" BID ITEM.
- THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL SURVEY MONUMENTS AND CONSTRUCTION STAKES. MONUMENTS AND CONSTRUCTION STAKES DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE BY A REGISTERED SURVEYOR. MONUMENTS ARE LOCATED ON THE RIGHT OF WAY CURVATURE POINTS AND BLOCK CORNERS.
- CURB DROPS FOR DRIVEWAYS MAY BE CONSTRUCTED DURING CONSTRUCTION OF THE CONCRETE CURB & GUTTER. THE EXACT LOCATION OF CURB DROPS FOR DRIVEWAYS IS NOT CURRENTLY KNOWN. DROP CURB SHALL BE CONSIDERED STANDARD CURB & GUTTER FOR MEASUREMENT AND PAYMENT.
- PROVIDE SIGNAGE AS REQUIRED TO CONSTRUCT THE IMPROVEMENTS IN THE INTERSECTION OF 19TH STREET SE AND RIDGE DRIVE.
- THE CONTRACTOR SHALL GRADE, TOPSOIL, SEED AND MULCH THE ENTIRE BOULEVARD TO FINISHED GRADE. THE CONTRACTOR SHALL PROVIDE A 3:1 TRANSITION TO MATCH INTO THE EXISTING GROUND OUTSIDE OF THE RIGHT OF WAY. ALL CURB STOPS SHALL BE ADJUSTED TO FINAL GRADE INCIDENTAL TO THE "4" TOPSOILING" BID ITEM.
- REMOVE AND DISPOSE OF THE EXISTING CURB AND ASPHALT PAVEMENT AS REQUIRED TO CONSTRUCT THE VALLEY GUTTER. SAW CUT THE ASPHALT TO PROVIDE A STRAIGHT VERTICAL EDGE. PATCH THE ASPHALT AFTER THE VALLEY GUTTER IS CONSTRUCTED.
- THE CONTRACTOR SHALL CONSTRUCT A 96" DIAMETER FIRE APPARATUS TURN AROUND. CONTRACTOR SHALL GRADE THE TURN AROUND TO HAVE NO GRADE GREATER THAN 3.5%. THE CONTRACTOR SHALL EXECUTE SUBGRADE PREPARATION AND PLACE A MINIMUM OF 4" CLASS V COMPACTED GRAVEL SURFACE. ALL SAID WORK AND MATERIALS NEEDED TO COMPLETE SAID WORK SHALL BE INCLUDED IN UNIT PRICE FOR "FIRE APPARATUS TURN AROUND" BID ITEM.

SCALE - 1"=50'



### APPROXIMATE QUANTITIES

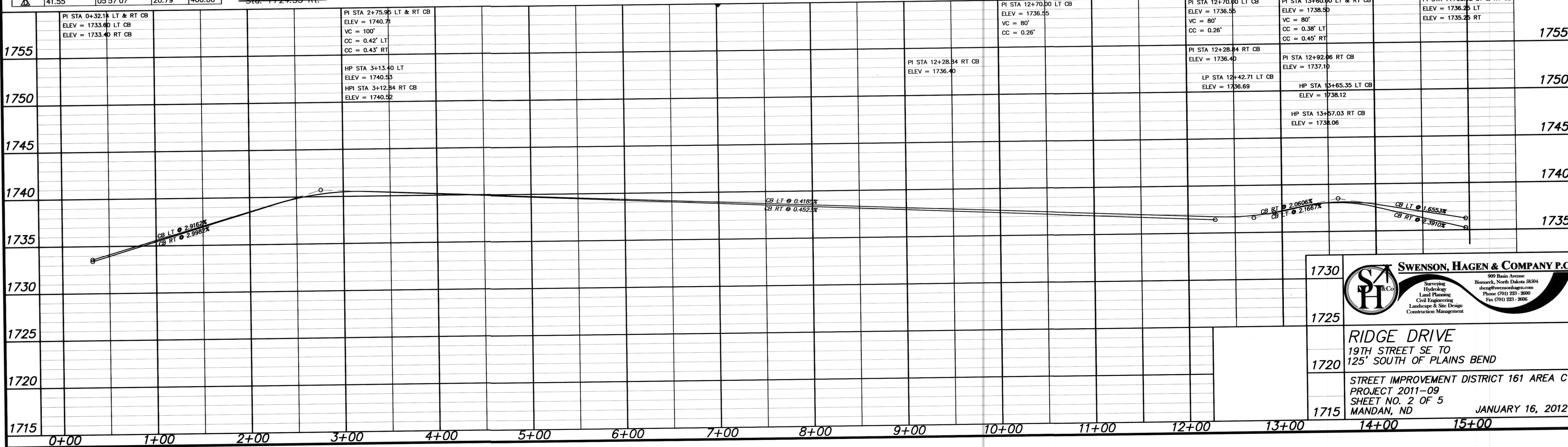
ITEMS	QUANTITY
<b>52,521 SF STREET PAVING</b>	
<b>GRADING ITEMS</b>	
Grading	18 Mgd
Subgrade Preparation (1.0' Deep)	2,918 SY
Subgrade Preparation (1.5' Deep)	3,733 SY
4" Topsoiling	3,733 SY
Seeding (Class IV)	3,733 SY
Mulching (Straw)	3,733 SY
<b>ASPHALT ITEMS</b>	
3" AC Base Course (Class B)	973 Ton
2" AC Surface Course (Class B)	648 Ton
Bituminous Tack Coat	700 Gal
Bituminous Seal Course	5,836 SY
Blotter Sand	9 Ton
Adjust Manhole Casting in Asphalt Pavement	4 EA
Adjust Manhole Casting in Unpaved Area	1 EA
<b>CONCRETE ITEMS</b>	
Standard Curb & Gutter	2,823 LF
8" Concrete Valley Gutter	1,038 SF
<b>MISCELLANEOUS ITEMS</b>	
Adjust Valve Box in Unpaved Area	6 EA
Adjust Valve Box in Concrete	1 EA
Erosion Control	1 LS
Traffic Control	1 LS
Fire Apparatus Turn Around	1 LS
<b>REMOVAL ITEMS</b>	
Curb & Gutter Removed	45 LF
Asphalt Removal	204 SF



As-Built Begin Curb & Gutter, Asphalt  
Sta. 0+31.23 Lt.  
Sta. 0+33.61 Rt.

Begin Curb & Gutter, Asphalt  
Sta. 1+33.00 Lt.  
Sta. 1+24.55 Rt.

CURVE	ARC LENGTH	DELTA ANGLE	TANGENT	RADIUS
▲	133.24	30°32'11"	68.24	250.00
▲	157.59	30°05'49"	80.66	300.00
▲	383.97	55°00'00"	208.23	400.00
▲	41.55	05°57'07"	20.79	400.00



**SWENSON, HAGEN & COMPANY P.C.**  
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 Civil Engineering  
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**RIDGE DRIVE**  
 19TH STREET SE TO  
 125' SOUTH OF PLAINS BEND

STREET IMPROVEMENT DISTRICT 161 AREA C  
 PROJECT 2011-09  
 SHEET NO. 2 OF 5  
 MANDAN, ND  
 JANUARY 16, 2012