

H.A. M^cCOY
**ENGINEERING
& SURVEYING, LLC**

PO Box 533 Redmond, OR 97756 · 541-923-7554 · www.ham-engr.com

Date: February 14, 2020
To: Nyle Head, President – PASRD Board
From: David M. Cospers, P.E. – Project Engineer
Re: Proposed Street Improvements – Revised

The following documents are attached for your review:

- Attachment 1 – Street Quantities (As of 2/12/20);
- Attachment 2 – Street Map of Proposed Improvements (As of 2/12/20);
- Attachment 3 – District Street Map Provided by PASRD;
- Attachment 4 – Revised Street Quantities (As of 2/13/20);
- Attachment 5 – Revised Street Map of Proposed Improvements (As of 2/13/20);
- Attachment 6 – Construction Quantities/Costs and Maintenance Costs – OTTA Seal;
- Attachment 7 – Construction Quantities/Costs and Maintenance Costs – 2” AC/6”CAB;
- Attachment 8 – Gravel Quantities/Costs and Maintenance Costs – 6” Gravel;
- Attachment 9 – Summary of Alternative Improvements/Maintenance Costs;
- Attachment 10 – Panoramic View Estates Tract Map (Recorded February 4, 1969);
- Attachment 11 – 9/3/2019 Robinson & Owen Proposal for Gravel Roadway.



The street quantities shown in *Attachment 1* and the mapping shown on *Attachment 2* were based upon the *Panoramic View Estates Tract Map* recorded February 4, 1969 (*Attachment 10*), and later used to determine construction quantities and costs outlined in the attachments for the various roadway improvement alternatives. Reconciliation of centerline mileage between the quantities developed from the plat map and the PASRD Road Map (*Attachment 3*) could not be made. It was therefore determined the recorded tract map was more accurate and was used as the basis to develop all construction quantities outlined in this analysis.

Based upon input received at the February 12, 2020 Board meeting, revisions were made to *Attachment 1* and *Attachment 2*. *Attachment 4* and *Attachment 5* reflect these revisions. Briefly, the revisions are as follows:

- The portion of Panoramic View Drive from Camp Polk to Buck Horn Drive, was removed from the construction quantities because of its current condition;
- A 0.4-mile portion of Lake Drive was added to the northern terminus of Lake Drive and identified as Lake Drive (Private);
- A 0.6-mile portion of Emerald Valley Rd., from Enewetak Ext. to where the pavement ends on Hurley Ranch Rd., was added;
- All road travel widths were reduced to 20 feet.

Modifications to the roadway system resulted in the following changes:

- Centerline Mileage increased from 6.21 miles to 7.04 miles (13.37% increase);
- Roadway Travel Surface Area increased from 713,448 sf to 742,740 sf (4.11% increase).

Attachment 6 provides the quantities, estimated unit costs and total costs for the various work items related to **Alternative 1 - OTTA Seal**, based upon the street quantities shown in **Attachment 1/Attachment 2** (2/12/2020) and street quantities shown in **Attachments 4/Attachment 5** (2/13/2020). Unit costs for the OTTA Seal alternative were developed in consultation with Vic Russell of Vic Russell Construction, Sam Sachamberger of Albina Asphalt Company and Chris Doty, Deschutes County Road Department Director. All three (3) sources have extensive knowledge and experience constructing OTTO Seals throughout Deschutes County. The overall cost of construction for the **OTTA Seal** alternative increased approximately \$47,842, from \$1,107,204 to \$1,155,046, as a result of the roadway modifications outlined above. The annualized cost for maintenance also increased by \$1,009, from \$23,781 per year to \$24,791 per year for the same reason. Differences in quantities, unit costs and total costs are shown in red and described under notes.

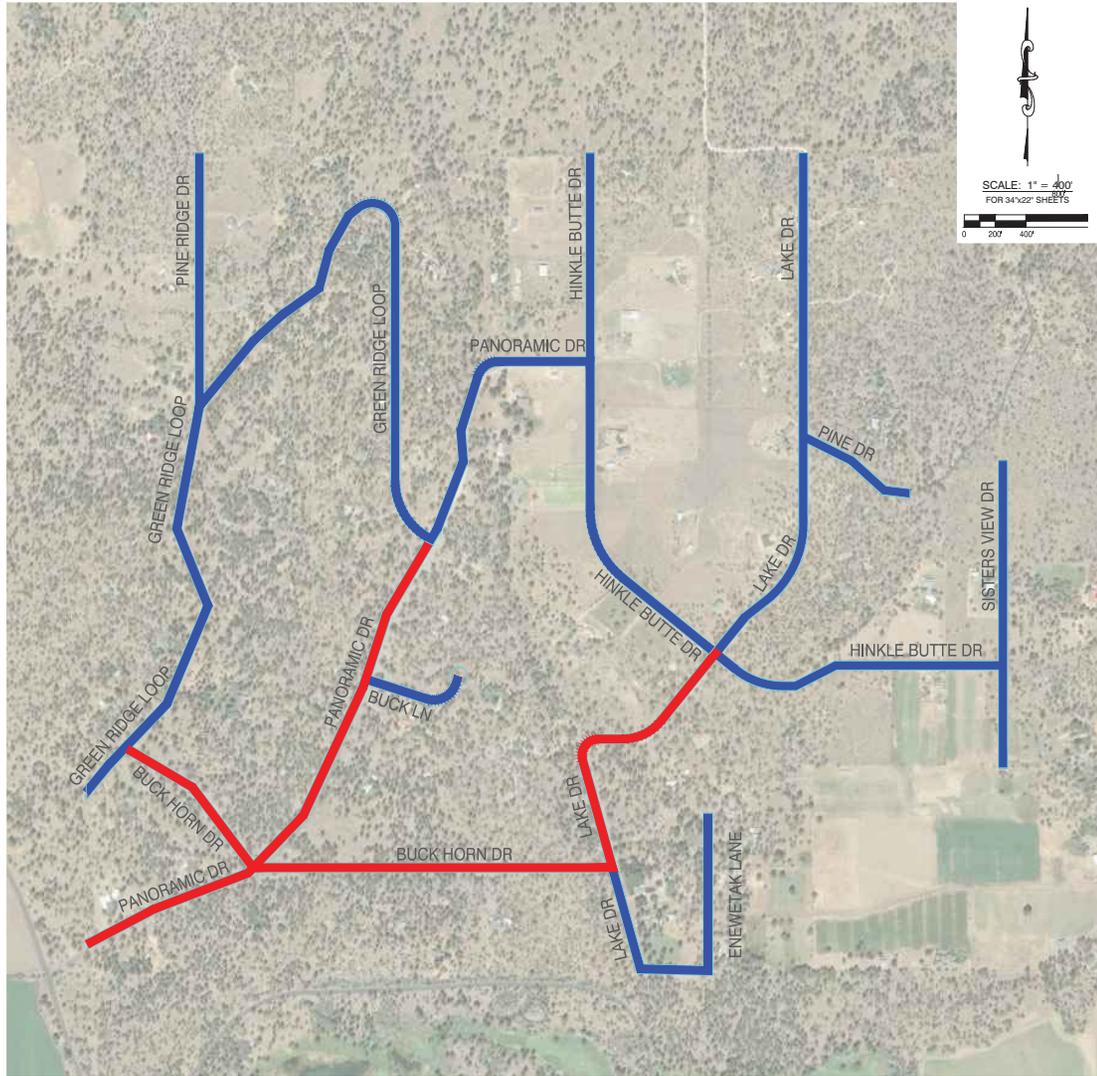
Attachment 7 provides the quantities, estimated unit costs and total costs for the various work items related to **Alternative 2 - 2" Hot Mix Asphalt Concrete (HMAC) on 6" Aggregate Base** based upon the street quantities shown in **Attachment 1/Attachment 2** (2/12/2020) and street quantities shown in **Attachments 4/Attachment 5** (2/13/2020). The overall cost of construction for the **2" AC over 6" Aggregate Base** alternative was reduced by approximately \$161,166 as a result of a reduction in the unit cost of AC from \$150/ton to \$125/ton. All other unit costs remained as originally proposed. The reduction in the unit cost for AC was determined to be warranted after a review of the historical costs for AC for recent bids for AC ranged in cost for a 2-inch section from \$100/ton to \$115/ton. The \$150/ton unit cost originally used seemed too aggressive after our second review and was reduced to \$125/ton. The reduction in overall costs due to the unit cost reduction outlined above was offset by the additional costs caused by the modifications to the roadway system described previously. The overall cost of construction for the **2" AC over 6" Aggregate Base** alternative decreased approximately \$161,166, from \$3,066,635 to \$2,905,469. However, the annualized cost for maintenance increased by \$1,077, from \$25,367 per year to \$26,444 per year due to roadway system modifications previously described herein. Differences in quantities, unit costs and total costs are shown in red and described under notes.

