CITY OF ALBUQUERQUE

November 25, 2014

Ms. Asa Weber, PE
Isaacson & Arfman, PA
1287 Monroe Street NE
Albuquerque, NM 87108

Re: Coronado Villa Retirement Community, Tract 4B
Grading and Drainage Plan Engineer's date 11-21-14
Supplemental Information to Grading and Drainage Plan
Engineer's date 11-11-14 (D18D054C)

Dear Ms. Weber,

Based upon the information provided in your submittal received 11-24-14, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3994.

Sincerely,

Amy L. D. Niese, P.E.
Senior Engineer, Hydrology
Planning Department

C: e-mail
file

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

NOVEMBER 11, 2014

SUPPLEMENTAL INFORMATION

for

TRACT 4-B, SANTA MONICA PLACE
CORONADO VILLA RETIREMENT COMMUNITY
GRADING AND DRAINAGE PLAN

Åsa Nilsson-Weber 11-11-14

Åsa Nilsson-Weber, NMPE 17631 Date

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates

Thomas O. Isaacson, PE(RET.) & LS(RET.)
Fred C. Arfman, PE
Åsa Nilsson-Weber, PE

TABLE OF CONTENTS

.

PROJECT INFORMATION:

PROPERTY: The site is a previously developed mobile home property located within C.O.A. Vicinity Map D-18. The site is bound to the south by Santa Monica Ave. NE, to the west by undeveloped property (proposed Tract 4-A), to the east by Louisiana Blvd. and to the north by undeveloped property (proposed Tract 3-B).

PROPOSED IMPROVEMENTS: the proposed improvements include a 65,000± SF retirement community, three garage parking buildings, associated asphalt paved access, parking and landscaping.

EXISTING LEGAL: The eastern portion of Tract 4, Santa Monica Place, Albuquerque, NM

PROPOSED LEGAL: Tract 4-B, Santa Monica Place, Albuquerque, NM

BENCHMARK: Vertical datum is based upon the Albuquerque Control Survey Benchmark "18-E18", ELEVATION = 5269.166 (NGVD88)

OFF-SITE: No off-site drainage impacts this property.

FLOOD HAZARD: The subject property lies within Zone "X" (areas determined to be outside 0.2% annual chance flood plain) in accordance with the National Flood Insurance Program Rate Map No. 35001c0137F, effective date 11-19-03.

SURVEYOR: Russ P. Hugg, Surv-Tek, Inc., (505)897-3366, Albuquerque, New Mexico.

DRAINAGE CONCEPT:

The Drainage Master Plan (DMP) by Isaacson & Arfman, P.A., dated October 9, 2014, outlined drainage requirements for each tract within Santa Monica Place (Tracts 3A, 3B, 4A & 4B). This property is tract 4B with land treatments estimated at 15%B, 35%C AND 50% D.

Per the DMP, Tract 4B shall be allowed to discharge 30.9 cfs into the storm drain system connecting to the Derickson Ave. storm drain. The onsite storm drain shall connect to 18" RCP storm drain stubs that shall be installed with the public work order for the construction of Brentwood Blvd. and San Vicente Ave.

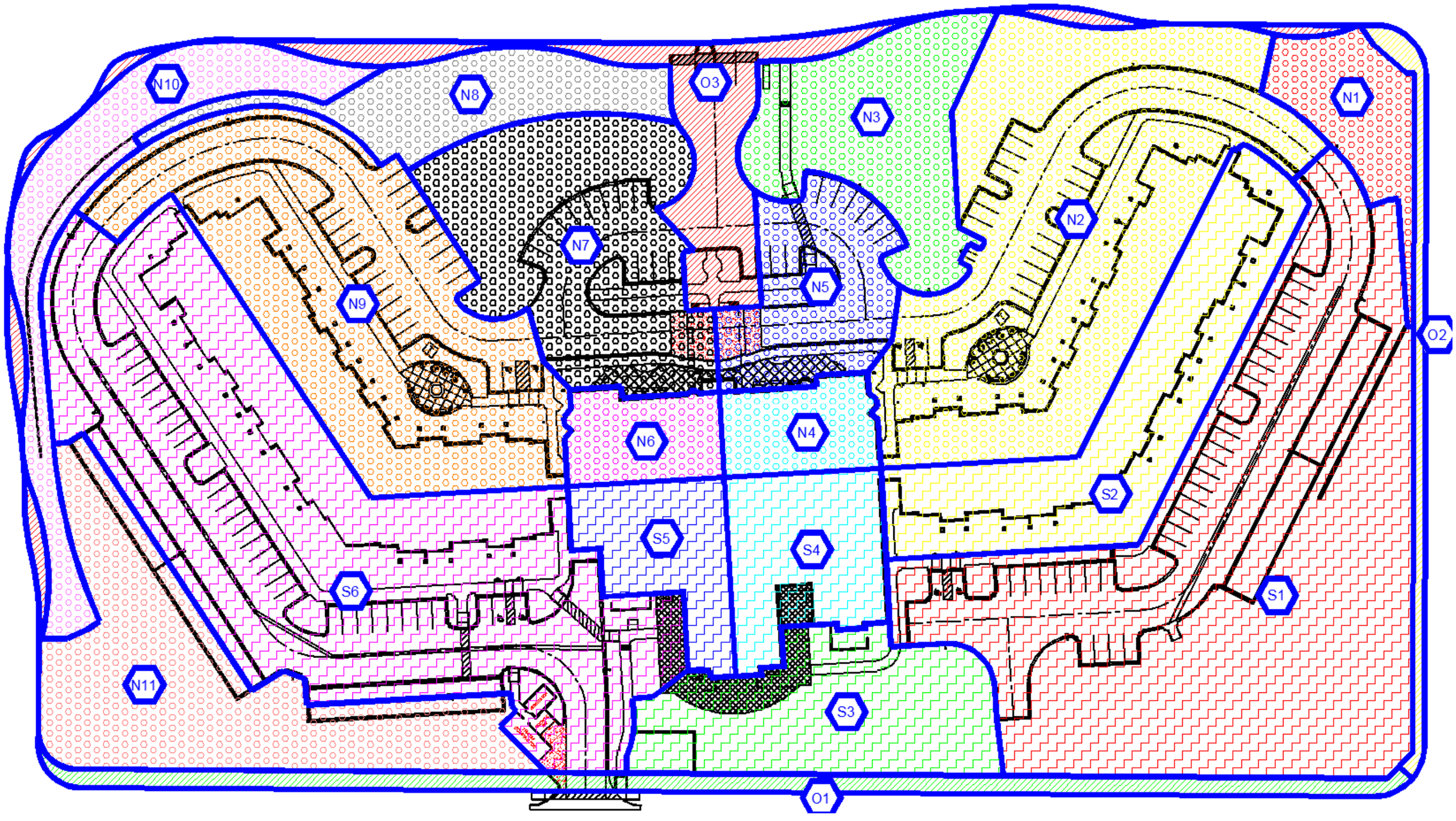
The proposed on-site private storm drain system is analyzed and sized as part as part of this submittal.

Stormwater control measures are required to provide management of 'First Flush' (defined as the 90th percentile storm event or 0.34” [0.44" less 0.1" for initial abstraction] of stormwater from impervious construction [Land Treatment ‘D’] which discharges directly to a public storm drainage system).

Temporary ponds and earth swales with erosion protection as needed will be constructed off-site to pass the concentrated flow to the public storm drain system (to be constructed as part of CPN 689984).

Landscaped areas, other than those adjacent to buildings, are noted to be depressed for water harvesting. The stormwater calculations do not reflect this on-site water harvesting or ‘First Flush’ retention basins which may reduce the discharge rates.

DRAINAGE BASINS



DRAINAGE BASIN SUMMARY: (See the AHYMO printouts at the back of this packet)

Per the DMP, Tract 4B shall be allowed to discharge 30.9 cfs into the storm drain system connecting to the Derickson Ave. storm drain.

Based on the AHYMO calculations using the drainage basin areas and land treatment percentages shown below, the Q100-6HR will be 30.3 cfs. Therefore, the site is permitted free discharge. No retention / detention will be required other than the 'First Flush' basins.

BASIN	AREA (SF)	A (SF)	B (SF)	C (SF)	D (SF)	Q100 (AHYMO)
S1	60,993.70	0	8	50	42	4.96
S2	19,653.15	0	48	0	52	1.54
S3	15,578.25	0	25	50	25	1.16
S4	9,330.69	0	18	30	52	0.79
S5	7,169.59	0	0	0	100	0.72
S6	56,416.90	0	26	0	74	4.95
N1	6,502.48	0	20	80	0	0.44
N2	40,827.95	0	20	17	63	3.49
N3	14,046.50	0	80	16	4	0.84
N4	4,935.33	0	0	0	100	0.5
N5	10,174.78	0	12	0	88	0.97
N6	4,947.41	0	0	0	100	0.5
N7	21,048.76	0	40	13	47	1.65
N8	9,536.95	0	40	60	0	0.62
N9	33,968.47	0	28	0	72	2.95
N10	12,146.67	0	70	30	0	0.73
N11	22,445.84	0	30	70	0	1.48
O1	8,966.62	0	0	95	5	0.66
O2	3,550.91	0	0	100	0	0.26
O3	13,061.15	0	22	0	78	1.18
TOTAL DEVELOPED Q100						30.39

FIRST FLUSH REQUIREMENT:

The First Flush ponding volume required is 0.34" * Type 'D' area. The area of Land Treatment ‘D’ for each basin has been calculated (see chart below).

Required First Flush retention = (0.34 in /12 in per ft) * (Basin Area * % impervious) = CF volume

There are 'First Flush' retention basin areas throughout the site. Storm water from the impervious areas shall be directed to these basins via curb openings. Inlets that are placed in the basins show the top of grate located at the 'First Flush' water surface elevation.

BASIN	AREA (SF)	% IMPERV.	F.F. VOL (CF)
S1	60,993.70	42.00%	726
S2	19,653.15	52.00%	290
S3	15,578.25	25.00%	110
S4	9,330.69	52.00%	137
S5	7,169.59	100.00%	203
S6	56,416.90	74.00%	1183
N1	6,502.48	0.00%	0
N2	40,827.95	63.00%	729
N3	14,046.50	4.00%	16
N4	4,935.33	100.00%	140
N5	10,174.78	88.00%	254
N6	4,947.41	100.00%	140
N7	21,048.76	47.00%	280
N8	9,536.95	0.00%	0
N9	33,968.47	72.00%	693
N10	12,146.67	0.00%	0
N11	22,445.84	0.00%	0
O1	8,966.62	5.00%	13
O2	3,550.91	0.00%	0
O3	13,061.15	78.00%	289
TOTAL FIRST FLUSH RETENTION			5202

FIRST FLUSH PONDS:

The drainage from this property directs discharge to six First Flush retention ponding areas around the site. The design retention volume provided within each pond is shown below:

FIRST FLUSH POND F1			
Contour	Area	Volume	
5318.00	3287		
5317.00	600	1944	CF
TOTAL VOL.		**1944**	CF

FIRST FLUSH POND F4			
Contour	Area	Volume	
5316.00	1080		
5315.00	123	602	CF
TOTAL VOL.		**602**	CF

FIRST FLUSH POND F2			
Contour	Area	Volume	
5319.50	2709		
5319.00	1357	1017	CF
TOTAL VOL.		**1017**	CF

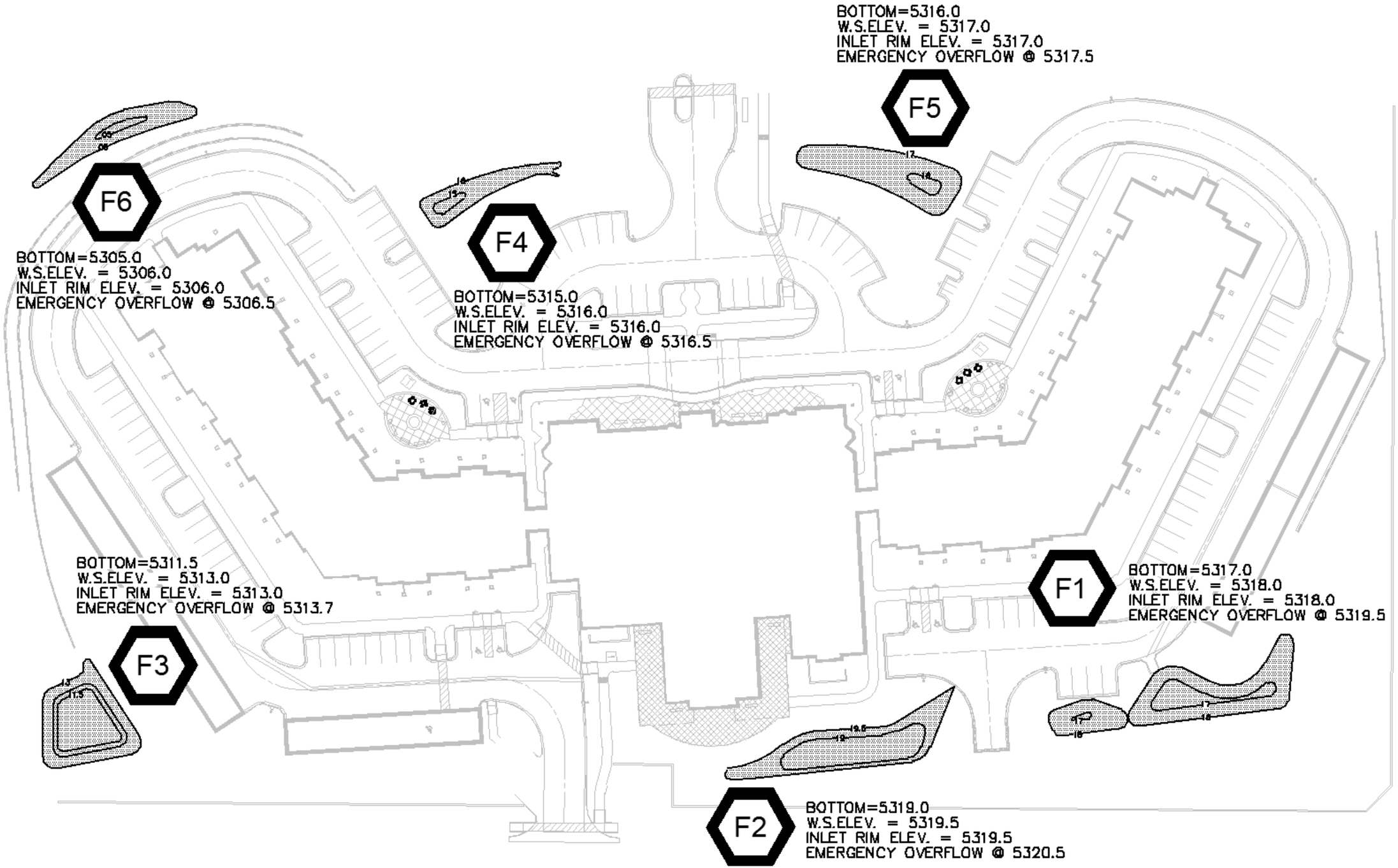
FIRST FLUSH POND F5			
Contour	Area	Volume	
5317.00	2118		
5316.00	154	1136	CF
TOTAL VOL.		**1136**	CF

