FEATURE BOULDER CLUSTER NUMBER	LOCATION	GENERAL PURPOSES)	COMMENTS	KEY DETAIL - DRAWING NUMBER	FIXED BOULDERS (GROUTED WITH ADJACENT 2 FT. MIN. GROUTED BOULDERS OR AS SHOWN)							FIXED BOULDER PLACEMENT ELEVATIONS - COMMENTS				MOVABLE BOULDERS WITH RIPRAP AND RIPRAP SPECIAL								MOVABLE BOULDER PLACEMENT ELEVATIONS - COMMENTS				RIPRAP FOR MOVABLE BOULDER VOID FILLING, SUPPORT, AND ADJUSTMENT	
					2.5 FT. X 3.5 FT.	2.5 FT. X 4.0 FT.	3. FT. BY 4.5 FT.	3.5 FT BY 5.5 FT.	4.5 FT. BY 6 FT.	SPECIAL	TOTAL	LOW	INT. 1	INT. 2	HIGH	2.5 FT. X 3.5 FT.	2.5 FT. X 4.0 FT.	3. FT. BY 4.5 FT.	3.5 FT BY 5.5 FT.	4.5 FT. BY 6 FT.	SPECIAL		TOTAL	LOW	INT. 1	INT. 2	HIGH	CUBIC YARDS	COMMENT
FBC- 50	S. BANK OF ENTRY SECTION TO LOWER MODERATE WATERWAY	ENHANCE VISIBILITY OF ENTRY TO LOWER MODEST WATERWAY	SELECT BOULDER WITH EMPHASIS ON AESTHETICS AND ROUNDED EDGES	E2		1	2	1			4	3 EA. 567.5			577								0						
FBC- 51	N. BANK OF ENTRY SECTION TO LOWER MODERATE WATERWAY	ENHANCE VISIBILITY OF ENTRY TO LOWER MODEST WATERWAY	SELECT BOULDER WITH EMPHASIS ON AESTHETICS AND ROUNDED EDGES	E2			1	2			3	577	577		578								0						
FBC- 52	S. BANK, ENTRY SECTION TO UPPER MODERATE WATERWAY	ADJUSTMENT OF WATER LEVEL AND FLOW PATTERN, FRAME ENTRY VIEW	LOWER TWO BOULDERS EXTENDS TO TOE OF SLOPE OF ENTRY, LARGER 573.0, SML. 573.5	E2							0					16	4	2					22	2 EA. 573.0	13 EA. 573.5	3 EA. 574.5, 1 EA. 575.0	3 EA. 575.5	6.5	FILL ALL VOIDS, ADD STAB. SOIL ABOVE LOW WATER, LEAVE EXCESS RIPRAP ON BENCH BOTTOM.
FBC- 53	N. BANK, ENTRY SECTION TO UPPER MODERATE WATERWAY	ADJUSTMENT OF WATER LEVEL AND FLOW PATTERN, FRAME ENTRY VIEW; SCREEN VISIBILITY OF UPPER CHALL. ENTRY	LOWER BOULDERS EXTENDS TO TOE OF SLOPE OF ENTRY, LARGER 573.5	E2							0					14	2	4	1	3			24	2 EA. 572.5	13 EA. 573.5, 3 EA. 574.5	1 EA. 574.8, 2 EA. 574.5	1 EA. 576.0, 2 EA. 576.5	12	FILL ALL VOIDS, ADD STAB. SOIL ABOVE LOW WATER, LEAVE EXCESS RIPRAP ON BENCH BOTTOM.
FBC- 54	ADJUSTABLE BOTTOM SILL JUST DOWNSTREAM OF SILL 1 AND WHITEWATER HOLE	ADJUSTMENT OF WHITEWATER WAVE AT HOLE.	A FLAT, RECTANGULAR SHAPE BOULDER IS NECESSARY WHICH CAN BE ADJUSTED TO A VARIETY OF LEVELS AND LOCATION UPSTREAM ON UNDERWATER RAMP.	E2							0					14					4	2.5 BY 5.5 BY 2 FT. T.	18				18 EA. 568.5	5	FINES TO LOCK IN AND LEVEL BOULDERS TO SLOPING RAMP. FILL ALL VOIDS. LEAVE ANY EXCESS ADJACENT DOWNSTREAM.
