



FIELD INSPECTION REPORT



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CLIENT	RJD & Associates				DATE OF INSPECTION	Dec. 17, 2015	
PROJECT TITLE	Raft Island Private Road Rehab				REPORT NUMBER	01	
JOB SITE ADDRESS	Raft Island, Pierce County, WA				PROJECT NUMBER	6007	
CONTRACTOR	N/A						
WORK ORDER NO.		CONTRACT ORDER NO.		PO NO.		JOB ORDER NO.	
BUILDING PERMIT NO.	N/A						

I arrived on the jobsite to perform special inspection and field testing for today's scheduled asphalt coring. Thirty 6" diameter cores were extracted from various location on Raft Island roadways to determine asphalt thickness and underlying subgrade material.

Core #		Core #	
1.	2 1/2" HMA Thickness - 5" Base Course	16.	1 1/2" HMA Thickness - Existing
2.	2 1/2" HMA Thickness - 3" Base Course	17.	3/4" to 1" HMA Thickness - Existing
3.	3" HMA Thickness - 3" Base Course	18.	1 3/4" HMA Thickness - Existing
4.	2 3/4" HMA Thickness - 4" Base Course	19.	3/4" to 1" HMA Thickness - Existing
5.	2 3/4" HMA Thickness - 3" Base Course	20.	3/4" to 1" HMA Thickness - Existing
6.	2 1/2" HMA Thickness - 2" Base Course	21.	1 1/2" HMA Thickness - Existing
7.	2" HMA Thickness - Existing	22.	1 3/4" HMA Thickness - Existing
8.	2 1/2" HMA Thickness - Existing	23.	1 1/4" HMA Thickness - Existing (Diesel Smell)
9.	2 1/2" HMA Thickness - 4" Base Course	24.	1" to 1 1/4" HMA Thickness - Existing
10.	2" HMA Thickness - 4" Base Course	25.	1" to 1 1/2" HMA Thickness - Existing
11.	2 1/2" HMA Thickness - Existing	26.	3 1/2" HMA Thickness - Existing
12.	2 3/4" HMA Thickness - Existing	27.	1 3/4" HMA Thickness - Existing
13.	1 1/2" HMA Thickness - Existing	28.	2" HMA Thickness - Existing
14.	3/4" to 1" HMA Thickness - Existing	29.	2" HMA Thickness - Existing
15.	3/4" to 1" HMA Thickness - Existing	30.	2 1/2" HMA Thickness - Existing

* Base course is 3/4" crushed.

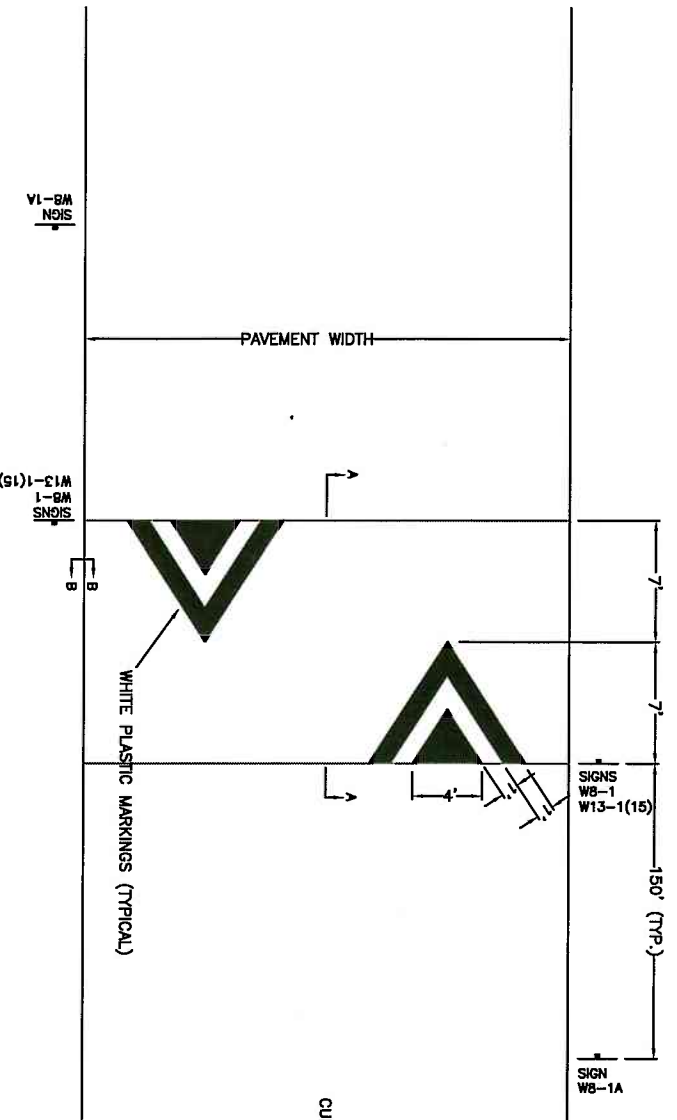
FIELD REMARKS: → All core locations were determined by a client representative.