FIRST FLUSH POND F3			
Contour	Area	Volume	
5313.00	2481		
5311.50	981	2597	CF
TOTAL VOL.		**2597**	CF

FIRST FLUSH POND F6			
Contour	Area	Volume	
5306.00	1277		
5305.00	115	696	CF
TOTAL VOL.		**696**	CF

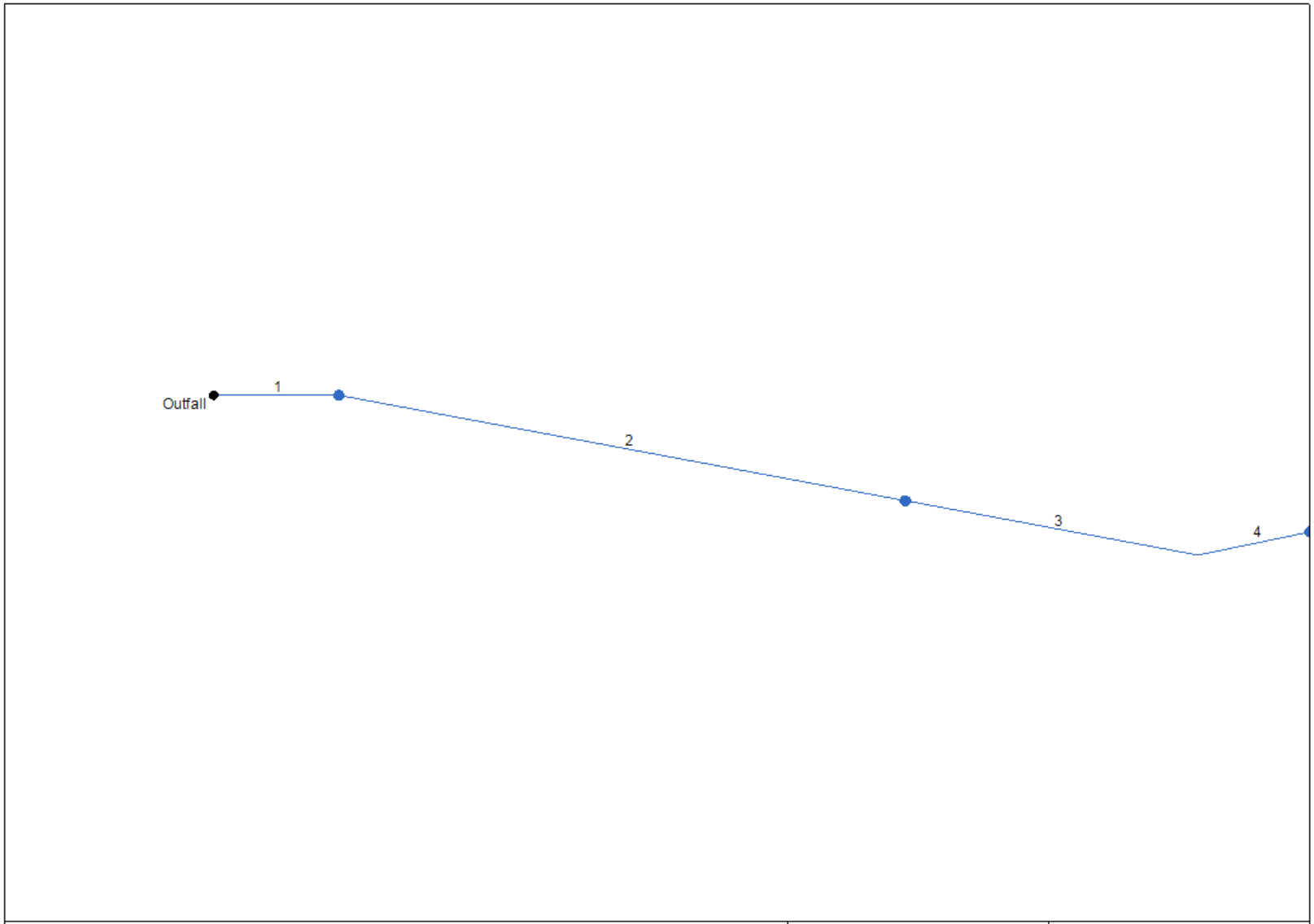
Total First Flush retention volume provided = 7,990 cf

Total First Flush retention volume required = 5,202 cf


BOTTOM=5316.0
W.S.ELEV. = 5317.0
INLET RIM ELEV. = 5317.0
EMERGENCY OVERFLOW @ 5317.5
F5
F6
BOTTOM=5305.0
W.S.ELEV. = 5306.0
INLET RIM ELEV. = 5306.0
EMERGENCY OVERFLOW @ 5306.5
F4
BOTTOM=5315.0
W.S.ELEV. = 5316.0
INLET RIM ELEV. = 5316.0
EMERGENCY OVERFLOW @ 5316.5
BOTTOM=5311.5
W.S.ELEV. = 5313.0
INLET RIM ELEV. = 5313.0
EMERGENCY OVERFLOW @ 5313.7
F3
F1
BOTTOM=5317.0
W.S.ELEV. = 5318.0
INLET RIM ELEV. = 5318.0
EMERGENCY OVERFLOW @ 5319.5
F2
BOTTOM=5319.0
W.S.ELEV. = 5319.5
INLET RIM ELEV. = 5319.5
EMERGENCY OVERFLOW @ 5320.5

NORTH SIDE
STORM DRAIN ANALYSIS

Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan



Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1		12.69	18	Cir	48.800	5301.45	5302.74	2.644	5304.22*	5304.83*	0.18	5305.00	End	Manhole
2		12.69	18	Cir	224.450	5302.74	5308.73	2.669	5305.00	5310.07	n/a	5310.07 j	1	Generic
3		8.39	18	Cir	116.000	5308.73	5311.81	2.655	5310.07	5312.93	n/a	5313.17 j	2	None
4		5.74	12	Cir	44.500	5311.81	5313.00	2.674	5313.17*	5314.16*	0.83	5314.99	3	Generic

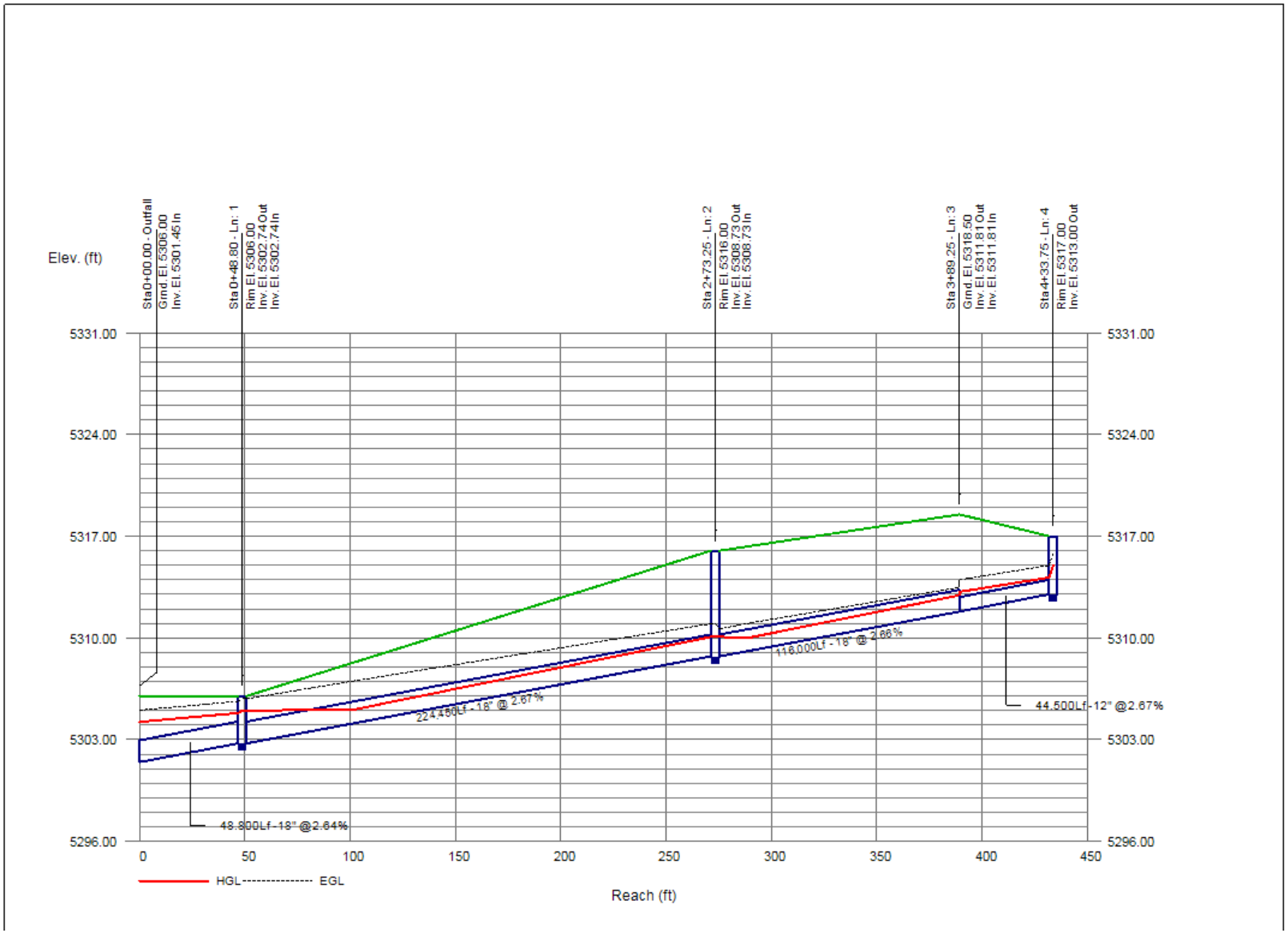
Project File: 2051 SD NORTH.stm | Number of lines: 4 | Run Date: 11/7/2014

NOTES: Return period = 2 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewers v10.30

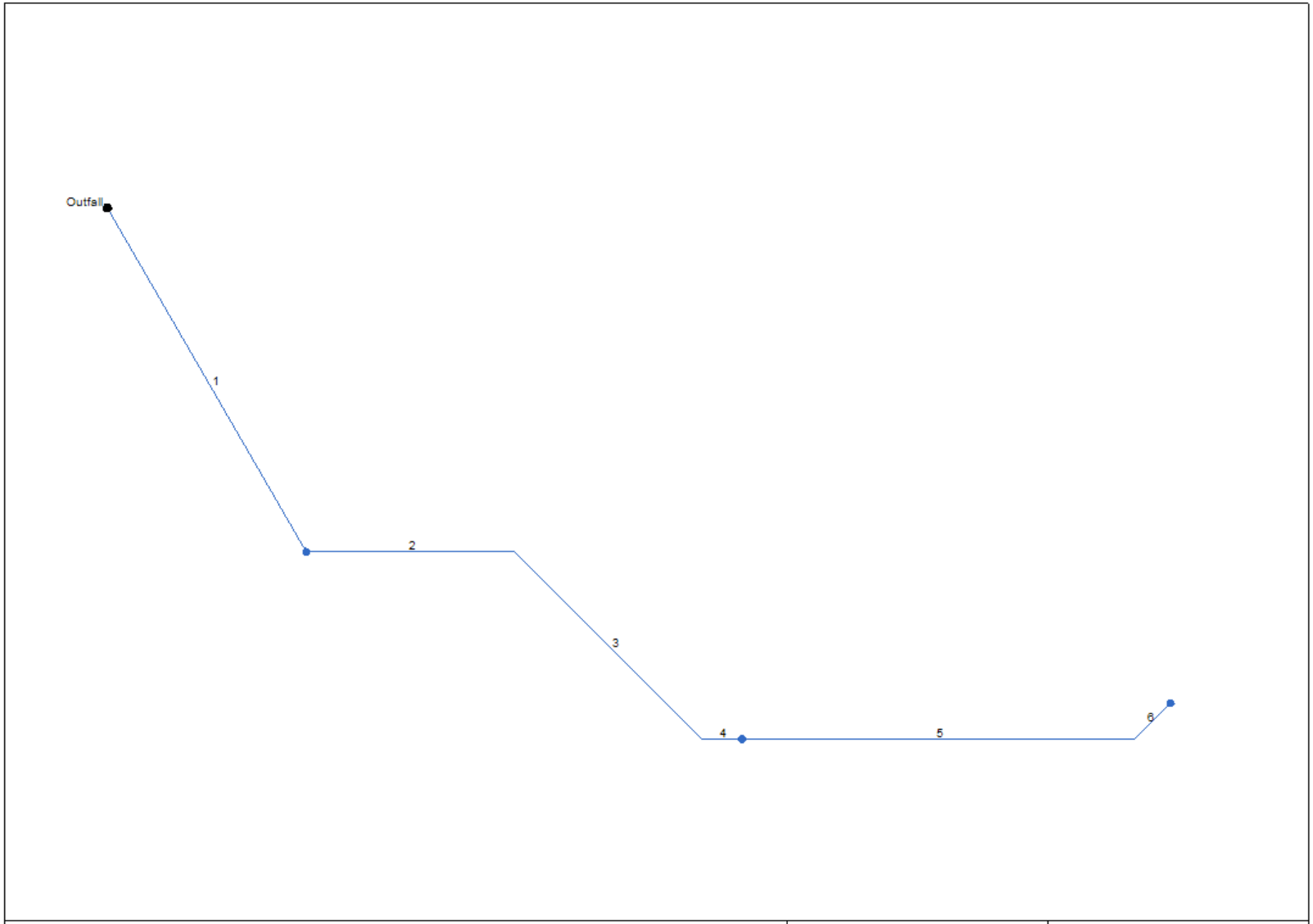
Storm Sewer Profile

Proj. file: 2051 SD NORTH.stm



SOUTH SIDE
STORM DRAIN ANALYSIS

Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan



Project File: 2051 SD SOUTH.stm	Number of lines: 6	Date: 11/7/2014

Storm Sewers v10.30

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1		11.65	18	Cir	224.620	5309.30	5310.97	0.744	5310.60*	5312.98*	0.90	5313.88	End	Generic
2		8.45	18	Cir	117.280	5310.97	5311.85	0.750	5313.88*	5314.53*	0.27	5314.79	1	None
3		8.45	18	Cir	149.910	5311.85	5312.96	0.740	5314.79*	5315.62*	0.27	5315.89	2	None
4		8.45	18	Cir	22.910	5312.96	5313.13	0.742	5315.89*	5316.01*	0.18	5316.19	3	Generic
5		6.50	18	Cir	221.720	5313.13	5314.79	0.749	5316.19*	5316.92*	0.16	5317.07	4	None
6		6.50	18	Cir	28.650	5314.79	5315.00	0.733	5317.07*	5317.17*	0.21	5317.38	5	Generic