FBC- 55	N. SIDE SPUR DOWNSTREAM OF SILL 1 AND WHITEWATER HOLE	EDDY AND WAVE EFFECTS, SOURCE OF MATERIALS, APPEARANCE	ADJUST BOULDERS TO BE EASY TO WALK AND SIT ON (TYPICAL)	E2							0					10		5					15	12 EA. 574.5			3 EA. 574.8	5	FILL ALL VOIDS, ADD STAB. SOIL ABOVE LOW WATER, LEAVE EXCESS RIPRAP ON BOTTOM OUT OF FLOW.
FBC- 56	N. SIDE OF CONSTRICTION ABUTMENT AT SILL 1	SOURCE OF MATERAILS FOR CONSTRICTION, EDDY AND WAVE EFFECTS, APPEARANCE.	ADJUST BOULDERS TO BE EASY TO WALK AND SIT ON (TYPICAL)	E2							0					7		2					9	2 EA. 575.5	5 EA. 576.0		2 EA. 576.5	3	FILL ALL VOIDS, ADD STAB. SOIL ABOVE LOW WATER, LEAVE EXCESS RIPRAP ON BOTTOM OUT OF FLOW.
FBC- 57	NORTH SIDE OF CONSTRICTION AT SILL 1.	HYDRAULIC CONTROL OF THE CHALLENGE WATERWAY AND WHITEWATER "HOLE"	SLOPE IS A 3H:1V. CREATE WITH THE FEWEST NUMBER OF BOULDERS. A LARGE BOULDER MATCHED TO DESIGN WOULD BE PREFERABLE. TOP ELEVATION IS 573, NO HIGHER THAN 573.2.	E2		3				4 3.5 FT BY 1.5 FT. TOP WITH WIDER BASE	7	4 EA. 572.5			3 EA. 573.2								0						
FBC- 58	S. SIDE OF CONSTRICTION AT SILL 1.	BASIC HYDRAULIC CONTROL OF THE CHALLENGE WATERWAY AND WHITEWATER "HOLE"	SLOPE IS A 2H:1V. CREATE WITH THE FEWEST NUMBER OF BOULDERS. A LARGE BOULDER MATCHED TO DESIGN WOULD BE PREFERABLE. TOP ELEVATION IS 573, NO HIGHER THAN 573.2	E2		3				4 3.5 FT BY 1.5 FT. TOP WITH WIDER BASE	7	4 EA. 572.5			3 EA. 573.2	3		1					4	3 EA. 575.3			576	1.5	FILL ALL VOIDS, ADD STAB. SOIL ABOVE LOW WATER, LEAVE EXCESS RIPRAP ON BENCH BOTTOM JUST DOWNSTREAM. PLACE OUT OF FLOW AREA.
FBC- 59	JUST US OF END OF DIVIDER BETWEEN UPPER WATERWAYS	APPEARANCE, MATERIALS, FLOW PATTERNS AND DISTRIBUTION ON CHALL. WATERWAY.	FILL TRANSITION UPSTREAM OF BOULDERS LEVEL.	E2							0					4		2					6	2 EA. 576.3	2 EA. 576.5		2 EA. 576.8	2	FILL ALL VOIDS, ADD STAB. SOIL ABOVE LOW WATER, LEAVE EXCESS RIPRAP ON BENCH BOTTOM JUST DOWNSTREAM. PLACE OUT OF FLOW AREA.
FBC- 60	SOUTH ABUTMENT CHUTE 1 SIDE WEIR.	ABUTMENT TO CONTROL FLOW, WHITEWATER FEATURE.	GROUTED BLDR. ABUTMENT MUST BE WATERTIGHT, TIGHT JOINTS, RECESS GROUT.	E2	5	2		2	1		10	1 EA. 575.5	7 EA. 576.5		2 EA. 576.8								0						
FBC- 61	NORTH ABUTMENT CHUTE 1 SIDE WEIR	ABUTMENT TO CONTROL FLOW, WHITEWATER FEATURE.	GROUTED BLDR. ABUTMENT MUST BE WATERTIGHT, TIGHT JOINTS, RECESS GROUT.	E2	4		2	1	1		8	6 EA. 575.5			2 EA. 576.5								0						
FBC- 62	N. SIDE OF CHUTE 1	WHITEWATER FEATURE WITH WAVE UPSTREAM, CONSTRICTION, AND EDDY BELOW	SMALL BOULDERS TO BE PLACED AS TERRACE FOLLOWED BY LARGE ROUNDED BOULDER.	E2	2			1			3	2 EA. 573.5			1 EA. 573.8								0						
FBC- 63	S. SIDE OF CHUTE 1	WHITEWATER FEATURE WITH WAVE UPSTREAM, CONSTRICTION, AND EDDY BELOW	SMALL BOULDERS TO BE PLACED AS TERRACE FOLLOWED BY LARGE ROUNDED BOULDER.	E2	3			1			4	3 EA. 573.5			1 EA. 573.8								0						
FBC- 64	S. SIDE OF POOL 1	MATERIAL SOURCE FOR ADJUSTMENTS.	CHINK ANY VOIDS AND FILL HORIZONTAL FROM TOPS TO ADJACENT SLOPE.	E2							0					6		1					7	6 EA. 567.5			569	3.5	LEAVE EXCESS IN POOL BOTTOM ON GROUTED BOULDERS.
