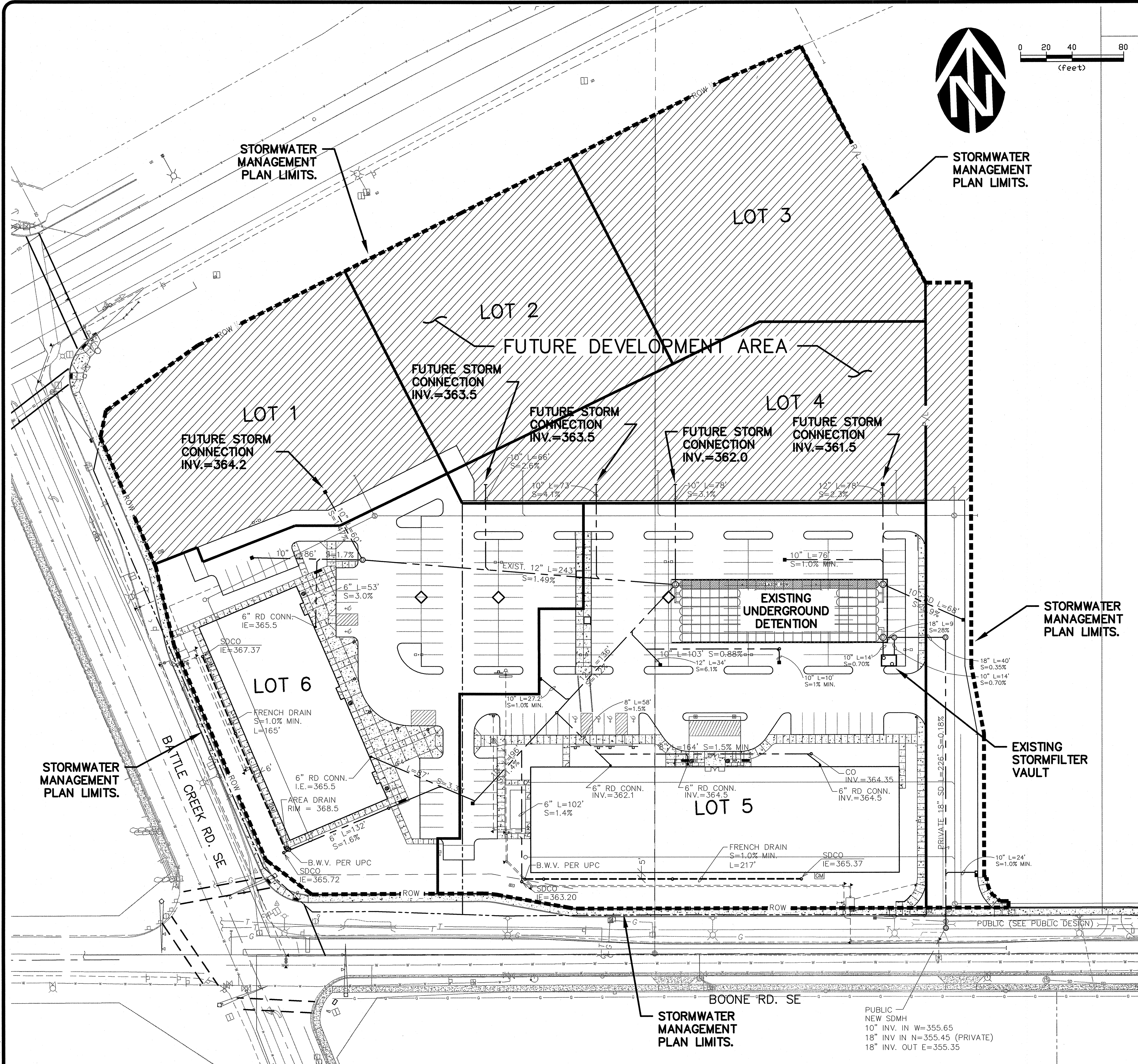


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STORMWATER NARRATIVE

Stormwater Management Plan Narrative

Summary:

The existing stormwater detention and water quality treatment system is sized for the Stormwater Management Plan limits at buildout including all future impervious areas, per the specifications below.

Detention Requirements:

Provide detention for the difference between the 5 yr predeveloped storm event and the 50 yr developed storm event based on the rational method at buildout.