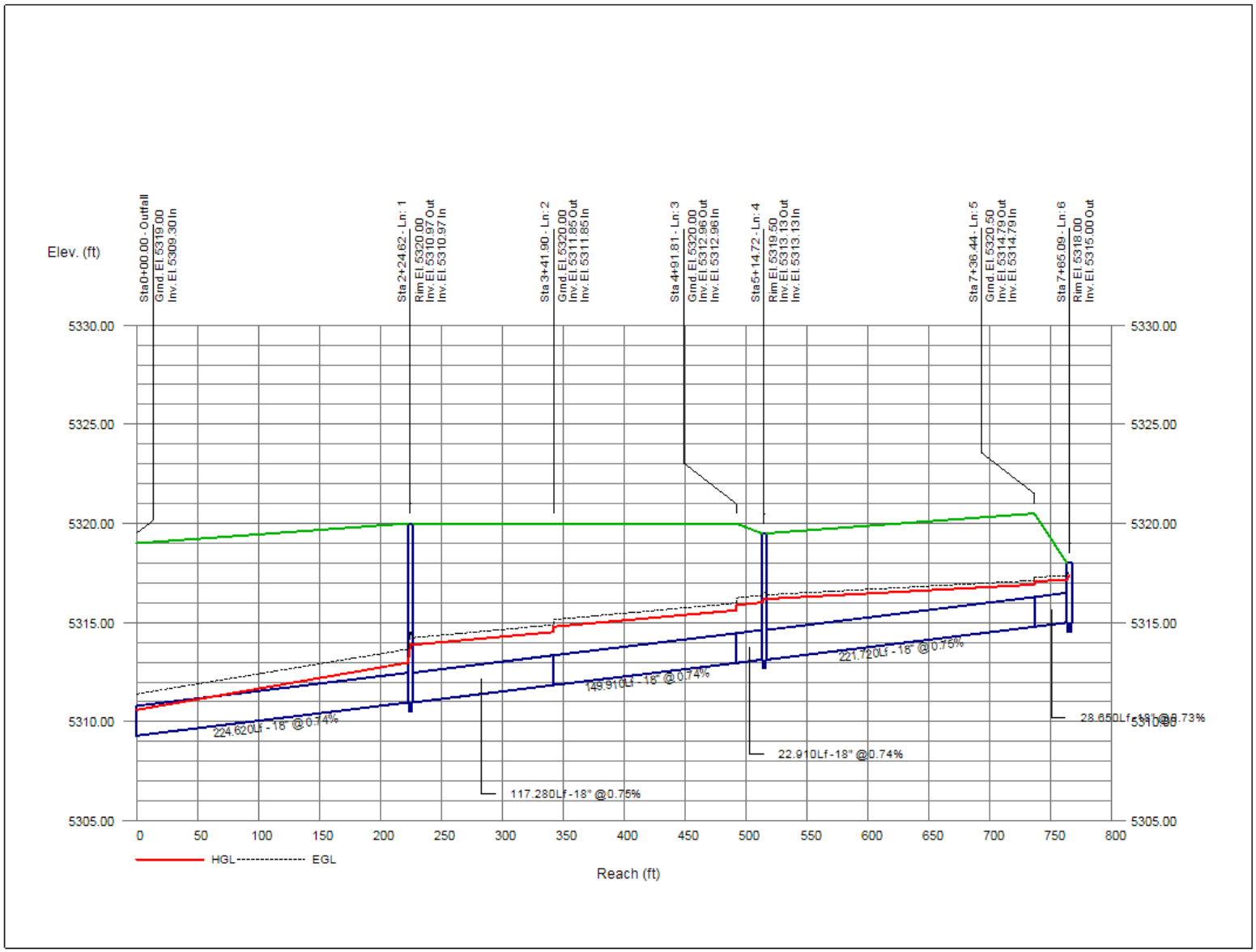
Project File: 2051 SD SOUTH.stm | Number of lines: 6 | Run Date: 11/7/2014

NOTES: Return period = 2 Yrs. ; *Surcharged (HGL above crown).

Storm Sewers v10.30

Storm Sewer Profile

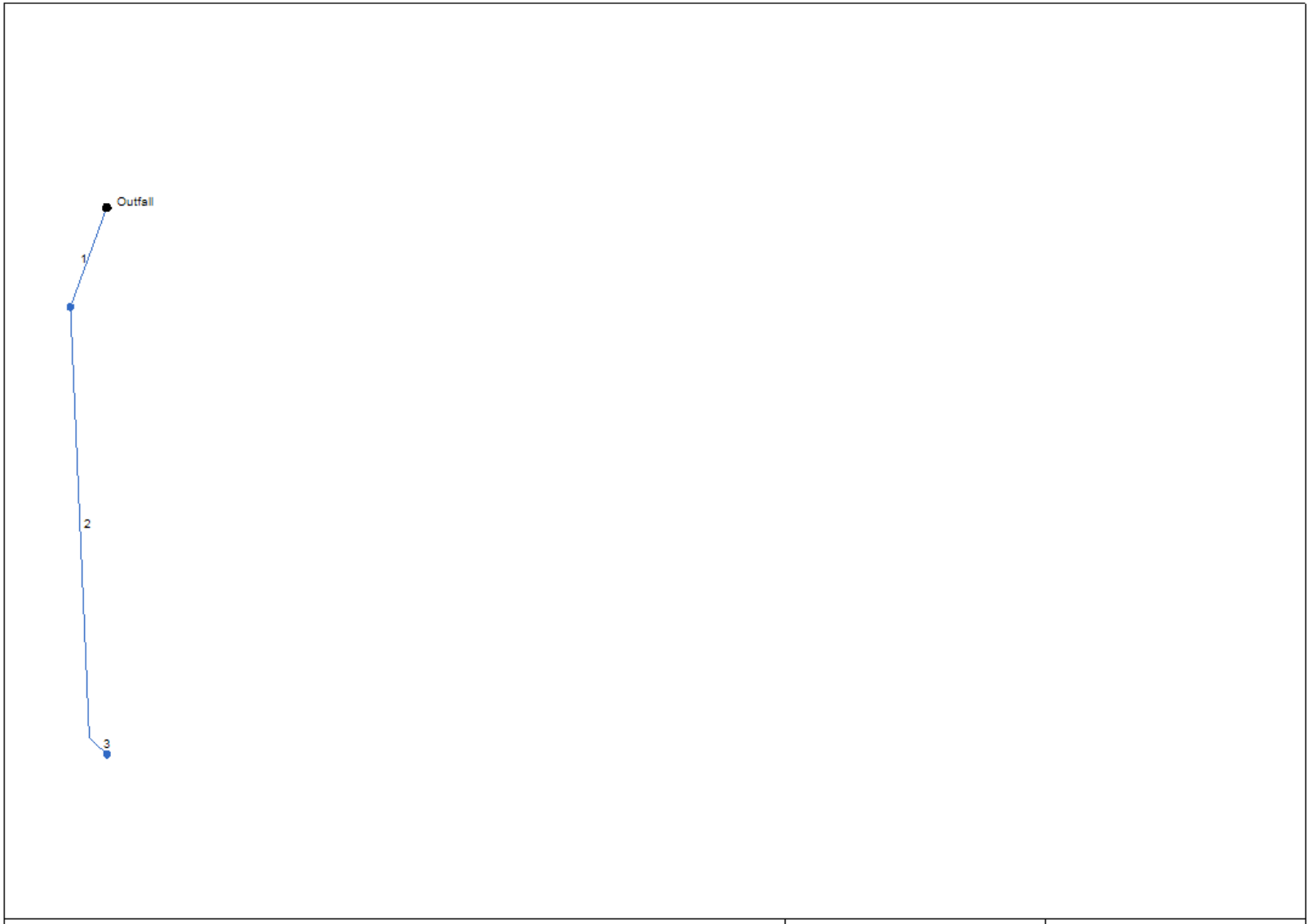
Proj. file: 2051 SD SOUTH.stm



Storm Sewers

WEST SIDE
STORM DRAIN ANALYSIS

Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan



Project File: 2051 SD WEST.stm	Number of lines: 3	Date: 11/7/2014

Storm Sewers v10.00

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1		3.96	12	Cir	60.050	5302.00	5303.32	2.198	5306.00*	5306.63*	0.17	5306.81	End	Manhole
2		3.96	12	Cir	244.530	5303.32	5308.70	2.200	5306.81	5309.54	n/a	5309.54 j	1	None
3		3.96	12	Cir	13.660	5308.70	5309.00	2.195	5309.54	5309.84	0.49	5309.84	2	Generic

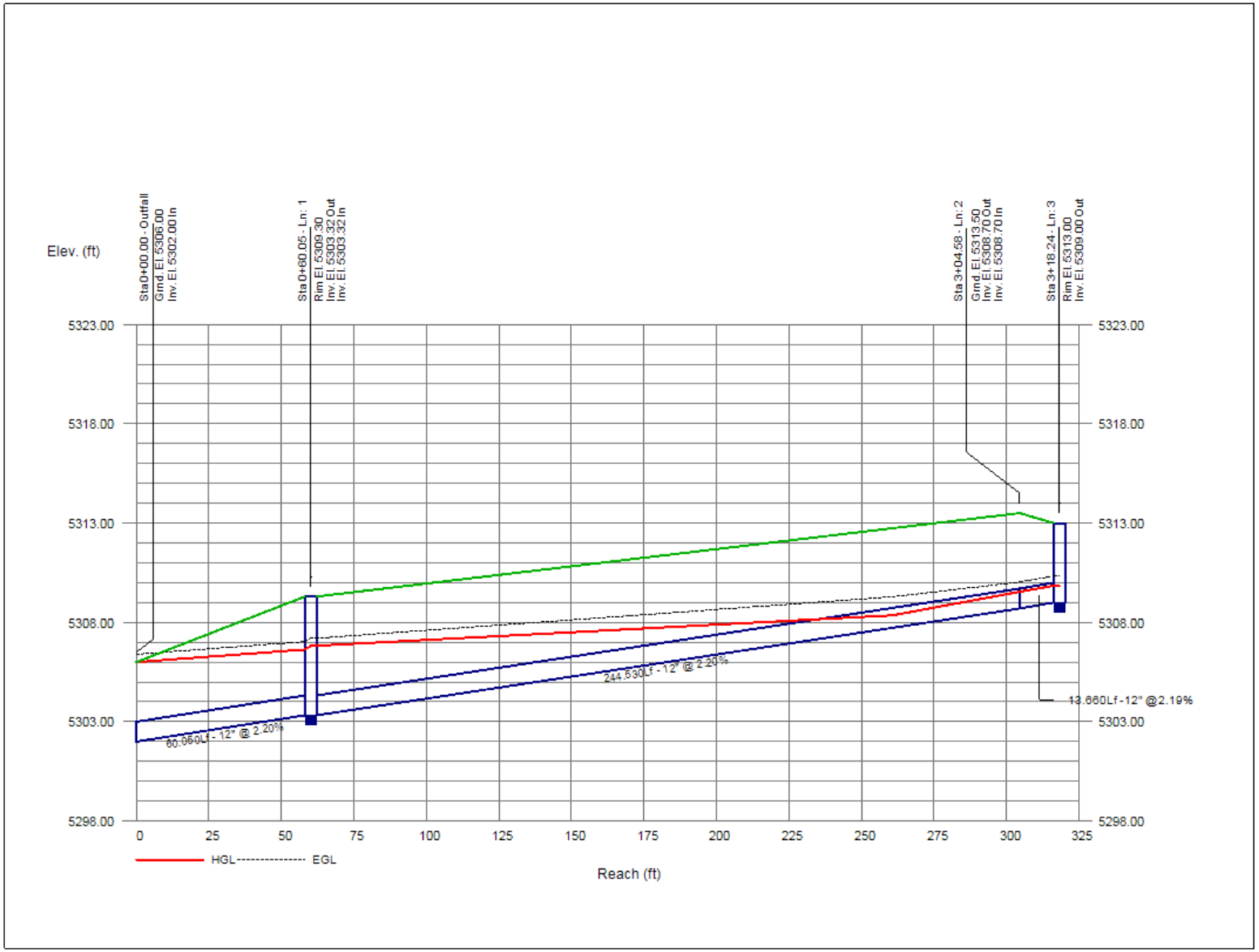
Project File: 2051 SD WEST.stm | Number of lines: 3 | Run Date: 11/7/2014

NOTES: Return period = 2 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewers v10.30