Attachment 8 provides the quantities, estimated unit costs and total costs for the various work items related to **Alternative 3 – Gravel Roadway**, based upon the street quantities shown in **Attachment 1/Attachment 2** (2/12/2020) and street quantities shown in **Attachments 4/Attachment 5** (2/13/2020). Unit costs were developed from the 9/3/2019 proposal received from *Robinson & Owens Heavy Construction* for this work (**Attachment 11**). The overall cost of construction for the **Gravel Roadway** alternative increased approximately \$34,151, from \$989,875 to \$1,024,026, as a result of the roadway modifications outlined above. The annualized cost for maintenance also increased by \$2,115, from \$49,809 per year to \$51,924 per year for the same reason. Differences in quantities, unit costs and total costs are shown in red and described under notes.

STREET QUANTITIES (02/12/20)

STREET NAME	CL FOOTAGE (TRACT MAP)	MILEAGE (TRACT MAP)	(HOA MILEAGE)	RANK	CL FTGE	RDWY WDTH (F)	RDWY AREA (SF)	SHLR AREA (SF)
PANORAMIC VIEW	5049	0.96	1.32	MAJOR	3191	24	76584	12764
				MINOR	1858	20	37160	7432
BUCK HORN	3485	0.66	0.81	MAJOR	3485	24	83640	13940
GREEN RIDGE	6356	1.20	1.48	MINOR	6356	20	127120	25424
LAKE	5982	1.13	1.40	MAJOR	1824	24	43776	7296
				MINOR	4158	20	83160	16632
HINKLE BUTTE	5962	1.13	1.28	MINOR	5962	24	143088	23848
PINE RIDGE	1636	0.31	0.38	MINOR	1636	20	32720	6544
PINE DRIVE	893	0.17	0.19	MINOR	893	20	17860	3572
SISTERS VIEW DRIVE	1326	0.25	0.40	MINOR	1326	20	26520	5304
BUCK LANE	591	0.11	0.17	MINOR	591	20	11820	2364
ENEWETAK EXT.	1500	0.28		MINOR	1500	20	30000	6000
	32780	6.21	7.43		32780		713448	131120

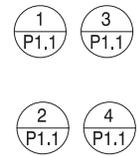
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	STREET NAME	RANK	LENGTH (FT)	RDWY WIDTH (F)
1.	PANORAMIC DRIVE	MAJOR	3,191 FT	24 FT
		MINOR	1,858 FT	20 FT
2.	BUCK HORN DRIVE	MAJOR	3,485 FT	24 FT
3.	GREEN RIDGE LOOP	MINOR	6,356 FT	20 FT
		MAJOR	1,824 FT	24 FT
5.	HINKLE BUTTE DRIVE	MINOR	4,158 FT	20 FT
		MINOR	5,962 FT	20 FT
6.	PINE RIDGE DRIVE	MINOR	1,636 FT	20 FT
7.	PINE DRIVE	MINOR	893 FT	20 FT
8.	SISTERS VIEW DRIVE	MINOR	1,326 FT	20 FT
9.	BUCK LANE	MINOR	591 FT	20 FT
10.	ENEWETAK LANE	MAJOR	1,500 FT	20 FT
TOTAL			32,780 FT	
			6.21 MILES	

MAJOR ROAD SECTION
 (CENTERLINE LENGTH 8,500 FEET)
 (ROAD SURFACE = 23,600 SY)

MINOR ROAD SECTION
 (CENTERLINE LENGTH 29,000 FEET)
 (ROAD SURFACE = 66,200 SY)



DATE:	
REVISION:	
No.	1 2 3 4 5 6 7 8 9 10
DATE:	02/05/20
DRAWING STATUS:	EXHIBIT
EXHIBIT	<input type="checkbox"/>