WEATHER CONDITION (S)				TEMPERATURE / TIME				INSPECTOR	
← CLEAR		← SNOW		45° F @ 0730	hr	G. Hanson/ds			
← OVERCAST		← INDOOR (S)		46° F @ 1400	hr	↓ REVIEWED BY ↓			
← PARTLY CLOUDY		← COVERED AREA							
← CLOUDY		↓ OTHER (S) ↓							
✓ ← RAIN				↓ TIME BOX ↓					
← FOGGY				↓ START TIME ↓	hr	↓ FINISH TIME ↓	hr		
← SHOWERS				N/A	hr	N/A	hr		
				N/A	hr	N/A	hr	D. Smith	

REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF CONSTRUCTION TESTING LAB, INC. REPORT PERTAINS ONLY TO THE MATERIAL TESTED (rev. 08-22-2011)

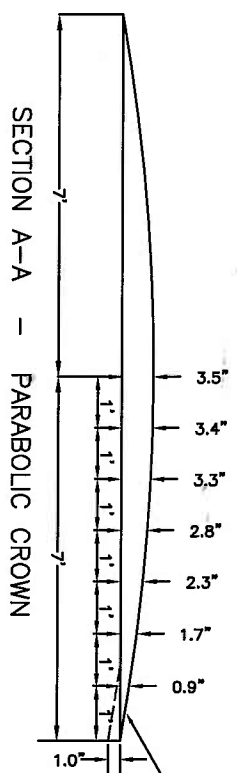
EXHIBIT C



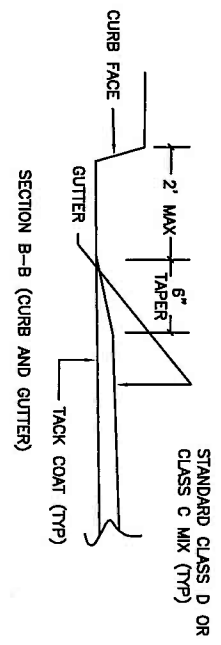
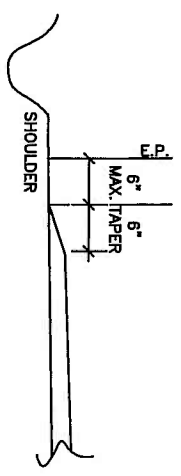


SIGN DESIGNATION / SIZE	
WB-1	BUMP
WB-1A	BUMP AHEAD
W13-1(20)	20 MPH ADVISORY PLAQUE
	30" x 30"
	30" x 30"
	18" x 18"

NOTES:
 1) ADVANCE SIGNS USED ONLY FOR FIRST IN SERIES
 2) WHEN 2 OR MORE BUMPS, REPLACE WB-1A WITH WB-1A(S) (BUMPS AHEAD)



NOTE:
 GRIND EXISTING ASPHALT AS REQUIRED TO PROVIDE 1" MINIMUM COMPACTED THICKNESS OF ASPHALT OVERLAY TO PREVENT RAVELLING OF MATERIAL.



CITY OF TACOMA
 DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER

DATE

3.5" HIGH
 SPEED HUMP DETAIL
 STANDARD PLAN NO. SU-XX

EXHIBIT E



EXHIBIT F

Preliminary Budget Cost Estimate-Raft Island RIIA Roads

26952 SY

Construction Items		Budget	
Preliminary Temporary Erosion Control/Miscellaneous Work		\$	18,500.00
Traffic Control		\$	10,000.00
Pulverizing		\$	24,583.88
Subgrade Prep/CSTC/Remove Excess		\$	112,098.00
Final Paving/Speed Humps/Driveways		\$	521,714.00
Shouldering/Water Valves/Misc Drainage		\$	45,228.50
Contingencies	10%	\$	73,212.44
WSST	7.9%	\$	63,621.61
Construction Totals		\$	868,958.42

\$ 732,124.38

\$32.24 per SY

Non-Construction Items

Project Management		\$	23,040.00
Survey		\$	2,500.00
Miscellaneous Consulting		\$	7,360.00
Contingencies	10%	\$	3,290.00
Non-Construction Totals		\$	36,190.00
Total		\$	905,148.42