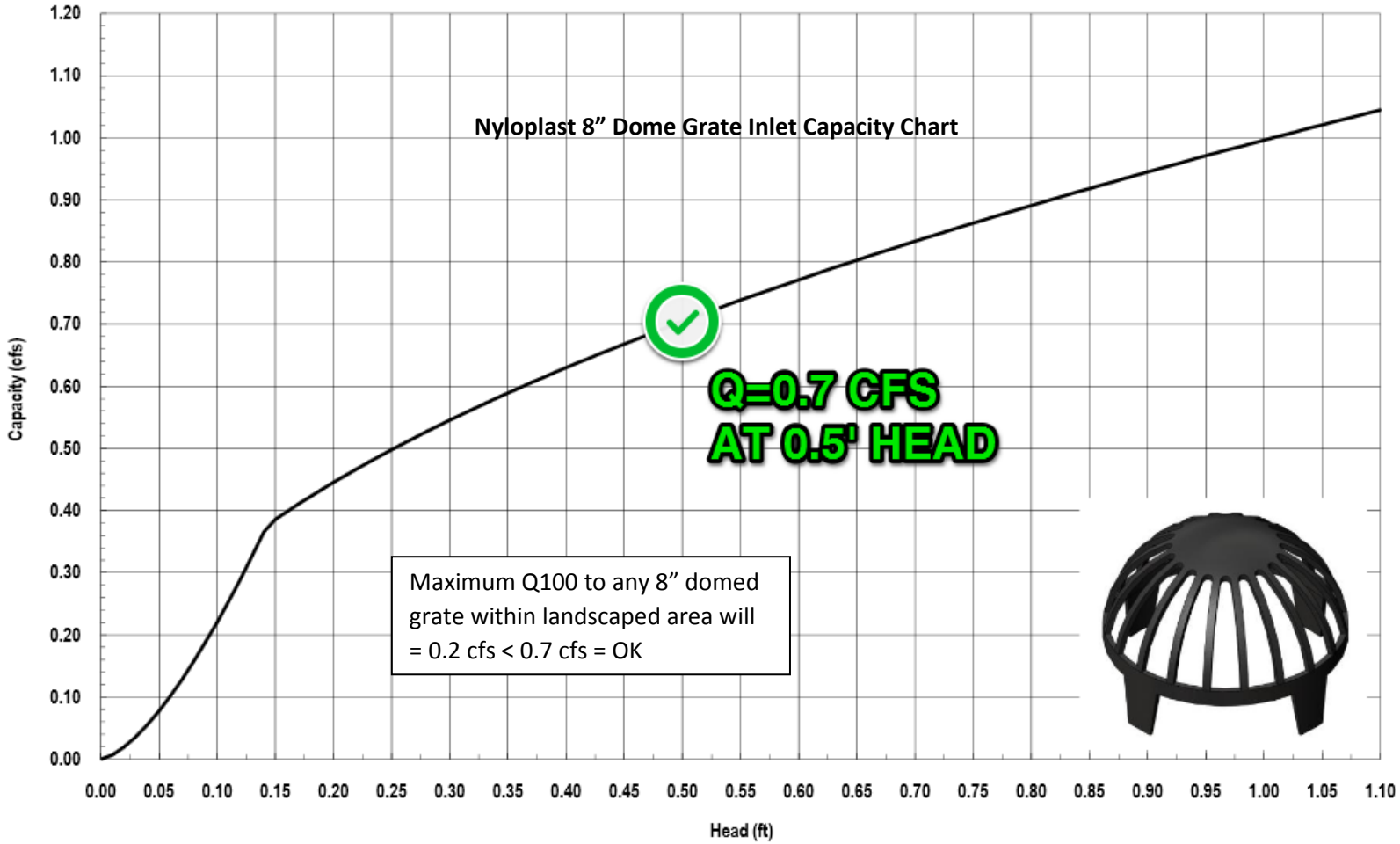
Storm Sewer Profile

Proj. file: 2051 SD WEST.stm

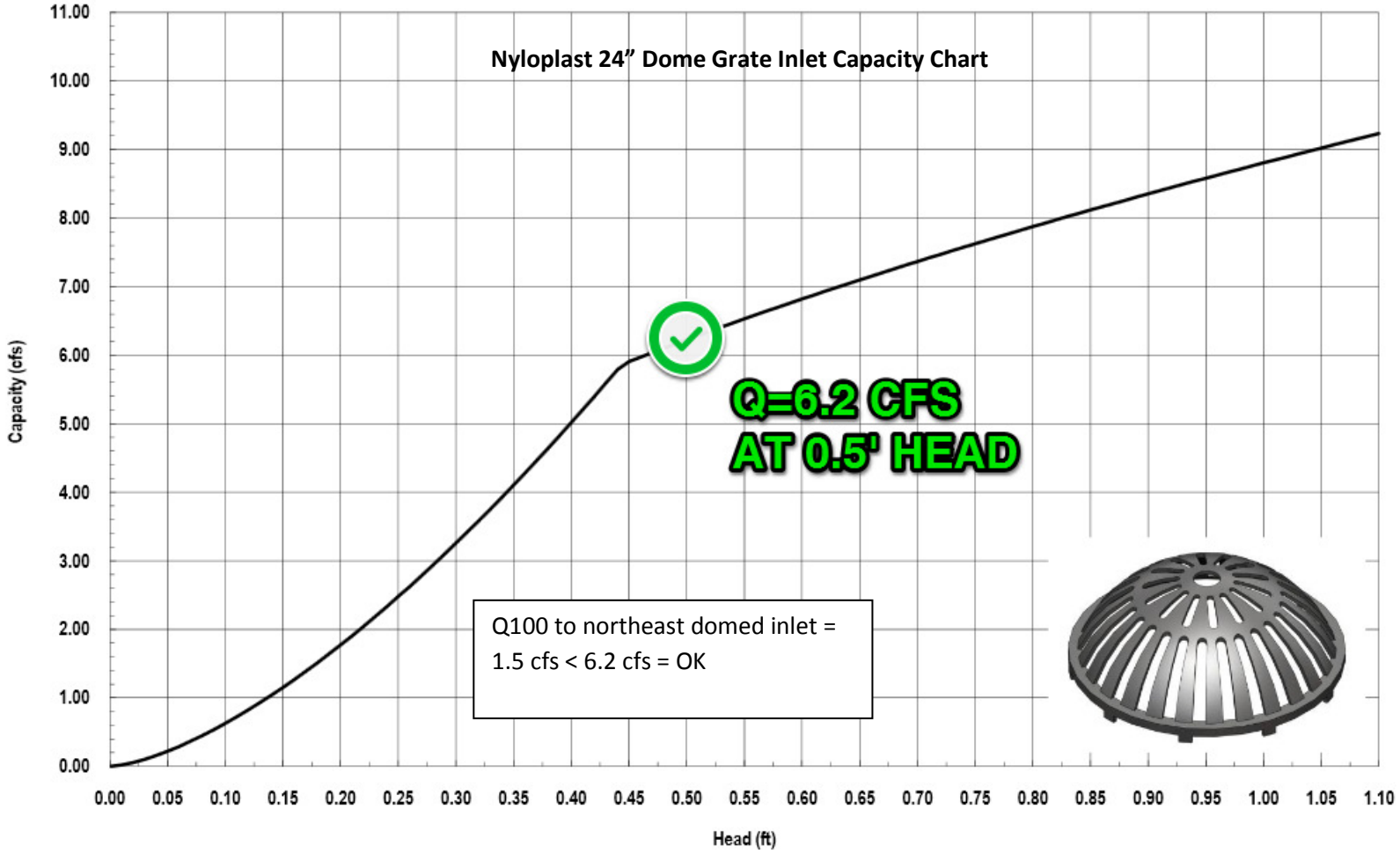


Storm Sewers

INLET GRATE CAPACITIES



Nyloplast®
3130 Verona Avenue • Buford, GA 30518
(866) 888-8479 / (770) 932-2443 • Fax: (770) 932-2490



Nyloplast
3130 Verona Avenue • Buford, GA 30518
(866) 888-8479 / (770) 932-2443 • Fax: (770) 932-2490

APPENDIX A
AHYMO CALCULATIONS

```
AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4)                        - Ver. S4.01a, Rel: 01a      RUN DATE (MON/DAY/YR) =11/05/2014
INPUT FILE = M:\PROJECTS\2000-2099\2051\CALCS\2051dev.dat                                 USER NO.= AHYMO_Temp_User:20122010

                             FROM  TO                    PEAK         RUNOFF              TIME TO    CFS      PAGE =   1
                HYDROGRAPH    ID   ID         AREA     DISCHARGE      VOLUME      RUNOFF     PEAK     PER
COMMAND       IDENTIFICATION  NO.  NO.      (SQ MI)      (CFS)       (AC-FT)    (INCHES)  (HOURS)    ACRE     NOTATION

*S**********************************************************************
*S           SANTA MONICA PLACE
*S           TRACTS 4-A
*S           100-YEAR, 6-HOUR STORM
*S           2051DEV.DAT
*S
*S           BY GENNY DONART
*S           ISAACSON & ARFMAN, P.A.
*S           OCTOBER, 2014
*S**********************************************************************
*S
*S    Rainfall distribution based on NOAA Atlas 14 maps
*S      Latitude=35.1625   Longitude=-106.5741
*S
*S**********************************************************************
START                                                                                                          TIME=      0.00
RAINFALL  TYPE= 1 NOAA 14                                                                                      RAIN6=    2.410
*S      BASIN S1
COMPUTE NM HYD            S1   -     1       0.00219        4.96       0.174      1.49143    1.533    3.539 PER IMP=  42.00
*S      BASIN S2
COMPUTE NM HYD            S2   -     2       0.00071        1.54       0.057      1.51323    1.533    3.423 PER IMP=  52.00
*S      BASIN S3
COMPUTE NM HYD            S3   -     3       0.00056        1.16       0.038      1.26423    1.533    3.244 PER IMP=  25.00
*S      BASIN S4
COMPUTE NM HYD            S4   -     4       0.00034        0.79       0.028      1.58015    1.533    3.664 PER IMP=  52.00
*S      BASIN S5
COMPUTE NM HYD            S5   -     5       0.00026        0.72       0.030      2.15347    1.500    4.370 PER IMP= 100.00
*S      BASIN S6
COMPUTE NM HYD            S6   -     6       0.00202        4.95       0.195      1.80668    1.533    3.818 PER IMP=  74.00
*S      BASIN N1
COMPUTE NM HYD            N1   -    11       0.00023        0.44       0.012      0.99745    1.533    2.983 PER IMP=   0.00
*S      BASIN N2
COMPUTE NM HYD            N2   -    12       0.00147        3.49       0.133      1.69629    1.533    3.723 PER IMP=  63.00
*S      BASIN N3
COMPUTE NM HYD            N3   -    13       0.00050        0.84       0.024      0.90239    1.533    2.611 PER IMP=   4.00
*S      BASIN N4
COMPUTE NM HYD            N4   -    14       0.00018        0.50       0.020      2.15347    1.500    4.387 PER IMP= 100.00
*S      BASIN N5
COMPUTE NM HYD            N5   -    15       0.00037        0.97       0.039      1.99341    1.500    4.159 PER IMP=  88.00
```

```
*S      BASIN N6
COMPUTE NM HYD          N6   -    16       0.00018        0.50       0.020      2.15347    1.500    4.387 PER IMP= 100.00
*S      BASIN N7
COMPUTE NM HYD          N7   -    17       0.00076        1.65       0.059      1.47190    1.533    3.406 PER IMP=  47.00
*S      BASIN N8
COMPUTE NM HYD          N8   -    18       0.00034        0.62       0.017      0.95307    1.533    2.826 PER IMP=   0.00
*S      BASIN N9
COMPUTE NM HYD          N9   -    19       0.00122        2.95       0.116      1.78000    1.533    3.788 PER IMP=  72.00
*S      BASIN N10
COMPUTE NM HYD         N10   -    20       0.00044        0.73       0.020      0.87996    1.533    2.611 PER IMP=   0.00
*S      BASIN N11
COMPUTE NM HYD         N11   -    21       0.00081        1.48       0.042      0.97501    1.533    2.870 PER IMP=   0.00
*S      BASIN O1
COMPUTE NM HYD          O1   -    31       0.00032        0.66       0.019      1.10153    1.533    3.190 PER IMP=   5.00
*S      BASIN O2
COMPUTE NM HYD          O2   -    32       0.00013        0.26       0.007      1.04616    1.533    3.169 PER IMP=   0.00
*S      BASIN O3
COMPUTE NM HYD          O3   -    33       0.00000        0.00        NaN           NaN   -0.133     NaN PER IMP=   0.00
```

```
    AHYMO PROGRAM (AHYMO-S4)                    - Version: S4.01a - Rel: 01a
         RUN DATE (MON/DAY/YR) = 11/05/2014
         START TIME (HR:MIN:SEC) = 14:59:17     USER NO.= AHYMO_Temp_User:20122010
         INPUT FILE = M:\PROJECTS\2000-2099\2051\CALCS\2051dev.dat
*S**********************************************************************
*S           SANTA MONICA PLACE
*S           TRACTS 4-A
*S           100-YEAR, 6-HOUR STORM
*S           2051DEV.DAT
*S
*S           BY GENNY DONART
*S           ISAACSON & ARFMAN, P.A.
*S           OCTOBER, 2014
*S**********************************************************************
*     100-YR, 6-HR STORM
*     PRECIPITATION:
*          P15 =       0"
*          P60 =       1.79"
*          P360 =      2.41"
*          P1440 =     2.77"
*
**********************************************************************
*S
*S    Rainfall distribution based on NOAA Atlas 14 maps
*S      Latitude=35.1625   Longitude=-106.5741
*S
*S**********************************************************************
START               TIME=0.0 HR  PUNCH CODE=0 PRINT LINE=60
RAINFALL            TYPE=1 RAIN QUARTER=0
                    RAIN ONE=1.79 IN  RAIN SIX=2.41 IN
                    RAIN DAY=2.77 IN  DT=0.03333333 HRS
               6-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE AREAS (NM & AZ) - D1
               DT =   0.033333 HOURS       END TIME =     6.000000 HOURS
                 0.0000  0.0027  0.0055  0.0084  0.0114  0.0144  0.0178
                 0.0212  0.0248  0.0286  0.0324  0.0411  0.0498  0.0589
                 0.0685  0.0781  0.0885  0.0989  0.1095  0.1204  0.1312
                 0.1426  0.1539  0.1658  0.1783  0.1908  0.2048  0.2188
                 0.2345  0.2517  0.2690  0.2921  0.3152  0.3430  0.3753
                 0.4077  0.4563  0.5048  0.5711  0.6549  0.7388  0.9622
                 1.1856  1.3593  1.4831  1.6070  1.6692  1.7314  1.7821
                 1.8213  1.8605  1.8877  1.9149  1.9384  1.9583  1.9782
                 1.9932  2.0083  2.0224  2.0356  2.0489  2.0607  2.0726
                 2.0836  2.0936  2.1036  2.1128  2.1221  2.1312  2.1402
                 2.1491  2.1532  2.1573  2.1614  2.1653  2.1693  2.1729
                 2.1766  2.1803  2.1839  2.1874  2.1909  2.1944  2.1978
                 2.2010  2.2043  2.2075  2.2107  2.2138  2.2170  2.2201
                 2.2230  2.2260  2.2289  2.2318  2.2346  2.2374  2.2403
                 2.2430  2.2457  2.2484  2.2510  2.2536  2.2562  2.2588
                 2.2614  2.2639  2.2664  2.2689  2.2714  2.2738  2.2762
                 2.2787  2.2811  2.2834  2.2858  2.2881  2.2904  2.2927
                 2.2950  2.2973  2.2996  2.3018  2.3040  2.3062  2.3084
                 2.3106  2.3127  2.3149  2.3170  2.3191  2.3212  2.3233
                 2.3254  2.3274  2.3295  2.3315  2.3335  2.3355  2.3375
                 2.3395  2.3415  2.3434  2.3454  2.3473  2.3492  2.3511
                 2.3530  2.3549  2.3568  2.3587  2.3605  2.3623  2.3642
                 2.3660  2.3678  2.3696  2.3714  2.3732  2.3749  2.3767
                 2.3784  2.3802  2.3819  2.3836  2.3854  2.3871  2.3888
                 2.3904  2.3921  2.3938  2.3954  2.3971  2.3987  2.4004
                 2.4020  2.4036  2.4052  2.4068  2.4084  2.4100
*S      BASIN S1
COMPUTE NM HYD      ID=1  HYD NO=S1  DA=0.002188 SQ MI
                    %A=0  %B=8  %C=50  %D=42
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =   3.6281    CFS   UNIT VOLUME =   0.9961       B =   526.28      P60 = 1.7900
     AREA =     0.000919 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.108749HR    TP =  0.133300HR    K/TP RATIO =  0.815818     SHAPE CONSTANT, N =  4.381263
     UNIT PEAK =   3.6161    CFS   UNIT VOLUME =   0.9969       B =   379.84      P60 = 1.7900
     AREA =     0.001269 SQ MI    IA =   0.37069 INCHES    INF =   0.88793 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=1 CODE=1
                                        HYDROGRAPH FROM AREA S1
```

