

GREEN STREET CONCEPTS ALONG GROVE AVENUE
ENGINEER'S PRELIMINARY ESTIMATE
RICK ENGINEERING COMPANY

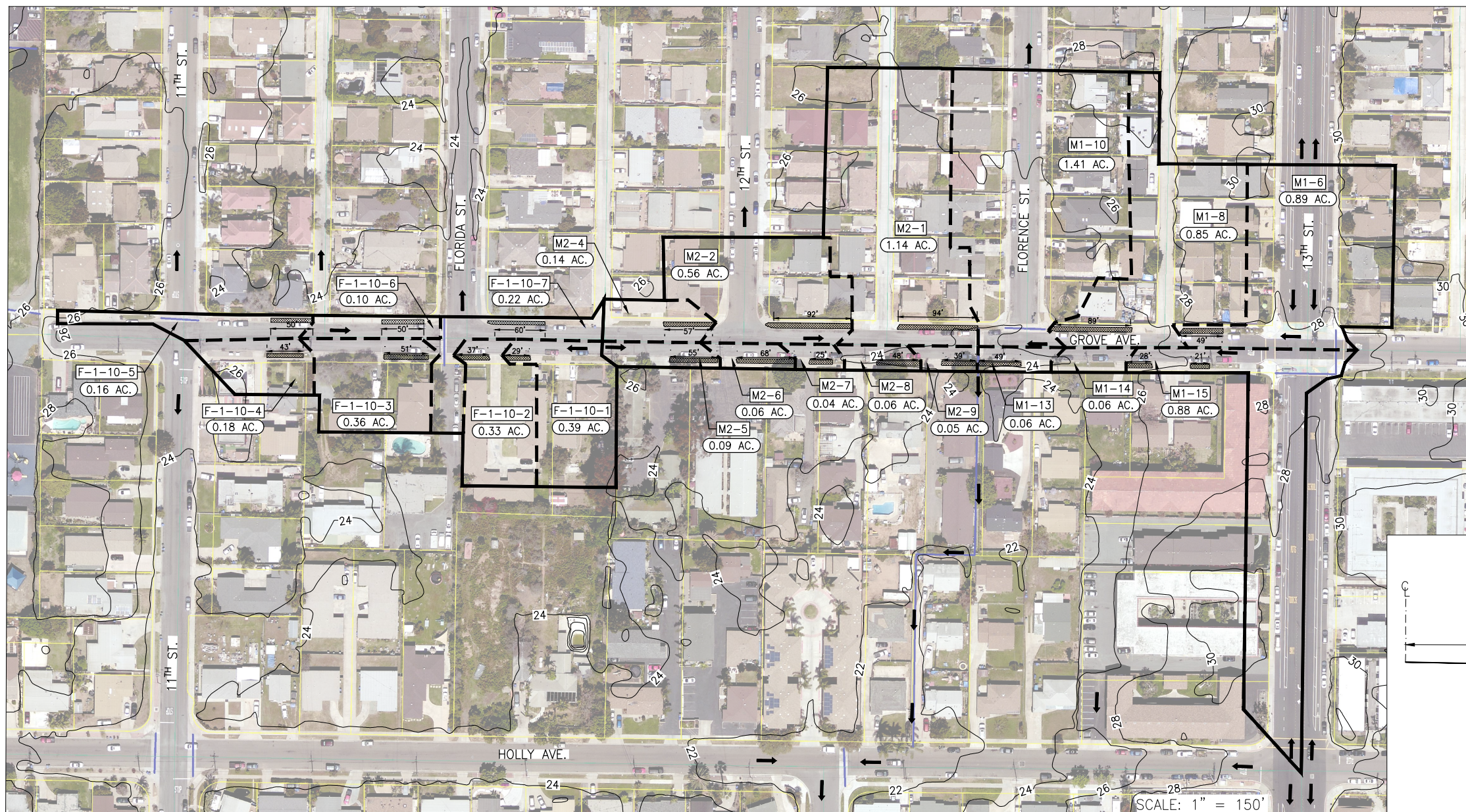
Item	Description	Unit	Quantity	Unit Price	Extension
BASE BID					
1	Mobilization	LS	1	\$100,000.00	\$100,000.00
2	AC Pavement Removal	SF	6,168	\$4.00	\$24,672.00
3	6" Curb and Gutter	LF	1,059	\$20.00	\$21,186.00
4	Earthwork and Export	CY	18,376	\$30.00	\$551,265.00
5	Biofiltration Aggregate Layer(3" No. 33, 3" No. 8, 6" No. 57)	CY	190	\$40.00	\$7,614.81
6	Mulch	SF	5140	\$0.50	\$2,570.00
7	Biofiltration Soil Mix	CY	286	\$50.00	\$14,277.78