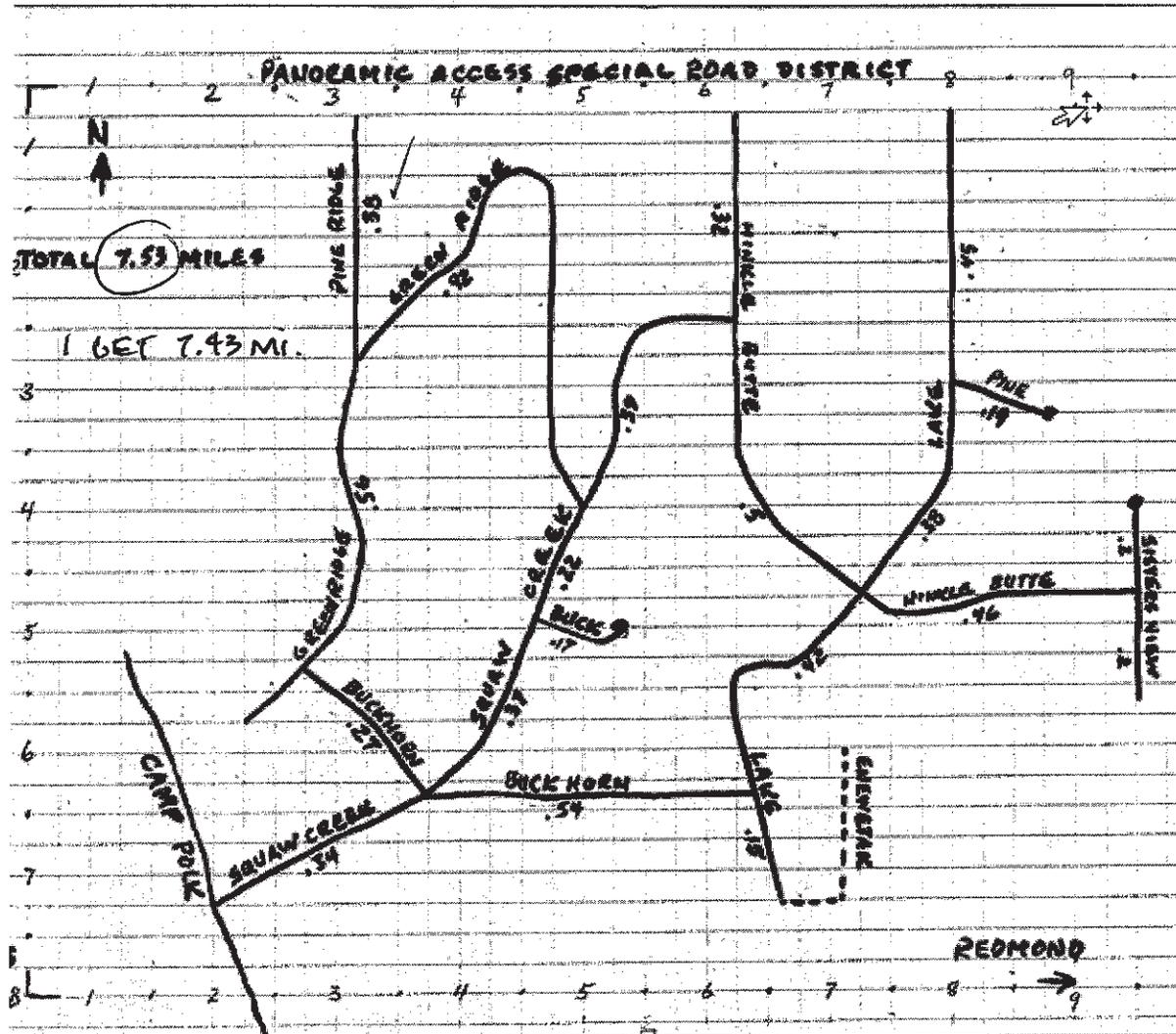


PROJECT: PANORAMIC ACCESS SPECIAL ROADS DISTRICT
 PROJECT LOCATION: SISTERS, OREGON
 CLIENT: PASRD

SHEET TITLE:
 PANORAMIC ACCESS SPECIAL ROADS DISTRICT PROPOSED ROAD IMPROVEMENTS

JOB NO. 19-242
 DRAWN BY: BPL
 DRAWING:
P1.0

ATTACHMENT 2



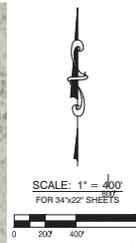
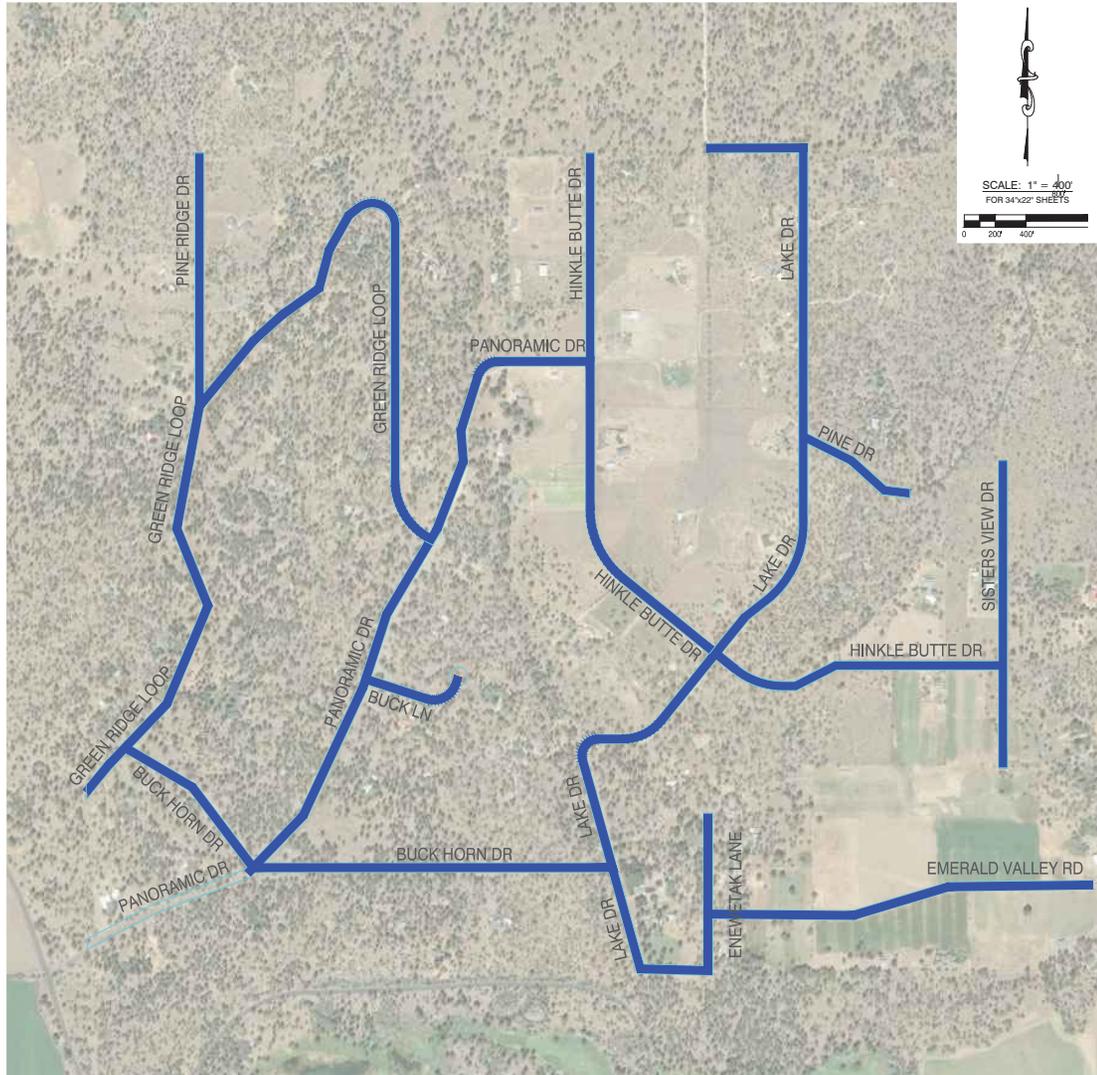
ATTACHMENT 3