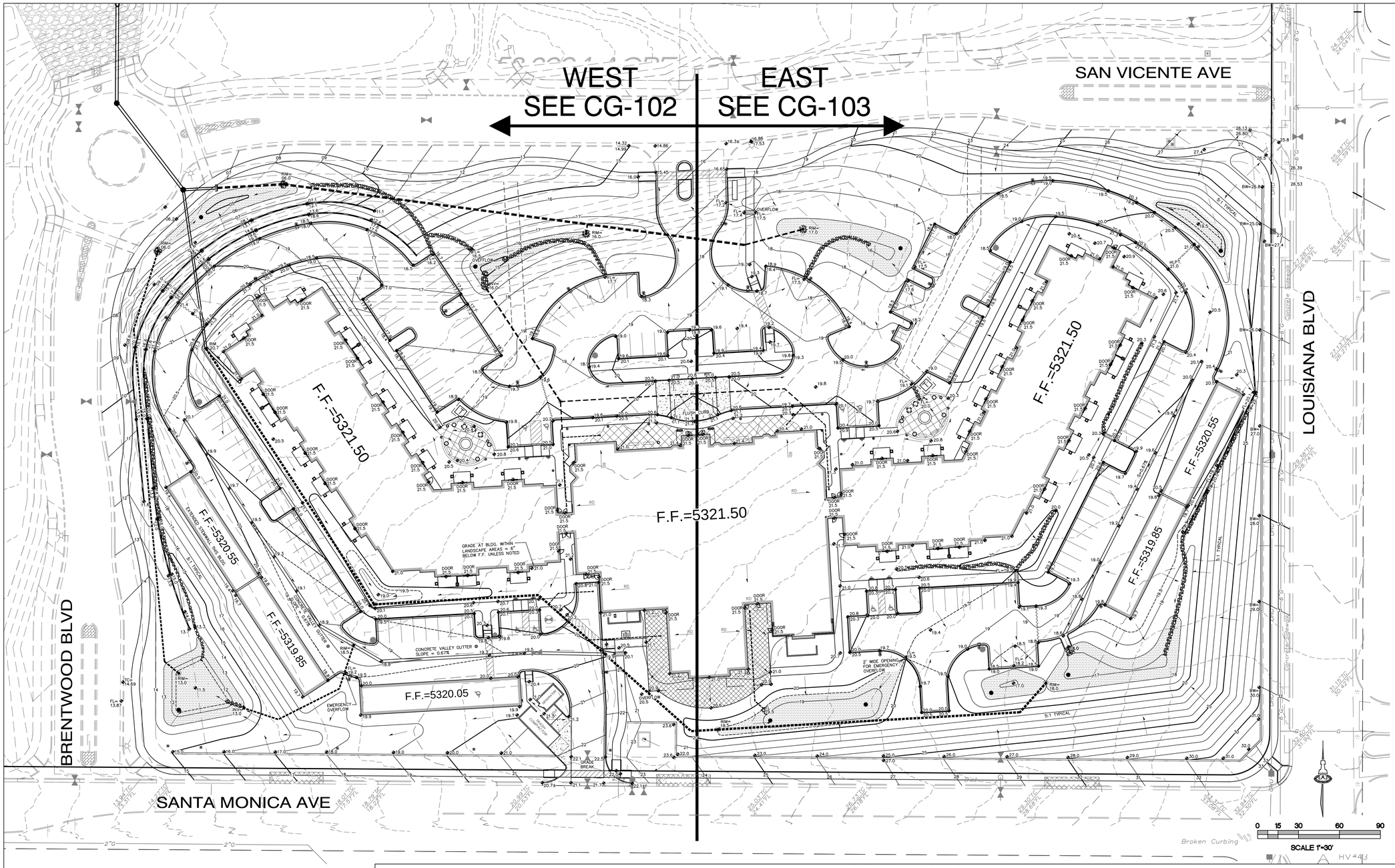
```
    RUNOFF VOLUME =     1.49143 INCHES     =       0.1740 ACRE-FEET
    PEAK DISCHARGE RATE =       4.96 CFS  AT   1.533 HOURS   BASIN AREA =  0.0022 SQ. MI.

*S      BASIN S2
COMPUTE NM HYD      ID=2  HYD NO=S2  DA=0.000705 SQ MI
                    %A=0  %B=48  %C=0  %D=52
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =   1.4474    CFS   UNIT VOLUME =   0.9911       B =   526.28      P60 = 1.7900
     AREA =     0.000367 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.132400HR    TP =  0.133300HR    K/TP RATIO =  0.993245     SHAPE CONSTANT, N =  3.554456
     UNIT PEAK =  0.82325    CFS   UNIT VOLUME =   0.9830       B =   324.29      P60 = 1.7900
     AREA =     0.000338 SQ MI    IA =   0.50000 INCHES    INF =   1.25000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=2 CODE=1
                                    HYDROGRAPH FROM AREA S2

    RUNOFF VOLUME =     1.51323 INCHES     =       0.0569 ACRE-FEET
    PEAK DISCHARGE RATE =       1.54 CFS  AT   1.533 HOURS   BASIN AREA =  0.0007 SQ. MI.

*S      BASIN S3
COMPUTE NM HYD      ID=3  HYD NO=S3  DA= 0.000559 SQ MI
                    %A=0  %B=25  %C=50  %D=25
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =  0.55174    CFS   UNIT VOLUME =   0.9786       B =   526.28      P60 = 1.7900
     AREA =     0.000140 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.114109HR    TP =  0.133300HR    K/TP RATIO =  0.856035     SHAPE CONSTANT, N =  4.155676
     UNIT PEAK =   1.1493    CFS   UNIT VOLUME =   0.9888       B =   365.42      P60 = 1.7900
     AREA =     0.000419 SQ MI    IA =   0.40000 INCHES    INF =   0.97000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=3 CODE=1
                                    HYDROGRAPH FROM AREA S3

    RUNOFF VOLUME =     1.26423 INCHES     =       0.0377 ACRE-FEET
    PEAK DISCHARGE RATE =       1.16 CFS  AT   1.533 HOURS   BASIN AREA =  0.0006 SQ. MI.

*S      BASIN S4
COMPUTE NM HYD      ID=4  HYD NO=S4  DA= 0.000335 SQ MI
                    %A=0  %B=18  %C=30  %D=52
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =  0.68775    CFS   UNIT VOLUME =   0.9815       B =   526.28      P60 = 1.7900
     AREA =     0.000174 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.115253HR    TP =  0.133300HR    K/TP RATIO =  0.864610     SHAPE CONSTANT, N =  4.110986
     UNIT PEAK =  0.43729    CFS   UNIT VOLUME =   0.9691       B =   362.50      P60 = 1.7900
     AREA =     0.000161 SQ MI    IA =   0.40625 INCHES    INF =   0.98750 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=4 CODE=1
                                    HYDROGRAPH FROM AREA S4

    RUNOFF VOLUME =     1.58015 INCHES     =       0.0282 ACRE-FEET
    PEAK DISCHARGE RATE =       0.79 CFS  AT   1.533 HOURS   BASIN AREA =  0.0003 SQ. MI.

*S      BASIN S5
COMPUTE NM HYD      ID=5  HYD NO=S5  DA= 0.000257 SQ MI
                    %A=0  %B=0  %C=0  %D=100
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =   1.0146    CFS   UNIT VOLUME =   0.9881       B =   526.28      P60 = 1.7900
     AREA =     0.000257 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=5 CODE=1
                                    HYDROGRAPH FROM AREA S5
```

```
    RUNOFF VOLUME =     2.15347 INCHES     =       0.0295 ACRE-FEET
    PEAK DISCHARGE RATE =       0.72 CFS  AT   1.500 HOURS   BASIN AREA =  0.0003 SQ. MI.

*S      BASIN S6
COMPUTE NM HYD      ID=6  HYD NO=S6  DA= 0.002024 SQ MI
                    %A=0  %B=26  %C=0  %D=74
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =   5.9132    CFS   UNIT VOLUME =   0.9976       B =   526.28      P60 = 1.7900
     AREA =     0.001498 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.132400HR    TP =  0.133300HR    K/TP RATIO =  0.993245     SHAPE CONSTANT, N =  3.554456
     UNIT PEAK =   1.2802    CFS   UNIT VOLUME =   0.9899       B =   324.29      P60 = 1.7900
     AREA =     0.000526 SQ MI    IA =   0.50000 INCHES    INF =   1.25000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
*S      BASIN N1
COMPUTE NM HYD      ID=11  HYD NO=N1  DA= 0.000233 SQ MI
                    %A=0  %B=20  %C=80  %D=0
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.110451HR    TP =  0.133300HR    K/TP RATIO =  0.828593     SHAPE CONSTANT, N =  4.306599
     UNIT PEAK =  0.65568    CFS   UNIT VOLUME =   0.9797       B =   375.12      P60 = 1.7900
     AREA =     0.000233 SQ MI    IA =   0.38000 INCHES    INF =   0.91400 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=11 CODE=1
                                      HYDROGRAPH FROM AREA N1

    RUNOFF VOLUME =     0.99745 INCHES     =       0.0124 ACRE-FEET
    PEAK DISCHARGE RATE =       0.44 CFS  AT   1.533 HOURS   BASIN AREA =  0.0002 SQ. MI.

*S      BASIN N2
COMPUTE NM HYD      ID=12  HYD NO=N2  DA= 0.001465 SQ MI
                    %A=0  %B=20  %C=17  %D=63
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =   3.6439    CFS   UNIT VOLUME =   0.9961       B =   526.28      P60 = 1.7900
     AREA =     0.000923 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.119794HR    TP =  0.133300HR    K/TP RATIO =  0.898681     SHAPE CONSTANT, N =  3.943851
     UNIT PEAK =   1.4290    CFS   UNIT VOLUME =   0.9911       B =   351.41      P60 = 1.7900
     AREA =     0.000542 SQ MI    IA =   0.43108 INCHES    INF =   1.05703 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=12 CODE=1
                                      HYDROGRAPH FROM AREA N2

    RUNOFF VOLUME =     1.69629 INCHES     =       0.1325 ACRE-FEET
    PEAK DISCHARGE RATE =       3.49 CFS  AT   1.533 HOURS   BASIN AREA =  0.0015 SQ. MI.

*S      BASIN N3
COMPUTE NM HYD      ID=13  HYD NO=N3  DA= 0.000504 SQ MI
                    %A=0  %B=80  %C=16  %D=4
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =  0.79593E-01CFS   UNIT VOLUME =   0.8874       B =   526.28      P60 = 1.7900
     AREA =     0.000020 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.127827HR    TP =  0.133300HR    K/TP RATIO =  0.958942     SHAPE CONSTANT, N =  3.684573
     UNIT PEAK =   1.2108    CFS   UNIT VOLUME =   0.9893       B =   333.57      P60 = 1.7900
     AREA =     0.000484 SQ MI    IA =   0.47500 INCHES    INF =   1.18000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=13 CODE=1
                                      HYDROGRAPH FROM AREA N3

    RUNOFF VOLUME =     0.90239 INCHES     =       0.0243 ACRE-FEET
    PEAK DISCHARGE RATE =       0.84 CFS  AT   1.533 HOURS   BASIN AREA =  0.0005 SQ. MI.

*S      BASIN N4
COMPUTE NM HYD      ID=14  HYD NO=N4  DA= 0.000177 SQ MI
                    %A=0  %B=0  %C=0  %D=100
                    TP=-0.1333 HR
```