SUB TOTAL: \$730,000.00

CONTINGENCY 20%

TOTAL ENGINEER'S ESTIMATE: \$900,000.00

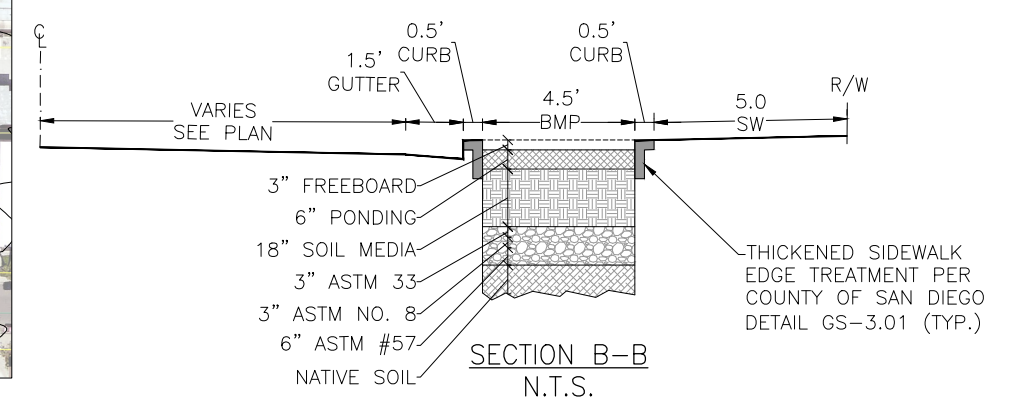
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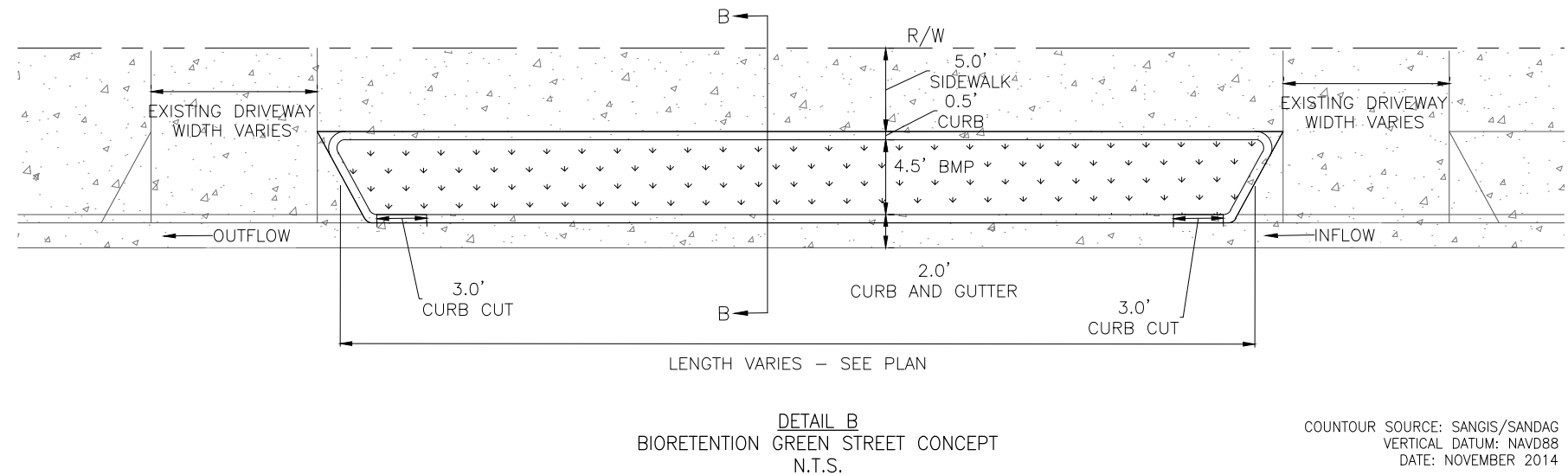
LEGEND