Alder, Maple and Cedar Lane-can be quantified by lots later

3153 SY

Construction Items		Budget	
Preliminary Temporary Erosion Control/Miscellaneous Work		\$	3,750.00
Traffic Control		\$	2,500.00
Pulverizing		\$	3,008.88
Subgrade Prep/CSTC/Remove Excess		\$	13,390.50
Final Paving/Speed Humps/Driveways		\$	52,714.00
Shouldering/Water Valves/Misc		\$	5,691.00
Contingencies	10%	\$	8,105.44
WSST	7.9%	\$	7,043.63
Construction Totals		\$	96,203.44

\$ 81,054.38

\$30.51 per SY

Description	Quant.	Units	Unit Price	Amount	Sub Tot Amt	Total
Non-Construction Items						
Project Management						
Prelim. Design/Budgets	66	Hrs	\$ 115.00	\$ 7,590.00		
Bid Phase	20	Hrs	\$ 115.00	\$ 2,300.00		
Construction Phase	3	Mo	\$ 4,000.00	\$ 12,000.00		
Final Approval Phase	10	Hrs	\$ 115.00	\$ 1,150.00		
				Subtotal	\$ 23,040.00	
Survey						
Re-establish Monuments	5	EA	\$ 500.00	\$ 2,500.00		
				Subtotal	\$ 2,500.00	
Miscellaneous Consulting						
Geotech-Coring for AC/Base depth	1	LS	\$ 2,360.00	\$ 2,360.00		
Geotech-Compaction Soils/HMA	1	LS	\$ 5,000.00	\$ 5,000.00		
				\$ -		
				Subtotal	\$ 7,360.00	
Non-Construction Items						\$32,900.00

Foot Notes	Description	Quant.	Units	Unit Price	Amount	Sub Tot Amt	Sub Tot Cat
	RIIA ROADS :						
	Preliminary Temporary Erosion Control/Miscellaneous Work						
	Culvert Protection/Cleaning	14	EA	\$ 250.00	\$ 3,500.00		
	Mailbox Removal/Replacement	50	EA	\$ 300.00	\$ 15,000.00		
				Subtotal		\$ 18,500.00	
	Traffic Control						
	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00		
				Subtotal		\$ 10,000.00	
	Pulverizing						
	Pulverizing	26,953	SY	\$ 0.88	\$ 23,583.88		
	Mobilization	1	LS	\$ 1,000.00	\$ 1,000.00		
				Subtotal		\$ 24,583.88	
	Subgrade Prep/CSTC/Remove Excess						
	Grading	26,953	SY	\$ 1.00	\$ 26,953.00		
	1" CSTC	1,497	Tons	\$ 35.00	\$ 52,395.00		
	Removal Excess	1,950	CY	\$ 15.00	\$ 29,250.00		
	Ditching	1,000	LF	\$ 3.50	\$ 3,500.00		
				Subtotal		\$ 112,098.00	
	Final Paving/Speed Humps/Driveways						
	3" HMA	4,813	Tons	\$ 78.00	\$ 375,414.00		
	Wedge Curb-for drainage	1,000	LF	\$ 5.00	\$ 5,000.00		
	Asphalt Driveway Approach	2,700	SF	\$ 4.00	\$ 10,800.00		
	Concrete Driveway Approach	1,500	SF	\$ 12.00	\$ 18,000.00		
	Speed Humps-incl striping	30	EA	\$ 3,750.00	\$ 112,500.00		
				Subtotal		\$ 521,714.00	
	Shouldering/Water Valves/Misc Drainage						
	Shouldering	28,638	LF	\$ 0.75	\$ 21,478.50		
	Water Valve Adjust-Remove/Replace	30	EA	\$ 350.00	\$ 10,500.00		
	Survey Monuments	5	EA	\$ 200.00	\$ 1,000.00		
	12" N-12 Culverts	60	LF	\$ 50.00	\$ 3,000.00		
	8" N-12 Culverts	100	LF	\$ 40.00	\$ 4,000.00		
	12" N-12 Flared End Section	4	EA	\$ 500.00	\$ 2,000.00		
	Type 26M CB w/Beehive Grate	1	EA	\$ 1,250.00	\$ 1,250.00		
	Quarry Spall Pads-3'x3'	6	EA	\$ 250.00	\$ 1,500.00		
	Rip Rap Pads-4'x6'	1	EA	\$ 500.00	\$ 500.00		
				Subtotal		\$ 45,228.50	
	TOTAL :					\$	732,124.38