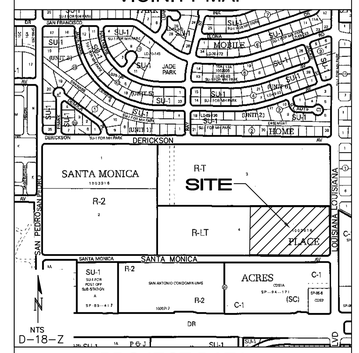
```
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =  0.69881    CFS   UNIT VOLUME =   0.9840       B =   526.28      P60 = 1.7900
     AREA =     0.000177 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=14 CODE=1
                                      HYDROGRAPH FROM AREA N4

    RUNOFF VOLUME =     2.15347 INCHES     =       0.0203 ACRE-FEET
    PEAK DISCHARGE RATE =       0.50 CFS  AT   1.500 HOURS   BASIN AREA =  0.0002 SQ. MI.

*S      BASIN N5
COMPUTE NM HYD      ID=15  HYD NO=N5  DA=0.000365 SQ MI
                    %A=0  %B=12  %C=0  %D=88
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =   1.2681    CFS   UNIT VOLUME =   0.9897       B =   526.28      P60 = 1.7900
     AREA =     0.000321 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.132400HR    TP =  0.133300HR    K/TP RATIO =  0.993245     SHAPE CONSTANT, N =  3.554456
     UNIT PEAK =  0.10656    CFS   UNIT VOLUME =   0.8706       B =   324.29      P60 = 1.7900
     AREA =     0.000044 SQ MI    IA =   0.50000 INCHES    INF =   1.25000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=15 CODE=1
                                      HYDROGRAPH FROM AREA N5

    RUNOFF VOLUME =     1.99341 INCHES     =       0.0388 ACRE-FEET
    PEAK DISCHARGE RATE =       0.97 CFS  AT   1.500 HOURS   BASIN AREA =  0.0004 SQ. MI.

*S      BASIN N6
COMPUTE NM HYD      ID=16  HYD NO=N6  DA= 0.000177 SQ MI
                    %A=0  %B=0  %C=0  %D=100
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =  0.69881    CFS   UNIT VOLUME =   0.9840       B =   526.28      P60 = 1.7900
     AREA =     0.000177 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=16 CODE=1
                                      HYDROGRAPH FROM AREA N6

    RUNOFF VOLUME =     2.15347 INCHES     =       0.0203 ACRE-FEET
    PEAK DISCHARGE RATE =       0.50 CFS  AT   1.500 HOURS   BASIN AREA =  0.0002 SQ. MI.

*S      BASIN N7
COMPUTE NM HYD      ID=17  HYD NO=N7  DA= 0.000755 SQ MI
                    %A=0  %B=40  %C=13  %D=47
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =   1.4010    CFS   UNIT VOLUME =   0.9911       B =   526.28      P60 = 1.7900
     AREA =     0.000355 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.125670HR    TP =  0.133300HR    K/TP RATIO =  0.942762     SHAPE CONSTANT, N =  3.750104
     UNIT PEAK =   1.0151    CFS   UNIT VOLUME =   0.9868       B =   338.16      P60 = 1.7900
     AREA =     0.000400 SQ MI    IA =   0.46321 INCHES    INF =   1.14698 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=17 CODE=1
                                      HYDROGRAPH FROM AREA N7

    RUNOFF VOLUME =     1.47190 INCHES     =       0.0593 ACRE-FEET
    PEAK DISCHARGE RATE =       1.65 CFS  AT   1.533 HOURS   BASIN AREA =  0.0008 SQ. MI.

*S      BASIN N8
COMPUTE NM HYD      ID=18  HYD NO=N8  DA= 0.000342 SQ MI
                    %A=0  %B=40  %C=60  %D=0
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.115938HR    TP =  0.133300HR    K/TP RATIO =  0.869756     SHAPE CONSTANT, N =  4.084704
     UNIT PEAK =  0.92563    CFS   UNIT VOLUME =   0.9857       B =   360.78      P60 = 1.7900
     AREA =     0.000342 SQ MI    IA =   0.41000 INCHES    INF =   0.99800 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=18 CODE=1
```

```
                                        HYDROGRAPH FROM AREA N8

    RUNOFF VOLUME =     0.95307 INCHES     =       0.0174 ACRE-FEET
    PEAK DISCHARGE RATE =       0.62 CFS  AT   1.533 HOURS   BASIN AREA =  0.0003 SQ. MI.

*S      BASIN N9
COMPUTE NM HYD      ID=19  HYD NO=N9  DA=0.001218 SQ MI
                    %A=0  %B=28  %C=0  %D=72
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =   3.4623    CFS   UNIT VOLUME =   0.9961       B =   526.28      P60 = 1.7900
     AREA =     0.000877 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.132400HR    TP =  0.133300HR    K/TP RATIO =  0.993245     SHAPE CONSTANT, N =  3.554456
     UNIT PEAK =  0.82967    CFS   UNIT VOLUME =   0.9844       B =   324.29      P60 = 1.7900
     AREA =     0.000341 SQ MI    IA =   0.50000 INCHES    INF =   1.25000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=19 CODE=1
                                        HYDROGRAPH FROM AREA N9

    RUNOFF VOLUME =     1.78000 INCHES     =       0.1156 ACRE-FEET
    PEAK DISCHARGE RATE =       2.95 CFS  AT   1.533 HOURS   BASIN AREA =  0.0012 SQ. MI.

*S      BASIN N10
COMPUTE NM HYD      ID=20  HYD NO=N10  DA=0.000436 SQ MI
                    %A=0  %B=70  %C=30  %D=0
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.124169HR    TP =  0.133300HR    K/TP RATIO =  0.931500     SHAPE CONSTANT, N =  3.797410
     UNIT PEAK =   1.1168    CFS   UNIT VOLUME =   0.9886       B =   341.43      P60 = 1.7900
     AREA =     0.000436 SQ MI    IA =   0.45500 INCHES    INF =   1.12400 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=20 CODE=1
                                        HYDROGRAPH FROM AREA N10

    RUNOFF VOLUME =     0.87996 INCHES     =       0.0205 ACRE-FEET
    PEAK DISCHARGE RATE =       0.73 CFS  AT   1.533 HOURS   BASIN AREA =  0.0004 SQ. MI.

*S      BASIN N11
COMPUTE NM HYD      ID=21  HYD NO=N11  DA=0.000805 SQ MI
                    %A=0  %B=30  %C=70  %D=0
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.113195HR    TP =  0.133300HR    K/TP RATIO =  0.849174     SHAPE CONSTANT, N =  4.192253
     UNIT PEAK =   2.2211    CFS   UNIT VOLUME =   0.9940       B =   367.79      P60 = 1.7900
     AREA =     0.000805 SQ MI    IA =   0.39500 INCHES    INF =   0.95600 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=21 CODE=1
                                        HYDROGRAPH FROM AREA N11

    RUNOFF VOLUME =     0.97501 INCHES     =       0.0419 ACRE-FEET
    PEAK DISCHARGE RATE =       1.48 CFS  AT   1.533 HOURS   BASIN AREA =  0.0008 SQ. MI.

*S      BASIN O1
COMPUTE NM HYD      ID=31  HYD NO=O1  DA=0.000322 SQ MI
                    %A=0  %B=0  %C=95  %D=5
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =  0.63564E-01CFS   UNIT VOLUME =   0.8874       B =   526.28      P60 = 1.7900
     AREA =     0.000016 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333

     K =  0.104964HR    TP =  0.133300HR    K/TP RATIO =  0.787430     SHAPE CONSTANT, N =  4.558258
     UNIT PEAK =  0.89686    CFS   UNIT VOLUME =   0.9861       B =   390.82      P60 = 1.7900
     AREA =     0.000306 SQ MI    IA =   0.35000 INCHES    INF =   0.83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=31 CODE=1
                                        HYDROGRAPH FROM AREA O1

    RUNOFF VOLUME =     1.10153 INCHES     =       0.0189 ACRE-FEET
    PEAK DISCHARGE RATE =       0.66 CFS  AT   1.533 HOURS   BASIN AREA =  0.0003 SQ. MI.

*S      BASIN O2
```

```
COMPUTE NM HYD      ID=32  HYD NO=O2  DA=0.000127 SQ MI
                    %A=0  %B=0  %C=100  %D=0
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     K =  0.104964HR    TP =  0.133300HR    K/TP RATIO =  0.787430     SHAPE CONSTANT, N =  4.558258
     UNIT PEAK =  0.37235    CFS   UNIT VOLUME =   0.9671       B =   390.82      P60 = 1.7900
     AREA =     0.000127 SQ MI    IA =   0.35000 INCHES    INF =   0.83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033333
PRINT HYD           ID=32 CODE=1
                                      HYDROGRAPH FROM AREA O2

    RUNOFF VOLUME =     1.04616 INCHES     =       0.0071 ACRE-FEET
    PEAK DISCHARGE RATE =       0.26 CFS  AT   1.533 HOURS   BASIN AREA =  0.0001 SQ. MI.

*S      BASIN O3
COMPUTE NM HYD      ID=33  HYD NO=O3  DA=0. 0.000469 SQ MI
                    %A=0  %B=22  %C=0  %D=78
                    TP=-0.1333 HR
                    MASS RAINFALL=-1
     *****WARNING*****  SUM OF TREATMENT TYPES DOES NOT EQUAL 100 PERCENT OR TOTAL AREA
              INPUT OF MASS RAINFALL WITH DT =   0.133300 HR.
     K = 42.510002HR    TP = 78.000000HR    K/TP RATIO =  0.545000     SHAPE CONSTANT, N =  7.106428
     UNIT PEAK =      0.00000CFS   UNIT VOLUME =          NaN   B =   526.28      P60 = 1.0000
     AREA =     0.000000 SQ MI    IA =   0.10000 INCHES    INF =   0.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.133300

     K = 64.665985HR    TP = 78.000000HR    K/TP RATIO =  0.829051     SHAPE CONSTANT, N =  4.303975
     UNIT PEAK =      0.00000CFS   UNIT VOLUME =          NaN   B =   374.95      P60 = 1.0000
     AREA =     0.000000 SQ MI    IA =   0.35001 INCHES    INF =   0.83002 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.133300
PRINT HYD           ID=33 CODE=1
                                      HYDROGRAPH FROM AREA O3

    RUNOFF VOLUME =         NaN INCHES     =          NaN ACRE-FEET
    PEAK DISCHARGE RATE =       0.00 CFS  AT  -0.133 HOURS   BASIN AREA =  0.0000 SQ. MI.

FINISH
    NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 14:59:18
```



VICINITY MAP



PROJECT DATA

PROPERTY: THE SITE IS A PREVIOUSLY DEVELOPED MOBILE HOME PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP D-18. THE SITE IS BOUND TO THE SOUTH BY SANTA MONICA AVE. NE, TO THE WEST BY APARTMENTS (TRACT 1), TO THE EAST BY LOUISIANA BLVD. AND TO THE NORTH BY UNDEVELOPED PROPERTY (TRACT 3).

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE AN APPROXIMATELY 68,300 SF (FOOTPRINT) RETIREMENT COMMUNITY WITH THREE GARAGE PARKING BUILDINGS, ASSOCIATED ASPHALT PAVED DRIVES, PARKING, PEDESTRIAN WALKS AND LANDSCAPING.

EXISTING LEGAL: THE EASTERN PORTION OF TRACT 4, SANTA MONICA PLACE, ALBUQUERQUE. NM

PROPOSED LEGAL: TRACT 4-B, SANTA MONICA PLACE, ALBUQUERQUE, NM

AREA: 8.6± ACRES

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY BENCHMARK "18-E18", ELEVATION = 5269.166 (NGVD88)

OFF-SITE: NO OFF-SITE DRAINAGE IMPACTS THIS PROPERTY.

FLOOD HAZARD: THE SUBJECT PROPERTY LIES WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOOD PLAIN) IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAP NO. 35001C0137 F, EFFECTIVE DATE 11-19-03.

SURVEYOR: RUSS P. HUGG, SURV-TEK, INC., (505)897-3366, ALBUQUERQUE, NEW MEXICO.

GENERAL NOTES

A. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE AND NMDOT STANDARDS APPLY

B. THE CONTRACTOR SHALL ABIDE BY ALL STATE, LOCAL, AND FEDERAL LAWS, CODES, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA REQUIREMENTS.

C. ALL SUBGRADE, OVEREXCAVATION, BACKFILL, AND FILL SHALL BE PLACED AND / OR COMPACTED PER THE GEOTECHNICAL REPORT .

D. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION, OR PRIOR TO OCCUPANCY, AS APPROPRIATE. IF PERMITS ARE DELAYED OR ISSUED WITH CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT IMMEDIATELY.

E. COORDINATE WORK WITH SITE PLAN, UTILITY PLAN, DEMOLITION PLAN, AND LANDSCAPE PLAN.

F. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE ARCHITECT AND VERIFY THE ARCHITECT'S INTENT BEFORE PROCEEDING.

G. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SAFETY.

H. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS ON SITE AT ALL TIMES. THE CONTRACTOR SHALL NOT SCALE DRAWINGS. ONLY WRITTEN DIMENSIONS OR KEYED NOTES SHALL BE USED.

I. CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK. CONTRACTOR SHALL REGULARLY UPDATE OWNER AND ARCHITECT REGARDING THE STATUS OF THE INSPECTIONS.

J. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

K. CONSTRUCTION EQUIPMENT SHALL ONLY OBSTRUCT DESIGNATED TRAFFIC LANES IF APPROPRIATE BARRICADING PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL IN THE RIGHT-OF-WAY.

L. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN THAT CONFORMS TO THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN BARRICADING PERMITS FROM THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

M. THE CONTRACTOR SHALL MAINTAIN ALL BARRICADING AND CONSTRUCTION SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

N. PAVEMENT GRADES IN MARKED HANDICAPPED PARKING AREAS SHALL NOT EXCEED 2.0% IN ANY DIRECTION. FOR ALL ACCESSIBLE ROUTES, MAXIMUM ALLOWABLE CROSS SLOPE IS 2.0% AND MAXIMUM LONGITUDINAL SLOPE WITHOUT RAMP IS 5.0%. FOLLOW ALL ADA ACCESSIBILITY GUIDELINES OR CITY CODES, WHICHEVER IS MORE STRINGENT.

O. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.

P. PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.

Q. IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER.

R. MAXIMUM SLOPES SHALL BE 4:1. MINIMUM SLOPES SHALL BE 1% UNLESS OTHERWISE NOTED.

S. EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CONTACT NM-811 FOR UTILITY LINE SPOTS TWO WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.

T. SOIL TESTING AND INSPECTION SERVICES DURING EARTHWORK OPERATIONS ARE REQUIRED. CONTRACTOR SHALL ALLOW TESTING LABS TO INSPECT AND APPROVE COMPACTED SUBGRADES, BACKFILL, AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS DONE. SHOULD COMPACTION TESTS INDICATE INADEQUATE DENSITY, CONTRACTOR SHALL PROVIDE ADDITIONAL COMPACTION AND TESTING AT THE CONTRACTOR'S SOLE EXPENSE.

U. CONTRACTOR SHALL PROVIDE ALL OTHER CONSTRUCTION STAKING. CONTRACTOR SHALL LOCATE AND PRESERVE ALL BOUNDARY CORNERS AND REPLACE ANY LOST OR DISTURBED CORNERS AT CONTRACTOR'S SOLE EXPENSE. PROPERTY CORNERS SHALL ONLY BE RESET BY A REGISTERED LAND SURVEYOR.

V. A CURRENT STORMWATER CONTROL PERMIT, INCLUDING AN EROSION SEDIMENT CONTROL PLAN (E.S.C.) FOR EROSION AND SEDIMENT CONTROL IS REQUIRED FOR ALL CONSTRUCTION, DEMOLITION CLEARING, AND GRADING OPERATIONS THAT DISTURB THE SOIL ON ONE ACRE OR MORE OF LAND. OWNER WILL COORDINATE.

W. POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES OWNER. PERIODIC INSPECTION AND CERTIFICATIONS OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER.

X. STORMWATER CONTROL MEASURES SHOWN ON THIS PLAN ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH' (CURRENTLY CALCULATED AS 0.34" OF STORMWATER MULTIPLIED BY THE IMPERMEABLE AREA).

Y. ADJUST RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.

Z. ALL NEW PAVEMENT SURFACES SHALL BE CONSTRUCTED WITH POSITIVE SLOPE AWAY FROM BUILDINGS AND POSITIVE SLOPE TOWARD EXISTING AND/OR PROPOSED DRAINAGE PATHS. PAVING AND ROADWAY GRADES SHALL BE ±0.1' FROM PLAN ELEVATIONS. BUILDING PAD ELEVATION SHALL BE ±0.05' FROM PLAN ELEVATION.

AA. WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH.

AB. ALL EROSION PROTECTION TO BE FRACTURED FACE ROCK (F.F. ROCK) = 6" AVG. DIA. ANGULAR FACED ROCK PLACED OVER GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.).

AC. SIDESLOPES STEEPER THAN 4:1 BUT LESS THAN 2:1 MUST HAVE PERMANENT EROSION CONTROL (F.F. ROCK O.E.) INSTALLED, TYPICAL. NO SLOPE SHALL BE STEEPER THAN 2:1.

AD. CONTRACTOR SHALL COMPLY WITH LOCAL REGULATIONS FOR RESEEDING OF DISTURBED AREAS.

AE. POND DESIGN PARAMETERS (TOP OF POND, BOTTOM OF POND, SIZE OF ORIFICE, AREA OF POND, ETC.) TO BE STRICTLY ADHERED TO FOR CERTIFICATION PURPOSES. SEE DETAIL SHEET FOR ADDITIONAL INFORMATION.

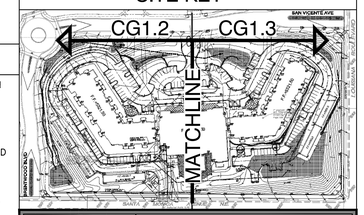
AF. ENGINEER RECOMMENDS THAT OWNER MAINTAIN EROSION PROTECTION ELEMENTS. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.

AG. GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

AH. MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.

AI. ALL SITE PREPARATION, GRADING OPERATIONS, FOUNDATION CONSTRUCTION, AND PAVEMENT INSTALLATION WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, WHICH WILL BE PROVIDED BY THE OWNER OR ARCHITECT. ALL OTHER WORK SHALL; UNLESS OTHERWISE NOTED IN THE PLANS, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION (FIRST PRIORITY), AND/OR NMDOT STANDARD SPECIFICATIONS FOR PUBLIC WORK (SECOND PRIORITY.)