- MAJOR BASIN BOUNDARY
- MINOR BASIN BOUNDARY
- ➔ SURFACE FLOW PATH
- BMP - REF. DETAIL B
- X.X AC SUB BASIN AREA
- XXX BASIN ID

- NOTES:**
- DIMENSIONS OF EXISTING IMPROVEMENTS ARE APPROXIMATE AND HAVE BEEN OBTAINED FROM AERIAL.
 - INITIAL STORMWATER CONCEPTS REFLECT INFILTRATION BMPs WITHOUT AN UNDERDRAIN. INFILTRATION TESTING WILL BE REQUIRED DURING THE DESIGN PHASE TO CONFIRM IN-SITU INFILTRATION RATES.
 - PERVIOUS PAVEMENT/PAVERS AT ALONG PARKING LANE MAY BE SUITABLE FOR ADDITIONAL WATER QUALITY BENEFIT.



Design Capture Volume Calculations				BMP Parameters								Provided Bioretention Volume	
Basin ID	Area	C	85th Percentile	DCV	BMP Footprint	Surface Ponding Depth	Media Thickness	Aggregate Depth	Media Available Pore Space	Aggregate Pore Space	Depth of Retention Storage	cu ft	
	sf		ac										24-hr Storm Depth
M1-6	38,780	0.89	0.78	0.55	1,386	290	6	18	12	0.2	0.4	14	348
M1-8	37,369	0.86	0.78	0.55	1,336	515	6	18	12	0.2	0.4	14	618
M1-15	38,393	0.88	0.78	0.55	1,373	279	6	18	12	0.2	0.4	14	335
M2-1	49,471	1.14	0.78	0.55	1,769	523	6	18	12	0.2	0.4	14	628
M2-2	24,351	0.56	0.78	0.55	871	630	6	18	12	0.2	0.4	14	756
M2-5	3,859	0.09	0.78	0.55	138	290	6	18	12	0.2	0.4	14	348
M2-6	2,742	0.06	0.78	0.55	98	377	6	18	12	0.2	0.4	14	453
M2-7	1,813	0.04	0.78	0.55	65	140	6	18	12	0.2	0.4	14	168
M2-8	2,698	0.06	0.78	0.55	96	265	6	18	12	0.2	0.4	14	318
M2-9	2,155	0.05	0.78	0.55	77	199	6	18	12	0.2	0.4	14	239
F-1-10-1	17,058	0.39	0.78	0.55	610	152	6	18	12	0.2	0.4	14	183
F-1-10-2	14,250	0.33	0.78	0.55	509	194	6	18	12	0.2	0.4	14	233
F-1-10-3	15,478	0.36	0.78	0.55	553	290	6	18	12	0.2	0.4	14	348
F-1-10-4	8,048	0.18	0.78	0.55	288	206	6	18	12	0.2	0.4	14	248
F-1-10-5	6,801	0.16	0.78	0.55	243	251	6	18	12	0.2	0.4	14	301
F-1-10-6	4,202	0.10	0.78	0.55	150	251	6	18	12	0.2	0.4	14	301
F-1-10-7	9,467	0.22	0.78	0.55	338	289	6	18	12	0.2	0.4	14	347



COUNTOUR SOURCE: SANGIS/SANDAG
VERTICAL DATUM: NAVD88
DATE: NOVEMBER 2014

JN-19003

RICK ENGINEERING COMPANY

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GREEN STREET CONCEPTS ALONG GROVE AVE. IMPERIAL BEACH

DATE:	11/22/19
DRAWN BY:	LC
CHECKED BY:	MFR
SCALE:	1" = 150'
SHEET	1 OF 1

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