STREET QUANTITIES (02/13/20)

STREET NAME	CL FOOTAGE (TRACT MAP)	MILEAGE (TRACT MAP)	(HOA MILEAGE)	RANK	CL FTGE	RDWY WDTH (F)	RDWY AREA (SF)	SHLR AREA (SF)
PANORAMIC VIEW	4176	0.79	0.98	MINOR	4176	20	83520	16704
BUCK HORN	3485	0.66	0.81	MINOR	3485	20	69700	13940
GREEN RIDGE	6356	1.20	1.48	MINOR	6356	20	127120	25424
LAKE	5982	1.13	1.40	MINOR	5982	20	119640	23928
LAKE DR (PRIVATE)	2112	0.40	0.00	MINOR	2112	20	42240	8448
HINKLE BUTTE	5962	1.13	1.28	MINOR	5962	20	119240	23848
PINE RIDGE	1636	0.31	0.38	MINOR	1636	20	32720	6544
PINE DRIVE	893	0.17	0.19	MINOR	893	20	17860	3572
SISTERS VIEW DRIVE	1326	0.25	0.40	MINOR	1326	20	26520	5304
BUCK LANE	591	0.11	0.17	MINOR	591	20	11820	2364
ENEWETAK EXT.	1500	0.28	0.00	MINOR	1500	20	30000	6000
EMERALD VALLEY RD	3168	0.60	0.00	MINOR	3168	20	63360	12672
37187	7.04	7.09	37187	20	680380	148748		

Does not include portion from Camp Polk to Buck Horn Drive

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	STREET NAME	RANK	LENGTH (FT)	RDWY WIDTH (F)
1.	PANORAMIC DRIVE	MINOR	4,176 FT	20 FT
2.	BUCK HORN DRIVE	MIN OR	3,485 FT	20 FT
3.	GREEN RIDGE LOOP	MINOR	6,356 FT	20 FT
4.	LAKE DRIVE	MINRO	5,982 FT	20 FT
5.	LAKE DRIVE (PRIVATE)	MINOR	2,112 FT	20 FT
5.	HINKLE BUTTE DRIVE	MINOR	5,962 FT	20 FT
6.	PINE RIDGE DRIVE	MINOR	1,636 FT	20 FT
7.	PINE DRIVE	MINOR	893 FT	20 FT
8.	SISTERS VIEW DRIVE	MINOR	1,326 FT	20 FT
9.	BUCK LANE	MINOR	591 FT	20 FT
10.	ENEWETAK LANE	MINOR	1,500 FT	20 FT
11.	EMERALD VALLEY RD	MINOR	3,168 FT	20 FT
	TOTAL		37,187 FT	
				7.04 MILES

MAJOR ROAD SECTION
 (CENTERLINE LENGTH 8,500 FEET)
 (ROAD SURFACE = 23,600 SY)

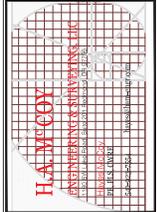
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MINOR ROAD SECTION
 (CENTERLINE LENGTH 29,000 FEET)
 (ROAD SURFACE = 66,200 SY)

2
4



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REVISION:	
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DATE:	02/05/20
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EXHIBIT	<input type="checkbox"/>