Foot Notes	Description	Quant.	Units	Unit Price	Amount	Sub Tot Amt	Sub Tot Cat
	Non-RIIA ROADS :						
	Preliminary Temporary Erosion Control/Miscellaneous Work						
	Culvert Protection/Cleaning	3	EA	\$ 250.00	\$ 750.00		
	Mailbox Removal/Replacement	10	EA	\$ 300.00	\$ 3,000.00		
				Subtotal		\$ 3,750.00	
	Traffic Control						
	Traffic Control	1	LS	\$ 2,500.00	\$ 2,500.00		
				Subtotal		\$ 2,500.00	
	Pulverizing						
	Pulverizing	3,153	SY	\$ 0.88	\$ 2,758.88		
	Mobilization	1	LS	\$ 250.00	\$ 250.00		
				Subtotal		\$ 3,008.88	
	Subgrade Prep/CSTC/Remove Excess						
	Grading	3,153	SY	\$ 1.00	\$ 3,153.00		
	1" CSTC	175	Tons	\$ 35.00	\$ 6,125.00		
	Removal Excess	228	CY	\$ 15.00	\$ 3,412.50		
	Ditching	200	LF	\$ 3.50	\$ 700.00		
				Subtotal		\$ 13,390.50	
	Final Paving/Speed Humps/Driveways						
	3" HMA	563	Tons	\$ 78.00	\$ 43,914.00		
	Wedge Curb-for drainage	200	LF	\$ 5.00	\$ 1,000.00		
	Asphalt Driveway Approach	450	SF	\$ 4.00	\$ 1,800.00		
	Concrete Driveway Approach	500	SF	\$ 12.00	\$ 6,000.00		
	Speed Humps-incl striping	-	EA	\$ 3,750.00	\$ -		
				Subtotal		\$ 52,714.00	
	Shouldering/Water Valves/Misc						
	Shouldering	4,788	LF	\$ 0.75	\$ 3,591.00		
	Water Valve Adjust-Remove/Replace	6	EA	\$ 350.00	\$ 2,100.00		
	Survey Monuments	-	EA	\$ 200.00	\$ -		
				Subtotal		\$ 5,691.00	
	TOTAL :					\$	81,054.38

EXHIBIT G

Roadway Measurements

HOA Roads	Length	Width	SF	culdesa	15' radii	20' radii	25' radii	30' radii	35' radii	40' radii	60' radii
Raft Isl Dr-Bridge Imp to Camp Rd	935	16.0	14960								
	200	18.0	3600								
RI Dr-Camp Rd to Maple Ln	1377	16.0	22032								
RI Dr-Maple Lane to Alder Dr	715	16.0	11440								
RI Dr-Alder Dr to Park Ave(so end)	2305	16.0	36880								
	200	19.0	3800								
RI Dr-Park Ave to Bridge Imp	1220	16.0	19520								
	120	18.0	2160								
Madrona Dr-Bridge Imp to Park to Fir Dr	1534	18.0	27612					2			
Park Ave-Madrona to RI Dr	1396	18.0	25128				2				
	170	20.0	3400								1
Rhodod Dr-Park Ave to Madr Dr	750	17.0	12750			2					
	150	22.0	3300							2	
Fir Dr-RI Dr(no side) to well site	735	16.0	11760				2				
Fir Dr-Well site to Park Dr (east side)	425	12.0	5100								
	545	16.0	8720								
Fir Dr-RI Dr to Park Ave	290	20.0	5800						1	1	
Hemlock Dr-Fir Dr to RI Dr	715	16.0	11440			4					
Camp Rd-RI Dr to end	485	12.0	5820				1			1	
Holly Court-Fir Dr to culd	272	12.0	3264		2						
	14539		238486		2	6	5	2	1	4	1

Length less road intersections 14319

Road 238486.0 sf
 Culdesac sf
 Radii 4085.0 sf
Total SF 242571.0 square feet

Total SY 26952.3 square yards

AC
Tonnage 4" 6126 tons tons
Tonnage 3" 4813 tons tons
Tonnage 2" 3098 tons tons

CSTC
Tonnage 1" 1497 tons tons

Shoulders-both sides 28638 lf

Non-HOA Roads	Length	Width	SF	culdesa	15' radii	20' radii	25' radii	30' radii	35' radii	40' radii	60' radii
AlderDr-RI Rd to end	205	12.0	2460			2					
	300	10.0	3000								
Maple Ln-RI Rd to T intersection	395	16.0	6320				2				
Maple Ln-T intersection to end	330	12.0	3960						1		
new ac section	460	10.0	4600								
Cedar Ln-T intersection to end	720	10.0	7200				1				
	2410		27540			2	3		1		

Road 27540.0 sf
 Culdesac sf
 Radii 838.5 sf
Total SF 28378.5 square feet

Total SY 3153.2 square yards

AC
Tonnage 4" 717 tons tons
Tonnage 3" 563 tons tons
Tonnage 2" 362 tons tons

CSTC
Tonnage 1" 175 tons tons

Shoulders-both sides 4788 lf