FBC- 65	DOWNSTREAM SIDE OF SOUTH STOPLOG ABUTMENT.	USE LARGE BOULDERS AS PART OF STACKED BOULDER WALL, APPEARANCE.	TOP OF SURFACE SHOULD BE FLAT AND EVEN WITH ADJACENT TERRACE).	E2			2	1			3				3 EA. 575. 95								0						
FBC- 66	DOWNSTREAM SIDE OF NORTH STOPLOG ABUTMENT.	USE LARGE BOULDERS AS PART OF STACKED BOULDER WALL, APPEARANCE.	TOP OF SURFACE SHOULD BE FLAT AND EVEN WITH ADJACENT TERRACE).	E2			2				2				2 EA. 574. 95								0						
FBC- 67	DOWNSTREAM OF ENTRY OVERFLOW GROUTED BOULDER DROP-OFF, 6 LOCATIONS.	THREE LARGE BOULDERS AT EACH LOCATION TO DEFLECT CURRENT HORIZONTALLY AND BREAK UP ANY KEEPER WAVE.	THIS WILL PROVIDE VARIETY IN THE SURFING WAVE AND FLUSH OUT BOATERS THAT CAPSIZE.	E2			6	12			18	6 EA. 572.8	6 EA. 573.0		6 EA. 573.5								0						
FBC- 68	UPSTREAM SIDE OF SOUTH STOPLOG ABUTMENT.	USE LARGE BOULDERS AS PART OF STACKED BOULDER WALL, APPEARANCE.	TOP OF SURFACE SHOULD BE FLAT AND EVEN WITH ADJACENT TERRACE).	E2			2	1			3				3 EA. 575. 95								0						
FBC- 69	UPSTREAM SIDE OF NORTH STOPLOG ABUTMENT.	PART OF STACKED BOULDER WALL, APPEARANCE. GUIDE BOATERS TO ENTRY.	TOP OF SURFACE SHOULD BE FLAT AND EVEN WITH ADJACENT TERRACE).	E2			2	1	1		4	2 EA. 574. 95		576	578								0						
FBC- 71	WEST END OF PARK RETAINING WALL AND PATH RAMP TO LOWER LANDING	RETAIN SOIL TO COVER END OF LOWER WALL, FLATTER SLOPE SOUTH OF PATH, APPEARANCE, SOURCE OF MATERIALS.	THE RIPRAP TO BE USED WITH FEATURE BOULDERS IS RIPRAP SPECIAL.	E1							0					25	6						31	9 EA. 575.0	5 EA. 575.5	12 EA. 576.0	5 EA. 576.5	9	MAINTAIN 1 FT MIN. OF SOIL AND RIPRAP OVER WALL. CHINK VOIDS BETWEEN BOULDERS BUT DO NOT FILL IN FRONT OF BOULDERS ABOVE DESIGN GRADE.
FBC- 72	BEND NEAR EAST END OF PARK RETAINING WALL	RETAIN SOIL TO COVER END OF LOWER WALL, FLATTER SLOPE SOUTH OF PATH, APPEARANCE, SOURCE OF MATERIALS.	THE RIPRAP TO BE USED WITH FEATURE BOULDERS IS RIPRAP SPECIAL.	E1							0					29							29	8 EA. 576.2	1 EA. 575.5		20 EA. 576.7	8	MAINTAIN 1 FT MIN. OF SOIL AND RIPRAP OVER WALL. CHINK VOIDS BETWEEN BOULDERS BUT DO NOT FILL IN FRONT OF BOULDERS ABOVE DESIGN GRADE.
TOTALS					103	43	41	48	12	8	255					403	56	61	30	8	8		566					293	

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