PROJECT: PANORAMIC ACCESS
 SPECIAL ROADS DISTRICT
 PROJECT LOCATION:
 SISTERS, OREGON
 CLIENT:
 PASRD

SHEET TITLE:
 PANORAMIC ACCESS
 SPECIAL ROADS
 DISTRICT
 PROPOSED ROAD
 IMPROVEMENTS

JOB NO. 19-242
 DRAWN BY: BPL
 DRAWING:
P1.0

ATTACHMENT 5

OTTA SEAL ESTIMATE

		<u>2/12/2020</u>			<u>2/13/2020</u>			<u>NOTES</u>
<u>ESTIMATED CONSTRUCTION COSTS</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>ITEM COST</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>ITEM COST</u>		
1. MOBILIZATION	1 LS	\$78,467.54 /LS	\$78,468	1 LS	\$82,287.52 /LS	\$82,288	BASED ON % OF CONSTRUCTION COSTS - OVERALL CONSTRUCTION COST REDUCED	
2. SUBGRADE PREP	160 HR	\$300.00 /HR	\$48,000	160 HR	\$300.00 /HR	\$48,000		
3. PULVERIZE BUCK HORN DR/PANORAMIC DR	10842 SY	\$3.00 /SY	\$32,527	10125 SY	\$3.00 /SY	\$30,376	QUANTITY REDUCED TO INCLUDE ONLY PORTIONS OF BUCKHORN AND PANORAMIC	
4. INTERSECTION IMPROVEMENTS	6 EA	\$4,500.00 /INTERS	\$27,000	6 EA	\$4,500.00 /INTERS	\$27,000		
5. DRAINAGE IMPT.S	4 EA	\$25,000.00 /EA	\$100,000	4 EA	\$25,000.00 /EA	\$100,000		
6. OTTA SEAL - 2 LIFTS	79272 SY	\$6.00 /SY	\$475,632	82638 SY	\$6.00 /SY	\$495,827	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS	
7. AG BASE SHOULDERS	2428 CY	\$50.00 /CY	\$121,407	2755 CY	\$50.00 /CY	\$137,730	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS	
8. FINAL SEAL (FOG)	79272 SY	\$0.50 SY	\$39,636	82638 SY	\$0.50 SY	\$41,319	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS	
		SUBTOTAL	\$922,670			\$962,539		
		CONTINGENCY (20%)	\$184,534			\$192,508		
		ESTIMATED CONSTRUCTION COSTS	\$1,107,204			\$1,155,046	\$47,842.91 MORE IN OVERALL COSTS	
<u>ESTIMATED MAINTENANCE</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>ITEM COST</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>ITEM COST</u>		
EVERY 10 YEARS								
APPLY CHIP SEAL	79272 SY	\$3.00 /SY	\$237,816	82638 SY	\$3.00 /SY	\$247,913	QUANTITY REDUCED TO INCLUDE PORTION OF BUCKHORN AND PANORAMIC	
		TOTAL ANNUALIZED COST	\$23,782			\$24,791	\$1,009.73 MORE IN ANNUALIZED COSTS	

2" HMAC/6" CAB

	2/12/2020			2/13/2020			NOTES
ESTIMATED CONSTRUCTION COSTS	QUANTITY	UNIT COST	ITEM COST	QUANTITY	UNIT COST	ITEM COST	
1. MOBILIZATION	1	\$232,320.86 /LS	\$232,321	1	\$220,111.28 /LS	\$220,111.28	BASED ON % OF CONSTRUCTION COSTS - OVERALL CONSTRUCTION COST REDUCED
2. SUBGRADE PREP	160	\$300.00 /HR	\$48,000	160	\$300.00 /HR	\$48,000.00	
3. PULVERIZE BUCK HORN DR/PANORAMIC DR	10842	\$3.00 /SY	\$32,527	10125	\$3.00 /SY	\$30,376.00	QUANTITY REDUCED TO INCLUDE PORTION OF BUCKHORN AND PANORAMIC
4. INTERSECTION IMPROVEMENTS	6	\$4,500.00 /INTERS	\$27,000	6	\$4,500.00 /INTERS	\$27,000.00	
5. DRAINAGE IMPT.S	4	\$25,000.00 /EA	\$100,000	4	\$25,000.00 /EA	\$100,000.00	
6. 6" CRUSHED AGGREGATE BASED	16451	\$50.00 /SY	\$822,557	17448	\$50.00 /SY	\$872,379.47	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS
7. HMAC	8621	\$150.00 /TN	\$1,293,125	8987	\$125.00 /TN	\$1,123,357.29	REDUCED UNIT COST FROM \$150 TO \$125/QUANTITY ADJUSTMENT
		SUBTOTAL	\$2,555,530		SUBTOTAL	\$2,421,224.04	
		CONTINGENCY (20%)	\$511,106		CONTINGENCY (20%)	\$484,244.81	
		ESTIMATED CONSTRUCTION COSTS	\$3,066,635		ESTIMATED CONSTRUCTION COSTS	\$2,905,468.85	\$161,166.56 LESS IN OVERALL COSTS
ESTIMATED MAINTENANCE							
EVERY 10 YEARS							
APPLY CHIP SEAL	79272	\$3 /SY	\$237,816	82638	\$3.00 /SY	\$247,913	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS
		ANNUALIZED COST - CHIP SEAL	\$23,782		ANNUALIZED COST - CHIP SEAL	\$24,791	
EVERY 5 YEARS							
CRACK SEAL SURFACE	79272	\$0.10 /SY	\$7,927	82638	\$0.10 /SY	\$8,264	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS
		ANNUALIZED COST - CRACK SEAL	\$1,585		ANNUAL COST - CRACK SEAL	\$1,653	
		TOTAL ANNUALIZED COST	\$25,367.04		TOTAL ANNUALIZED COST	\$26,444	\$1,077.05 MORE IN ANNUALIZED COSTS

6" GRAVEL ROADWAY

	2/12/2020			2/13/2020			
ESTIMATED CONSTRUCTION COSTS	QUANTITY	UNIT COST	ITEM COST	QUANTITY	UNIT COST	ITEM COST	
1. MOBILIZATION	1 LS	\$74,990.55 /LS	\$74,991	1 LS	\$77,577.70 /LS	\$77,578	BASED ON % OF CONSTRUCTION COSTS - OVERALL CONSTRUCTION COST REDUCED
2. SUBGRADE PREP	79272 SY	\$0.39 /SY	\$30,916	82638 SY	\$0.39 /SY	\$32,229	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS
3. PULVERIZE BUCK HORN DR/PANORAMIC DR	10842 SY	\$3.00 /SY	\$32,527	10125 SY	\$3.00 /SY	\$30,376	QUANTITY REDUCED TO INCLUDE PORTION OF BUCKHORN AND PANORAMIC
4. 1-FOOT WIDE SHOULDER ROCK EA.SIDE	65560 LF	\$0.30 /LF	\$19,668	74374 LF	\$0.30 /LF	\$22,312	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS
5. DRAINAGE IMPT.S	4 EA	\$25,000.00 /EA	\$100,000	4 EA	\$25,000.00 /EA	\$100,000	
6. 6" CRUSHED AGGREGATE BASED	79272 SY	\$7.15 /SY	\$566,795	13773 CY	\$42.90 /CY	\$590,860	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS
		SUBTOTAL	\$824,896		SUBTOTAL	\$853,355	
		CONTINGENCY (20%)	\$164,979		CONTINGENCY (20%)	\$170,671	
		ESTIMATED CONSTRUCTION COSTS	\$989,875		ESTIMATED CONSTRUCTION COSTS	\$1,024,026	\$34,150 MORE IN OVERALL COSTS
ESTIMATED MAINTENANCE							
EVERY 10 YEARS	QUANTITY	UNIT COST	ITEM COST	QUANTITY	UNIT COST	ITEM COST	
ADD 2" OF GRAVEL	26424 SY	\$7.15 /SY	\$188,932	4591 CY	43 /CY	\$196,953	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS
		ANNUALIZED COST - NEW GRAVEL	\$18,893		ANNUALIZED COST - NEW GRAVEL	\$19,695	
EVERY 1 YEARS							
RESHAPE AND COMPACT SURFACE	79272 SY	\$0.39 /SY	\$30,916	82638 SY	\$0.39 /SY	\$32,229	QUANTITY ADJUSTED DUE TO STREET SEGMENT ADJUSTMENTS
		ANNUALIZED COST - RESHAPE	\$30,916		ANNUALIZED COST - RESHAPE	\$32,229	
		TOTAL ANNUALIZED COST	\$49,809		TOTAL ANNUALIZED COST	\$51,924	\$2,115 MORE IN ANNUALIZED COSTS