SITE KEY



ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com

11-21-14

2051 CG-101.dwg Nov 20,2014

Know what's below. Call before you dig. 811

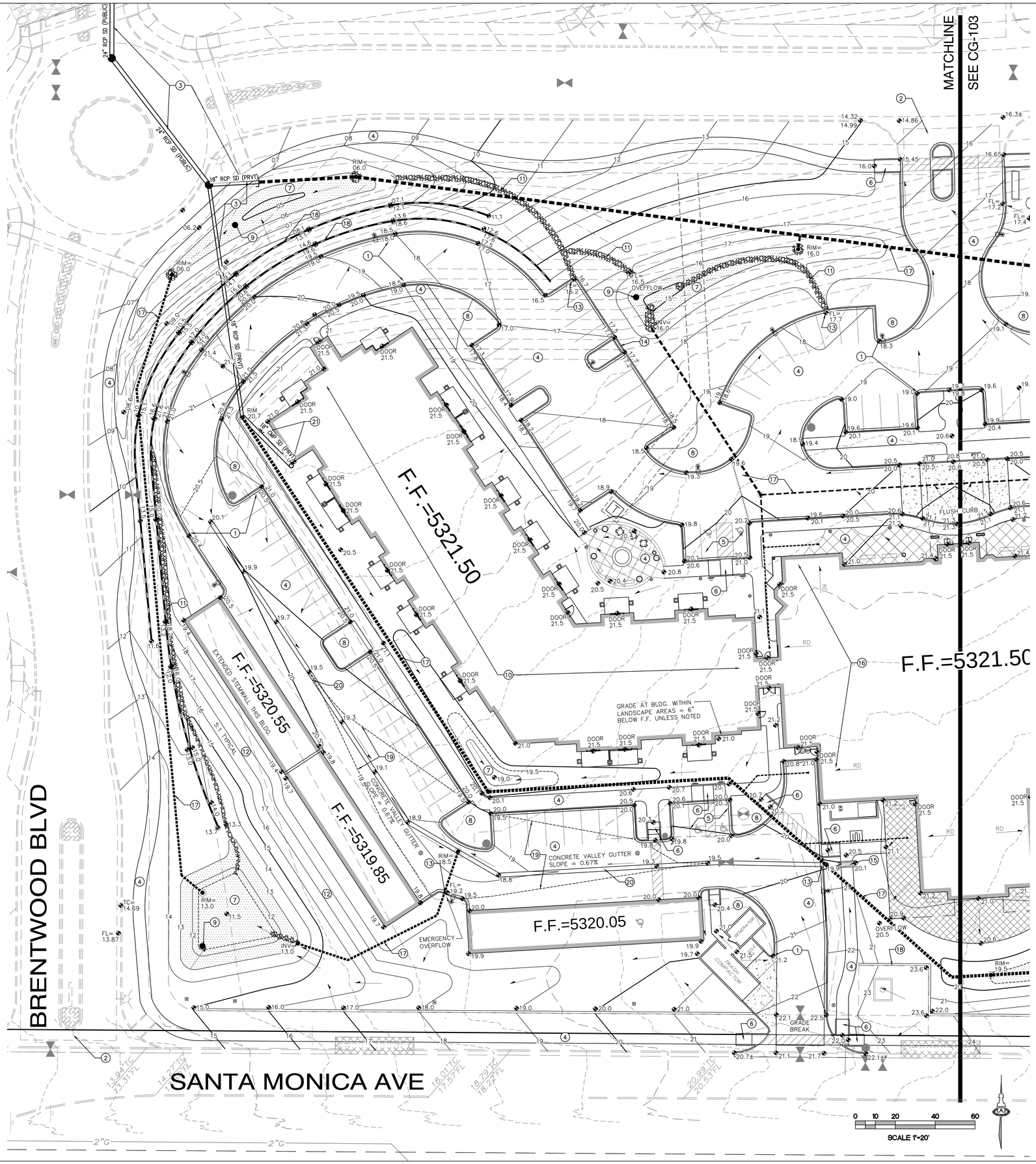
Coronado Villa Retirement Community

CAMERON GENERAL CONTRACTORS

OVERALL GRADING & DRAINAGE PLAN

Date:	No.	Revision:	Date:	Job No.
9/10/14				2051
Drawn By:				CG-101
Ckd By: FCA				SH. OF

M:\PROJECTS\2000-2099\2051\DWG\2051 CG-101.dwg, 11/21/2014 3:13:39 PM, thor



KEYED NOTES

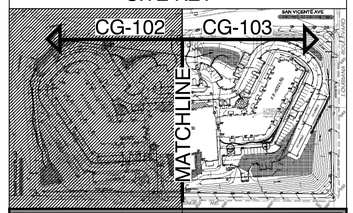
THESE NOTES ARE REFERENCED ON SHEETS CG-102 AND CG-103. NOT ALL NOTES ARE USED ON EACH SHEET.

1. SPOT ELEVATION LABELS WITHIN GUTTER AREA REPRESENT FLOWLINE UNLESS NOTED. ADD 0.5' TYPICAL FOR TOP OF CURB / TOP OF ADJACENT WALK ELEVATIONS.
2. SEE PUBLIC WORK ORDER DRAWINGS FOR CONSTRUCTION OF NEW ACCESS DRIVES WITH CONCRETE VALLEY GUTTER AND RAMPS. SEE SHEET CP-103 FOR SIDEWALK GRADES AND TYPICAL SECTIONS FOR PERIMETER SIDEWALKS ALONG PUBLIC STREETS.
3. SEE PUBLIC WORK ORDER DRAWINGS FOR CONSTRUCTION OF STORM DRAIN SYSTEM THIS AREA.
4. CONSTRUCT PAVING, CURB & GUTTER, AND WALKS AT ELEVATIONS SHOWN. SEE PAVING PLAN, PAVING DETAILS AND ARCHITECTURAL SITE DETAILS FOR ADDITIONAL INFORMATION. NOTE THAT PAVEMENT SLOPES AND CROSS-SLOPES VARY THROUGHOUT TO ACHIEVE GRADES NECESSARY TO ACHIEVE PEDESTRIAN ACCESS, STREET STORMWATER CAPACITIES, PIPE COVERAGE, ETC.
5. SLOPES WITHIN HANDICAP PARKING AREAS TO MEET ADA REQUIREMENTS. MAX. SLOPE = 2% IN ANY DIRECTION.
6. CONSTRUCT HANDICAP ACCESS RAMP TO ADA STANDARDS. SEE SHEET CP-501 FOR DETAILS.
7. CONSTRUCT RETENTION POND TO ELEVATIONS SHOWN TO CAPTURE FIRST FLUSH RUNOFF.
8. DEPRESS LANDSCAPING. NOTE: DO NOT DEPRESS LANDSCAPING WITHIN 10' OF ANY STRUCTURE.
9. CONSTRUCT PERCOLATION PIT. SEE DETAIL SHEET CG-501.
10. BUILDING ROOF DISCHARGE SHALL BE RELEASED TO ALL SIDES.
11. CONSTRUCT DRAINAGE SWALE WITH EROSION PROTECTION INTEGRATED WITH LANDSCAPING THIS AREA. SEE DETAIL SHEET CG-501.
12. SLOPE AT 4:1 MAX. (5:1 TYPICAL).
13. PROVIDE 2' WIDE OPENING IN CURB TO PASS FLOW.
14. 1' WIDE (BOTTOM WIDTH) 'U' SHAPED CONCRETE CHANNEL THROUGH PARKING ISLAND TO PASS FLOW.
15. CONSTRUCT 18" WIDE (BOTTOM WIDTH) COVERED SIDEWALK CULVERT PER DETAIL ON SHEET CG-501.
16. BUILDING ROOF DISCHARGE SHALL BE PIPED TO STORM DRAIN.
17. CONSTRUCT PRIVATE STORM DRAIN SYSTEM. SEE SHEET CG-501 FOR SIZES / SLOPES / INLET INFORMATION / MATERIALS.
18. CONSTRUCT RETAINING WALL (MAX. 5' RETAINING) TO ACHIEVE GRADE DIFFERENCE THIS AREA. STRUCTURAL / WEEPHOLE DESIGN BY OTHERS.
19. 0.5' CONTOURS ARE PROVIDED THIS AREA TO CLARIFY DRAINAGE CONCEPT.
20. CONSTRUCT 2' WIDE CONCRETE ALLEY GUTTER AT ELEVATIONS SHOWN.
21. REMOVE & DISPOSE 18" CMP PIPE AND STANDPIPE INSTALLED WITH PUBLIC WORK ORDER.
22. CONSTRUCT PCC RUNDOWN PER DETAIL ON SHEET CG-501.

LEGEND

79	PROPOSED CONTOUR – 1' INCREMENT
75.5	PROPOSED CONTOUR – 0.5' INCREMENT
78.3	PROPOSED SPOT ELEVATION
	FLOW ARROW
F.F.=XXXX.XX	FINISH FLOOR ELEVATION
78.3±	EXISTING ELEVATION (±) TO MATCH. PROVIDE SMOOTH TRANSITION.
	ROCK EROSION CONTROL
	GRADE BREAK
	PROPOSED STORM DRAIN (SEE CG5.1)
FL=	FLOWLINE ELEVATION
INV=	INVERT ELEVATION
	RETAINING WALL
	'FIRST FLUSH' RETENTION POND

SITE KEY



LISA M. WILLSSON-WEBER NEW MEXICO 17631 PROFESSIONAL ENGINEER
11-21-14

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com

2051 CG-101.dwg Nov 20,2014

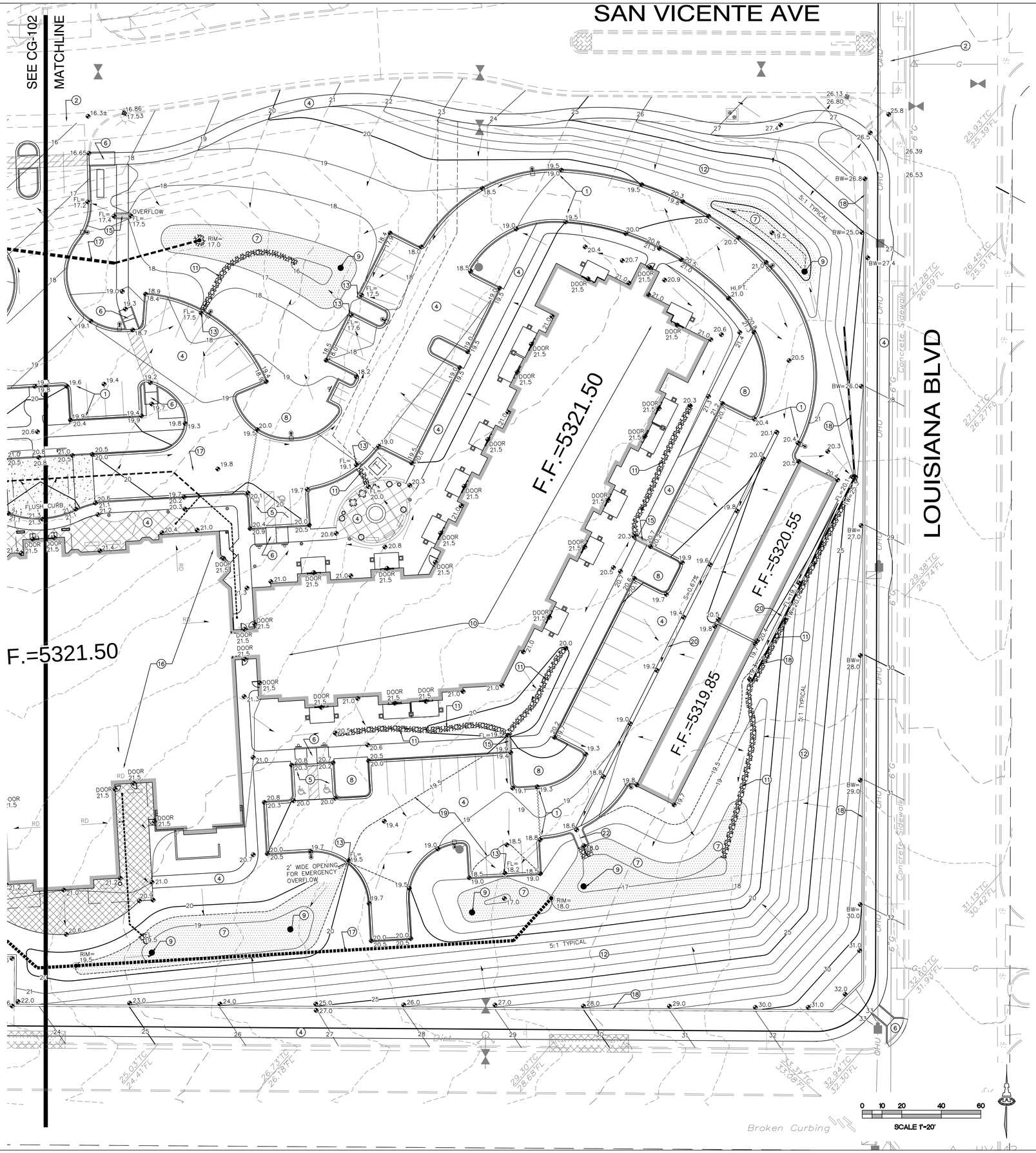
Coronado Villa Retirement Community

CAMERON GENERAL CONTRACTORS

GRADING & DRAINAGE PLAN - WEST

Date: 9/10/14	No.	Revision:	Date:	Job No. 2051
Drawn By: -				CG-102
Ckd By: FCA				SH. OF

811 Know what's below. Call before you dig.



KEYED NOTES

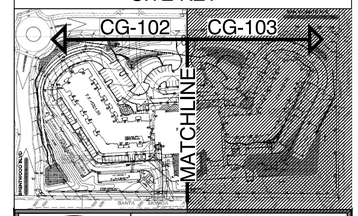
THESE NOTES ARE REFERENCED ON SHEETS CG-102 AND CG-103. NOT ALL NOTES ARE USED ON EACH SHEET.

1. SPOT ELEVATION LABELS WITHIN GUTTER AREA REPRESENT FLOWLINE UNLESS NOTED. ADD 0.5' TYPICAL FOR TOP OF CURB / TOP OF ADJACENT WALK ELEVATIONS.
2. SEE PUBLIC WORK ORDER DRAWINGS FOR CONSTRUCTION OF NEW ACCESS DRIVES WITH CONCRETE VALLEY GUTTER AND RAMPS. SEE SHEET CP-103 FOR SIDEWALK GRADES AND TYPICAL SECTIONS FOR PERIMETER SIDEWALKS ALONG PUBLIC STREETS.
3. SEE PUBLIC WORK ORDER DRAWINGS FOR CONSTRUCTION OF STORM DRAIN SYSTEM THIS AREA.
4. CONSTRUCT PAVING, CURB & GUTTER, AND WALKS AT ELEVATIONS SHOWN. SEE PAVING PLAN, PAVING DETAILS AND ARCHITECTURAL SITE DETAILS FOR ADDITIONAL INFORMATION. NOTE THAT PAVEMENT SLOPES AND CROSS-SLOPES VARY THROUGHOUT TO ACHIEVE GRADES NECESSARY TO ACHIEVE PEDESTRIAN ACCESS, STREET STORMWATER CAPACITIES, PIPE COVERAGE, ETC.
5. SLOPES WITHIN HANDICAP PARKING AREAS TO MEET ADA REQUIREMENTS. MAX. SLOPE = 2% IN ANY DIRECTION.
6. CONSTRUCT HANDICAP ACCESS RAMP TO ADA STANDARDS. SEE SHEET CP-501 FOR DETAILS.
7. CONSTRUCT RETENTION POND TO ELEVATIONS SHOWN TO CAPTURE FIRST FLUSH RUNOFF.
8. DEPRESS LANDSCAPING. NOTE: DO NOT DEPRESS LANDSCAPING WITHIN 10' OF ANY STRUCTURE.
9. CONSTRUCT PERCOLATION PIT. SEE DETAIL SHEET CG-501.
10. BUILDING ROOF DISCHARGE SHALL BE RELEASED TO ALL SIDES.
11. CONSTRUCT DRAINAGE SWALE WITH EROSION PROTECTION INTEGRATED WITH LANDSCAPING THIS AREA. SEE DETAIL SHEET CG-501.
12. SLOPE AT 4:1 MAX. (5:1 TYPICAL).
13. PROVIDE 2' WIDE OPENING IN CURB TO PASS FLOW.
14. 1' WIDE (BOTTOM WIDTH) 'U' SHAPED CONCRETE CHANNEL THROUGH PARKING ISLAND TO PASS FLOW.
15. CONSTRUCT 18" WIDE (BOTTOM WIDTH) COVERED SIDEWALK CULVERT PER DETAIL ON SHEET CG-501.
16. BUILDING ROOF DISCHARGE SHALL BE PIPED TO STORM DRAIN.
17. CONSTRUCT PRIVATE STORM DRAIN SYSTEM. SEE SHEET CG-501 FOR SIZES / SLOPES / INLET INFORMATION / MATERIALS.
18. CONSTRUCT RETAINING WALL (MAX. 5' RETAINING) TO ACHIEVE GRADE DIFFERENCE THIS AREA. STRUCTURAL / WEEPHOLE DESIGN BY OTHERS.
19. 0.5' CONTOURS ARE PROVIDED THIS AREA TO CLARIFY DRAINAGE CONCEPT.
20. CONSTRUCT 2' WIDE CONCRETE ALLEY GUTTER AT ELEVATIONS SHOWN.
21. REMOVE & DISPOSE 18" CMP PIPE AND STANDPIPE INSTALLED WITH PUBLIC WORK ORDER.
22. CONSTRUCT PCC RUNDOWN PER DETAIL ON SHEET CG-501.