- Existing Detention Required (see spreadsheet) = 21, 382 CF
- Existing Detention Provided = 23,000 CF

Stormwater Quality Treatment Requirements:

- Existing Stormwater Treatment Required = None Required
- Existing Stormwater Treatment Provided = ConTech StormFilter Vault sized to treat 0.86 cfs (equal to the detention 5 yr predeveloped release rate)

Future Development Detention & Treatment Requirements

Stormwater detention and water quality is provided for the entire subdivision at buildout. However, Green Stormwater Infrastructure (GSI) filtration BMP's will be provided for an impervious area equal to 50% of building footprint for lots 1 -4 (as shown on this plan) if a building is constructed. GSI will be located somewhere on each lot and will be constructed at the time of development of each lot. The GSI will be designed to filter a 1.38 inch storm over 24 hours (Type IA) using the Santa Barbara Unit Hydrograph Method and assume a 2 inch/hour media filtration rate. GSI will be planted with approved plantings. Storms of additional size will overflow and enter the existing stormwater system. A minimum of 18 inches of filtration media (as approved by the City) and underdrain system will be provided in each GSI to convey filtered water to the existing system. No additional stormwater detention or stormwater quality treatment requirements are required.

STORMWATER DETENTION CALC'S FOR EXISTING UNDERGROUND DETENTION

CITY OF SALEM REQUIRED DETENTION VOLUME						
Client: PAC-TRUST			Date: 23-Aug-12			
Project Name: Kusbler Development			Job Number: 2672.00			
Developed Conditions			Undeveloped (Historic) Conditions			
Storm Frequency, years	50	Storm Frequency, years	5			
A, Impervious Surface Area, Acres	6.50	A, Total Area, Acres	7.57			
C, Runoff Coefficient, Impervious Surface	0.90	C, Runoff Coefficient	0.20			
A, Pervious Surface Area, Acres	1.07	n, Manning's Roughness Coefficient	0.30			
C, Runoff Coefficient, Pervious Surface	0.17	I, Rainfall Intensity, inches/hour	0.57			
Cav, Weighted Average Runoff Coefficient	0.80	S, Slope, percent	3.23			
A, Total Area, Acres	7.57	L, Length, feet	650			
Detention Overflow Elevation, feet	364.00	T, Time of Concentration, minutes	57			
Outlet Pipe Invert Elevation, feet	358.00	Q, Allowable Outflow, cfs	0.86			
H, Maximum Head, feet	6.00					
D, Orifice Diameter, inches	3.7					
Time (minutes)	C * A (Acres)	Rainfall Intensity (in/hr)	Inflow (cfs)	Accumulated Inflow Volume (cubic feet)	Outflow (cfs)	Accumulated Outflow Volume (cubic feet)
5	6.03	2.75	16.59	4976	0.86	259
6	6.03	2.60	15.68	5646	0.86	311
7	6.03	2.45	14.78	6207	0.86	362
8	6.03	2.35	14.17	6804	0.86	414
9	6.03	2.24	13.51	7296	0.86	466
10	6.03	2.15	12.97	7781	0.86	518
15	6.03	1.80	10.86	9772	0.86	777
20	6.03	1.57	9.47	11364	0.86	1036
25	6.03	1.39	8.38	12577	0.86	1294
30	6.03	1.25	7.54	13572	0.86	1553
35	6.03	1.11	6.70	14060	0.86	1812
40	6.03	1.02	6.15	14766	0.86	2071
45	6.03	0.94	5.67	15309	0.86	2330
50	6.03	0.88	5.31	15924	0.86	2589
55	6.03	0.83	5.01	16521	0.86	2848
60	6.03	0.78	4.70	16938	0.86	3107
70	6.03	0.71	4.28	17987	0.86	3625
80	6.03	0.65	3.92	18820	0.86	4142
90	6.03	0.60	3.62	19543	0.86	4660
100	6.03	0.56	3.38	20267	0.86	5178
110	6.03	0.54	3.26	21498	0.86	5696
120	6.03	0.51	3.08	22149	0.86	6213
130	6.03	0.49	2.96	23054	0.86	6731
140	6.03	0.47	2.83	23814	0.86	7249
150	6.03	0.46	2.76	24863	0.86	7767
200	6.03	0.40	2.41	28953	0.86	10356
250	6.03	0.36	2.17	32572	0.86	12945
300	6.03	0.34	2.05	36915	0.86	15534
350	6.03	0.31	1.87	39268	0.86	18123

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
IF NOT ONE INCH ON
SCALES ACCORDINGLY

1"
0

1
NO. 1
DATE: DEC. 2013

BY
DESCRIPTION
REVISIONS

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS



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E-mail: westech@westech-eng.com

M & T PARTNERS

PROPOSED PRELIMINARY SUBDIVISION PLAN

STORMWATER MANAGEMENT PLAN

DRAWING
2

JOB NUMBER
2672.7000.0