SUMMARY

OTTA SEAL ESTIMATE	2/12/20	2/12/13	NOTES
ESTIMATED CONSTRUCTION COSTS	\$1,107,204	\$1,155,046	\$47,842.91 MORE IN OVERALL COSTS
TOTAL ANNUALIZED COST	\$23,781.60	\$24,791	\$1,009.73 MORE IN ANNUALIZED COSTS
2" HMAC/6" CAB			
ESTIMATED CONSTRUCTION COSTS	\$3,066,635	\$2,905,468.85	\$161,166.56 LESS IN OVERALL COSTS
TOTAL ANNUALIZED COST	\$25,367.04	\$26,444	\$1,077.05 MORE IN ANNUALIZED COSTS
6" GRAVEL ROADWAY			
ESTIMATED CONSTRUCTION COSTS	\$989,875	\$1,024,026	\$34,150 MORE IN OVERALL COSTS
TOTAL ANNUALIZED COST	\$49,809	\$51,924	\$2,115 MORE IN ANNUALIZED COSTS

A-183 10

PANORAMIC VIEW ESTATES

BEING A SUBDIVISION OF A PORTION OF SEC. 36
T.14.S., R.10.E. AND A PORTION OF SEC. 31, T.14.S., R.11.E.
W.M. IN THE COUNTY OF DESCHUTES, STATE OF OREGON.

FILED
FEB 5 1969
HELEN M. DACEY, CO. CLERK

SURVEYORS CERTIFICATE :

I, Richard W. Burton, being first duly sworn, depose and say that I have correctly surveyed and marked with proper monuments the lands represented on the plat "PANORAMIC VIEW ESTATES" located in a portion of Sec. 36, T.14.S., R.10.E. & a portion of Section 31, T.14.S., R.11.E. W.M. in Deschutes County, State of Oregon, the initial point being a 2"x36" galv. iron pipe set at the Southwest corner of said Sec. 36; thence along the southerly line of said Sec. N. 89° 43' 42" E. 3,997.08' to the S.W. corner of the S.E. 1/4 S.E. 1/4 of said Sec. 36; thence along the westerly line of said S.E. 1/4 S.E. 1/4 N. 0° 07' 53" W. 1,327.22' to the N.W. corner of said S.E. 1/4 S.E. 1/4; thence along the northerly line of said S.E. 1/4 S.E. 1/4 N. 89° 47' 34" E. 1,334.44' to the S.W. corner of the N.W. 1/4 S.W. 1/4 of said Sec. 31; thence along the southerly line of said N.W. 1/4 S.W. 1/4 of said Sec. 31 S. 89° 45' 03" E. 1,260.01' to the S.E. corner of the N.W. 1/4 S.W. 1/4 of said Sec. 31; thence along the easterly line of said N.W. 1/4 S.W. 1/4 of Section 31 N. 0° 03' 32" E. 1,326.09' to the N.E. corner of said N.W. 1/4 S.W. 1/4; thence along the northerly line thereof N. 89° 46' 06" W. 1,262.34' to the East 1/4 corner of said Sec. 36; thence along the easterly line of said Sec. 36 N. 0° 02' 31" W. 2,651.43' to the N.E. Cor. of said Sec. 36; thence along the northerly line of said Sec. 36 S. 89° 59' 06" W. 5,362.64' to the N.W. corner of said Sec. 36; thence along the Westerly line of said Sec. 36 S. 0° 23' 58" E. 5,326.84' to the initial point.

All block corners being marked with 5/8" X 30" iron rods all lot corners are marked with 1/2" X 24" iron rods and the accompanying tracing is an exact copy of the original.

By Richard W. Burton
Surveyor

Subscribed and sworn to before me this 26th day of December 1968

Notary Public for the State of Oregon Catherine Cecil

My commission expires March 7, 1969

REGISTERED
OREGON
LAND SURVEYOR
Richard W. Burton
JULY 12, 1968
RICHARD W. BURTON
842



DEDICATION :

Known all men by these presents that Sydney Gross and Sarah Gross, William R. Mayfield and D. Marian Mayfield and Dan H. Heierman and Aullice A. Heierman husbands and wives, do hereby make, establish and declare the plat of "PANORAMIC VIEW ESTATES" as described in the accompanying surveyors certificate to be a true and correct map and plat thereof, all lots being of the dimensions shown and all streets of the widths therein setforth and we do hereby dedicate to the use of the public as public ways forever all streets shown on said plat.

By Sydney Gross By William R. Mayfield By Dan H. Heierman
By Sarah Gross By D. Marian Mayfield By Aullice A. Heierman

ACKNOWLEDGEMENT :

STATE OF OREGON }
COUNTY OF DESCHUTES }SS

This certifies that on this 11th day of DECEMBER 1968, before me, a notary public in and for said State and County personally appeared Sydney Gross and Sarah Gross, William R. Mayfield and D. Marian Mayfield and Dan H. Heierman and Aullice A. Heierman husbands and wives, who being first duly sworn did say that they are the persons named in the foregoing Dedication and that they are the owners of the land known henceforth as "PANORAMIC VIEW ESTATES" and that their signatures affixed to said Dedication was their free act and deed.