LEGEND

79	PROPOSED CONTOUR – 1' INCREMENT
75.5	PROPOSED CONTOUR – 0.5' INCREMENT
78.3	PROPOSED SPOT ELEVATION
	FLOW ARROW
F.F.=XXXX.XX	FINISH FLOOR ELEVATION
78.3±	EXISTING ELEVATION (±) TO MATCH. PROVIDE SMOOTH TRANSITION.
	ROCK EROSION CONTROL
	GRADE BREAK
	PROPOSED STORM DRAIN (SEE CG5.1)
FL=	FLOWLINE ELEVATION
INV=	INVERT ELEVATION
	RETAINING WALL
	'FIRST FLUSH' RETENTION POND

SITE KEY



ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com

JOSH M. WILSSON-WEBER — NEW MEXICO — 17631 — REGISTERED PROFESSIONAL ENGINEER
11-21-14

2051 CG-101.dwg Nov 20,2014

Coronado Villa Retirement Community

CAMERON GENERAL CONTRACTORS

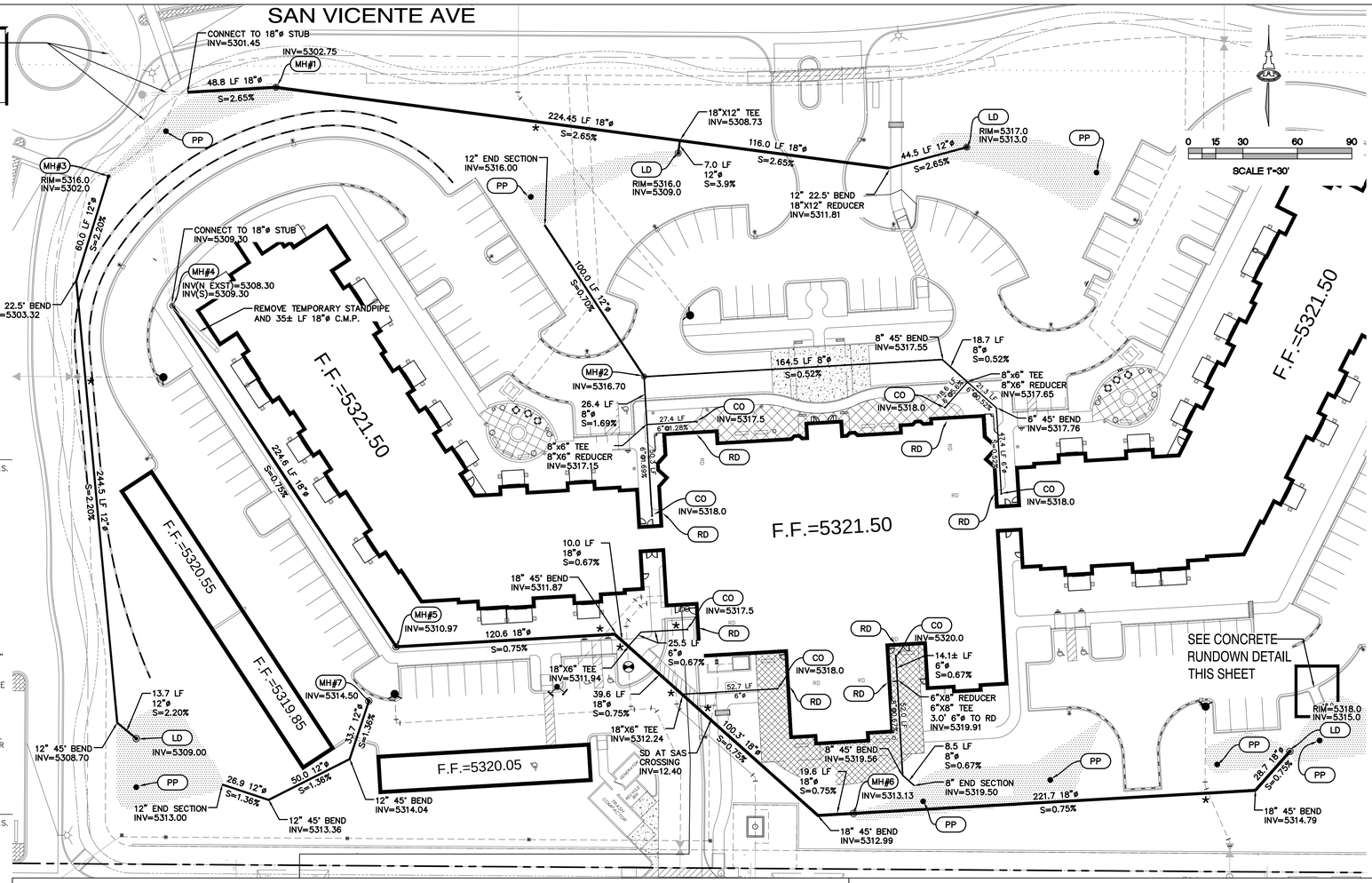
GRADING & DRAINAGE PLAN - EAST

Date:	No.	Revision:	Date:	Job No.
9/10/14				2051
Drawn By: -				CG-103
Ckd By: FCA				SH. OF

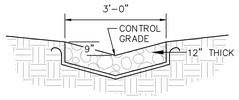
Know what's below. Call before you dig.

M:\PROJECTS\2000-2099\2051\DWG\2051 CG-101.dwg, 11/21/2014 3:14:02 PM, thor

STORM DRAIN TO BE CONSTRUCTED BY PUBLIC WORK ORDER PRIOR TO OR CONCURRENT WITH THE PRIVATE STORM DRAIN CONSTRUCTION. INVERT ELEVATION SHOWN IS DESIGN INVERT (NOT AS-BUILT).



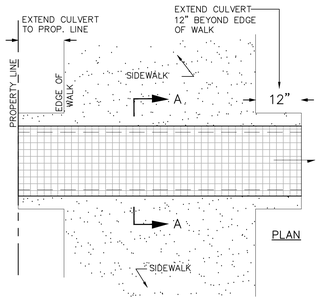
CONSTRUCT ALL SWALES BELOW ADJACENT GRADE TO ENSURE RUNOFF CAN BE CAPTURED AND CONVEYED PROPERLY



- VARY FRACTURED FACE ROCK SIZE BETWEEN 4" AND 8" DIA. (AVG.=6").
- PLACE GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.) BENEATH ALL EROSION PROTECTION.

DRAINAGE SWALE

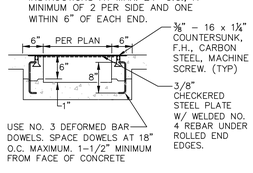
SCALE: N.T.S.



PLAN

WELD ⅛" THICK, ⅝" MIN. DIAMETER OVER ALL SCREWS. COMPLETELY COVER SCREW HEADS. GRIND EDGES SMOOTH.

FOR SECURING PLATE USE 1"X5" S.S. ROD ANCHOR, "RED HEAD MULTI-SET II SRM-38 ANCHOR" OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS AT MAX. 24" O.C., A MINIMUM OF 2 PER SIDE AND ONE WITHIN 6" OF EACH END.



SECTION A-A

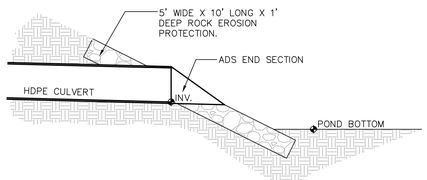
COVERED SIDEWALK CULVERT

SCALE: N.T.S.

1. ALL EXPOSED CONCRETE EDGES NOT SPECIFICALLY DIMENSIONED SHALL BE SHAPED WITH A 3/8" EDGING TOOL.
2. SILICON SEAL ALL DRAINAGE FEATURE EXPANSION JOINTS.

'U' SHAPED CONC. CHANNEL

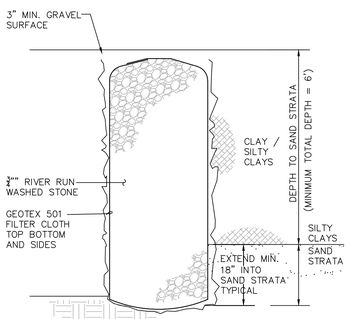
SCALE: N.T.S.



STORM DRAIN LINE OUTLETS WITH END SECTIONS

GENERAL INFORMATION

SCALE: N.T.S.



PERCOLATION PIT

SCALE: N.T.S.

STORM DRAIN DESIGN

MH# NYLOPLAST MANHOLE (SEE INDIVIDUAL BASIN DESIGNS THIS SHEET)

ALL MANHOLES (MH):
- ADS NYLOPLAST BASIN (SEE DESIGN INFORMATION FOR DIAMETER)
- 2' SUMP
- MH#1, MH#3, MH#4, MH#6: 18"ø LOCKING DOMED GRATE
- MH#2: 18"ø LOCKING SOLID GRATE
- MH#5: 24"ø LOCKING DOMED GRATE
- MH#7: 24"X24" ROAD TRAFFIC INLET
- 8" WIDE X 6" DEEP CONCRETE COLLAR

CO NYLOPLAST BASIN CLEANOUT

ALL CLEANOUTS (CO):
- 8"ø ADS INLINE DRAIN WITH 6" OUT.
- 8"X6" TEE
- LOCKING SOLID GRATE (H-20 TRAFFIC RATED)
- 8" WIDE X 6" DEEP CONCRETE COLLAR

LD LANDSCAPE AREA INLINE DRAIN INLET

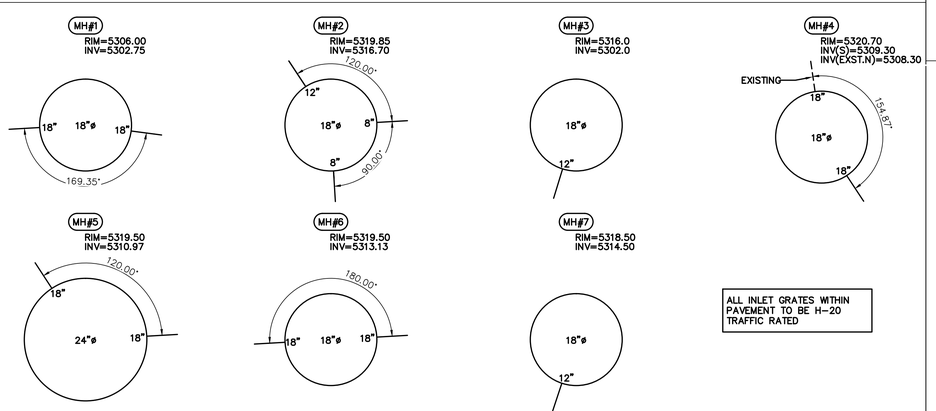
ALL LANDSCAPE AREA INLETS (LD)
- 18"ø ADS NYLOPLAST BASIN
- 2' SUMP
- LOCKING DOMED GRATE
- 8" WIDE X 6" DEEP CONCRETE COLLAR

RD ROOF DRAIN DISCHARGE PIPE
SEE PLUMBING PLAN FOR DIAMETER AND INVERT (TYP). EXTEND TO CLEANOUT USING WATERTIGHT FITTINGS AS REQUIRED. (TYP)

PP PERCOLATION PIT
SEE DETAIL THIS SHEET.

* STORM SEWER CROSSING UTILITY SERVICE

LEGEND



ALL INLET GRATES WITHIN PAVEMENT TO BE H-20 TRAFFIC RATED

NYLOPLAST BASIN DESIGN INFORMATION

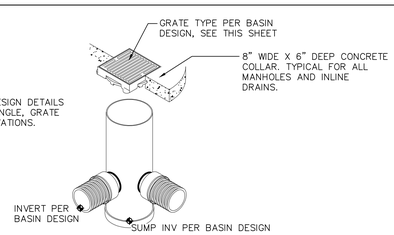
SCALE: N.T.S.

STORM DRAIN GENERAL NOTES

A. ALL PRIVATE STORM DRAIN LINES AND FITTINGS TO BE ADS N-12WT (WATERTIGHT) UNLESS NOTED.

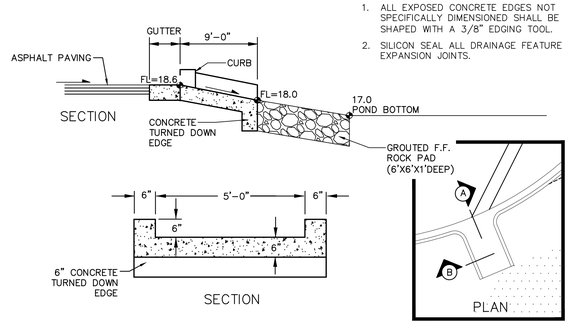
B. INSTALL ALL STORM DRAIN INLETS AND PIPE PER MANUFACTURER'S SPECIFICATIONS.

C. STORM DRAIN SYSTEM WILL REQUIRE REGULAR MAINTENANCE TO ENSURE PROPER FUNCTIONING DURING STORM EVENTS. ENGINEER RECOMMENDS THAT OWNER PUT IN PLACE INSPECTION AND MAINTENANCE REQUIREMENTS SCHEDULED TO OCCUR MONTHLY AND AFTER EACH STORM EVENT.



TYPICAL NYLOPLAST BASIN

SCALE: N.T.S.



1. ALL EXPOSED CONCRETE EDGES NOT SPECIFICALLY DIMENSIONED SHALL BE SHAPED WITH A 3/8" EDGING TOOL.
2. SILICON SEAL ALL DRAINAGE FEATURE EXPANSION JOINTS.

CONCRETE RUNDOWN

SCALE: N.T.S.

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com

OLIVER M. WILSSON-WEBER NEW MEXICO 17631 REGISTERED PROFESSIONAL ENGINEER
11-21-14

2051 CG-501.dwg Nov 21,2014

Coronado Villa Retirement Community

CAMERON GENERAL CONTRACTORS

DRAINAGE DETAILS

Date:	No.	Revision:	Date:	Job No.
9/10/14				2051
Drawn By: -				CG-501
Ckd By: FCA				SH. OF