Witness my hand and official seal
Notary public for the State of Oregon Catherine Cecil
My commission expires August 12, 1972

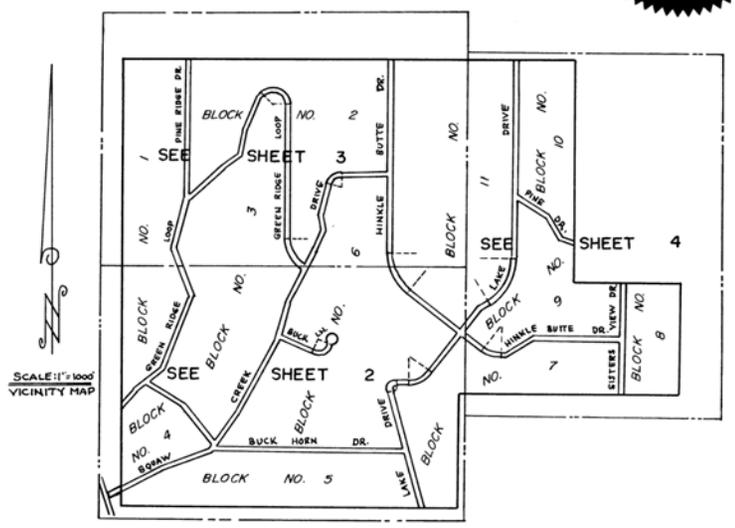
APPROVALS :

Approved DECEMBER 30th 1968 Quincy E. Perry
County Surveyor

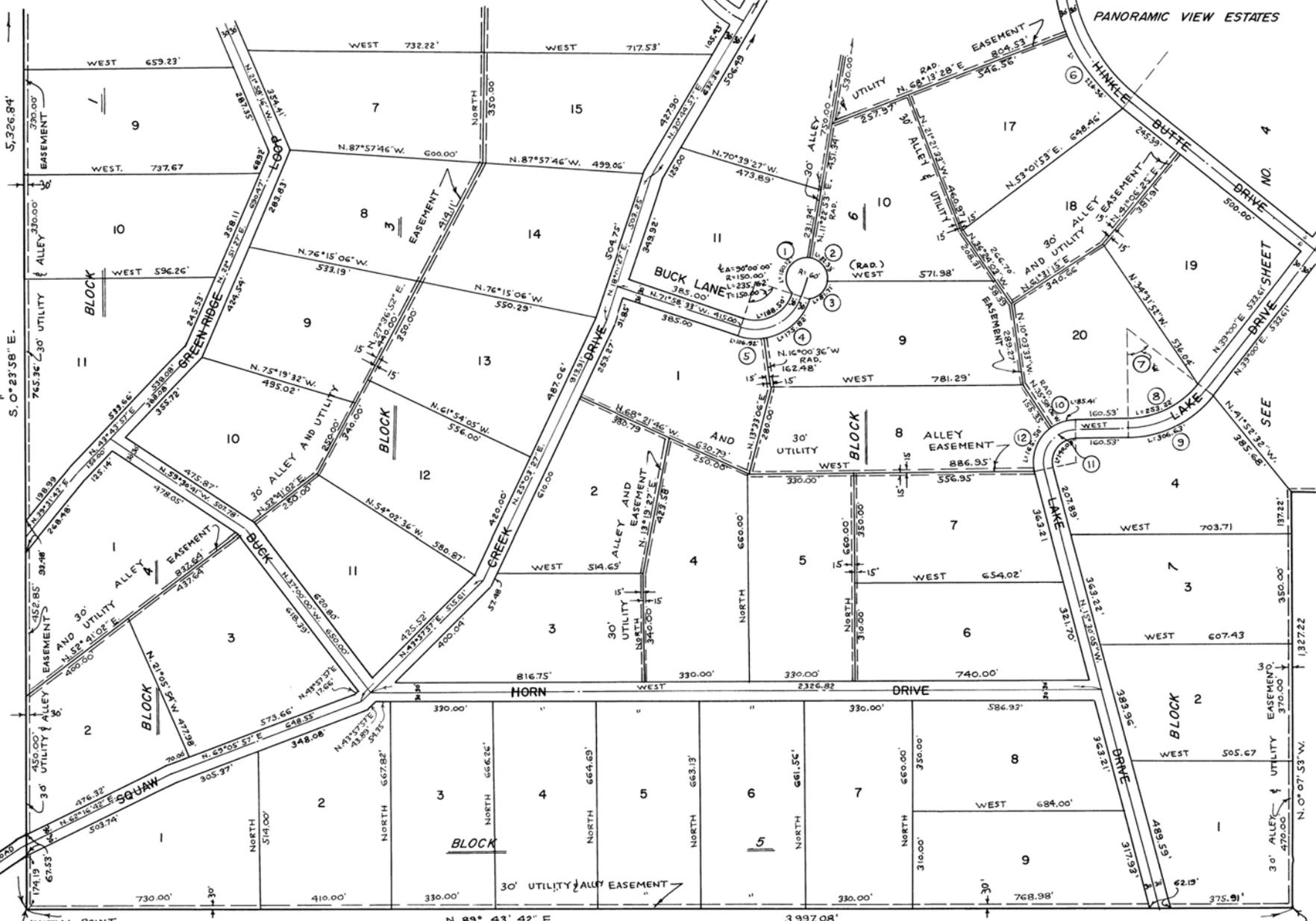
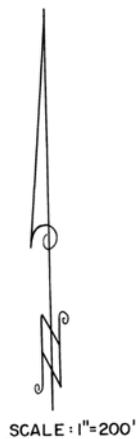
Approved FEBRUARY 4 1969 A. L. Puchollow Barth O. Smoad
County Commissioners

All taxes, assessment, fees, or other charges as provided by ORS 92-095 have been paid as of Feb 4 1969 J. S. Holzer
County Sheriff

I hereby certify that all ad valorem taxes and all special assessments, fees and other charges required by law to be placed on the 1969-70 tax roll which became a lien or will become a lien during this calendar year, but not yet certified to the tax collector for collection have been paid to me.
Approved Jan 31, 1969 J. P. Mark
County Assessor



BY: BURTON BROS. ENGINEERS & LAND SURVEYORS, BEND, OREGON



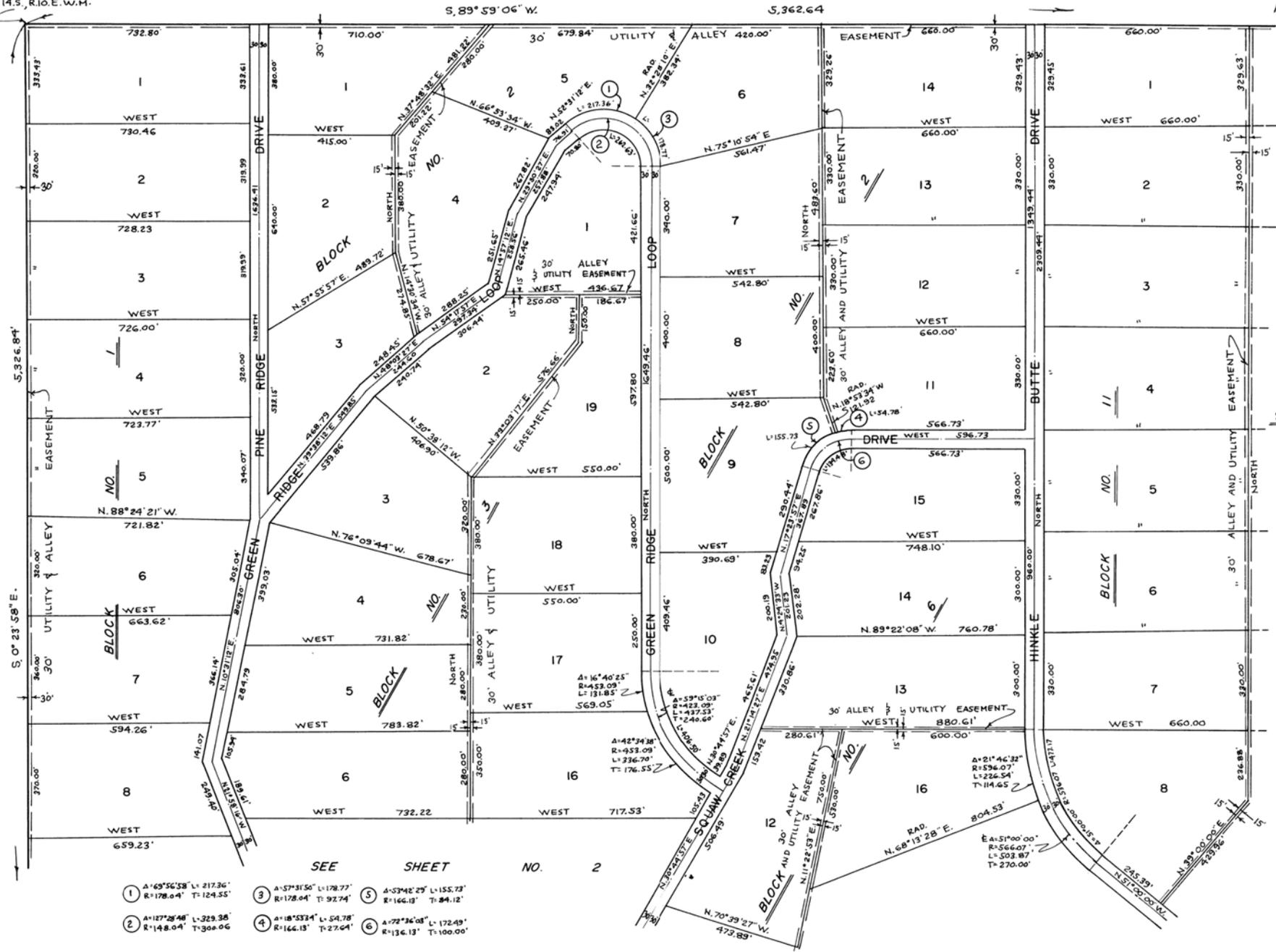
INITIAL POINT
S.W. CORNER SEC.
36, T.14.S. R.10.E.
W.M.

- ① Δ=143°21'26" L=150.12' R=60.00' T=181.20'
- ② Δ=78°37'07" L=82.33' R=60.00' T=49.13'
- ③ Δ=78°01'27" L=81.71' R=60.00' T=48.61'
- ④ Δ=55°57'57" L=175.82' R=180.00' T=95.64'
- ⑤ Δ=34°02'03" L=106.92' R=180.00' T=55.09'
- ⑥ Δ=21°46'32" L=226.54' R=596.07' T=114.65'
- ⑦ Δ=51°00'00" L=279.32' R=314.48' T=150.00'
- ⑧ Δ=51°00'00" L=284.48' R=284.48' T=135.69'
- ⑨ Δ=51°00'00" L=306.63' R=344.48' T=164.31'
- ⑩ Δ=35°58'06" L=85.41' R=136.05' T=44.16'
- ⑪ Δ=105°30'05" L=135.27' R=106.05' T=139.47'
- ⑫ Δ=49°41'53" L=165.50' R=196.05' T=94.73'

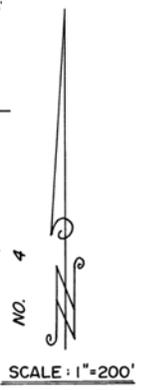
S.W. CORNER OF
S.E. 1/4 S.E. 1/4 OF
SEC. 36, T.14.S.
R.10.E. W.M.

A-173

N.W. CORNER OF SEC. 36
 T.14.S., R.10.E., W.M.



- SEE SHEET NO. 2
- ① A=69°56'58" L=217.36' R=178.04' T=124.55'
 - ② A=127°28'48" L=329.38' R=148.04' T=304.06'
 - ③ A=57°31'50" L=178.77' R=178.04' T=92.74'
 - ④ A=18°53'34" L=54.78' R=166.13' T=27.64'
 - ⑤ A=57°42'29" L=155.73' R=166.13' T=84.12'
 - ⑥ A=72°36'08" L=172.49' R=136.13' T=100.00'



SCALE: 1"=200'

NO. 4

SHEET

SEE

SEE SHEET NO. 3



SCALE: 1" = 200'

Panoramic Roads

Quote

9/3/2019

Sisters, Oregon

Prepared By: Mike Owen

Description	Unit	QTY	Unit Price	Total
01 Place 3/4 inch crushed rock on 7.5 mile x 22ft wide 6 inches deep compacted ready to pave. 871200sf = 96800 sy	SY	96800	\$7.15	\$692,120.00
02 Prep subgrade and build a 2% crown	SY	96800	\$0.39	\$37,752.00
03 1 Foot Wide Shoulder Rock placed	LF	79200	\$0.30	\$23,760.00
			Base Bid Total	\$753,632.00

Notes & Exclusions

Excludes all permits

If quantities or scope are altered R&O reserves the right to adjust pricing

Proposal based on non-prevailing wage rates

Excludes any survey or staking

Estimate provided with out plans or specifacations

Estimate does not include cut or fill excavation, drainage