Transect Number: CM-124-1

Elevation profile

_____
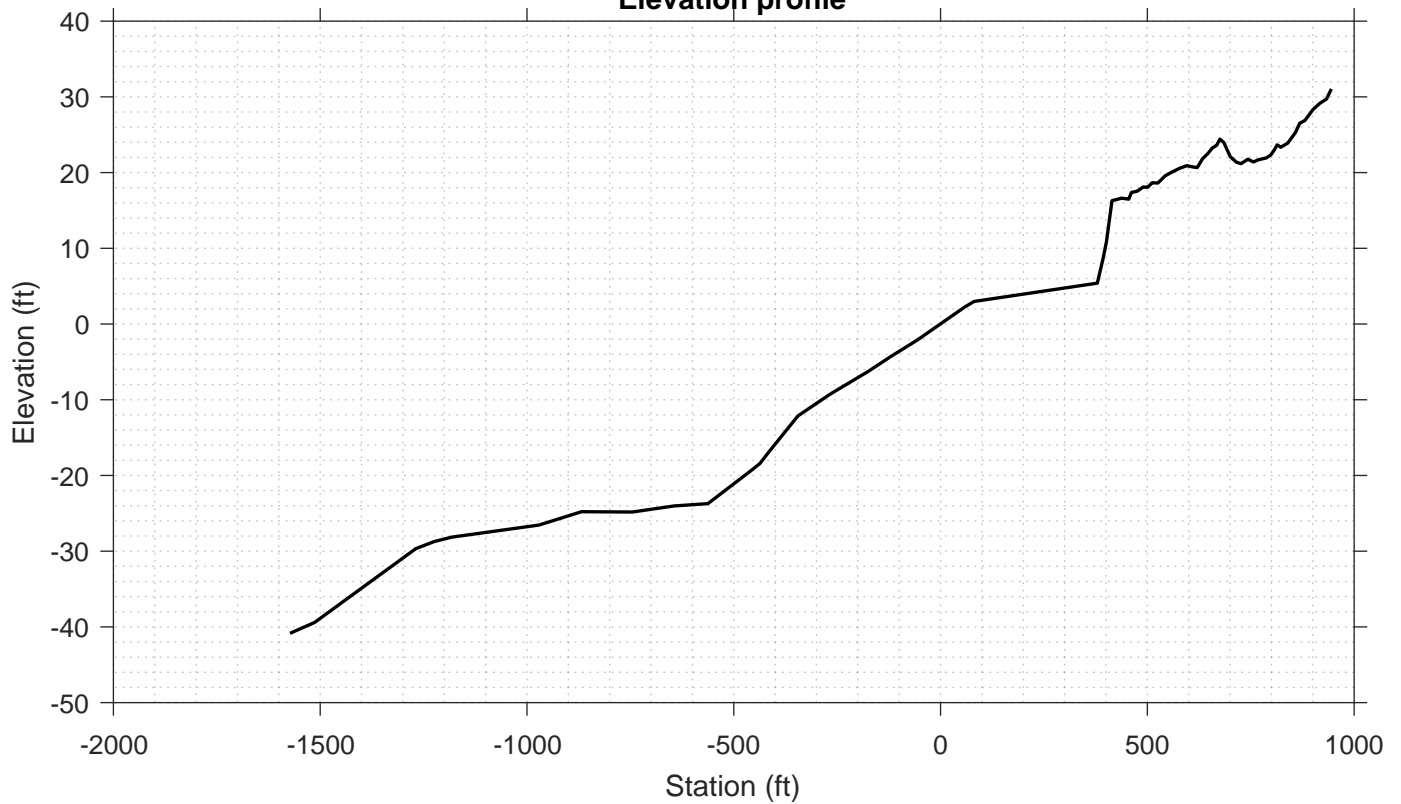
PART 1: USER INPUT

SWAN 1-D / WHAFIS input
_____
station: -511 ft
LON: -70.0124 deg E
LAT: 43.785 deg N
Bottom ELEV: -21.5647 ft-NAVD88
TWL: 8.9825 ft-NAVD88
HS: 2.6133 ft
TP: 3.4 sec
Wave Direction bin: 270 deg CCW from East (90 deg sector)
Transect Direction: 282.2554 deg CCW from East

TAW/RUNUP input
_____
toe sta: 379 ft
toe elev: 5.397 ft-NAVD88
top sta: 414.5 ft
top elev: 16.2894 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE_____

transectCM-124-1: User-Selected inputs

Cross-shore Distance (feet)

Elevation (ft), Significant Wave Height (ft), Period (sec)

Legend:
- Transect Profile
- ADCIRC Profile
- TWL
- HS
- TP
- 1-D Wave start
- TAW toe/top
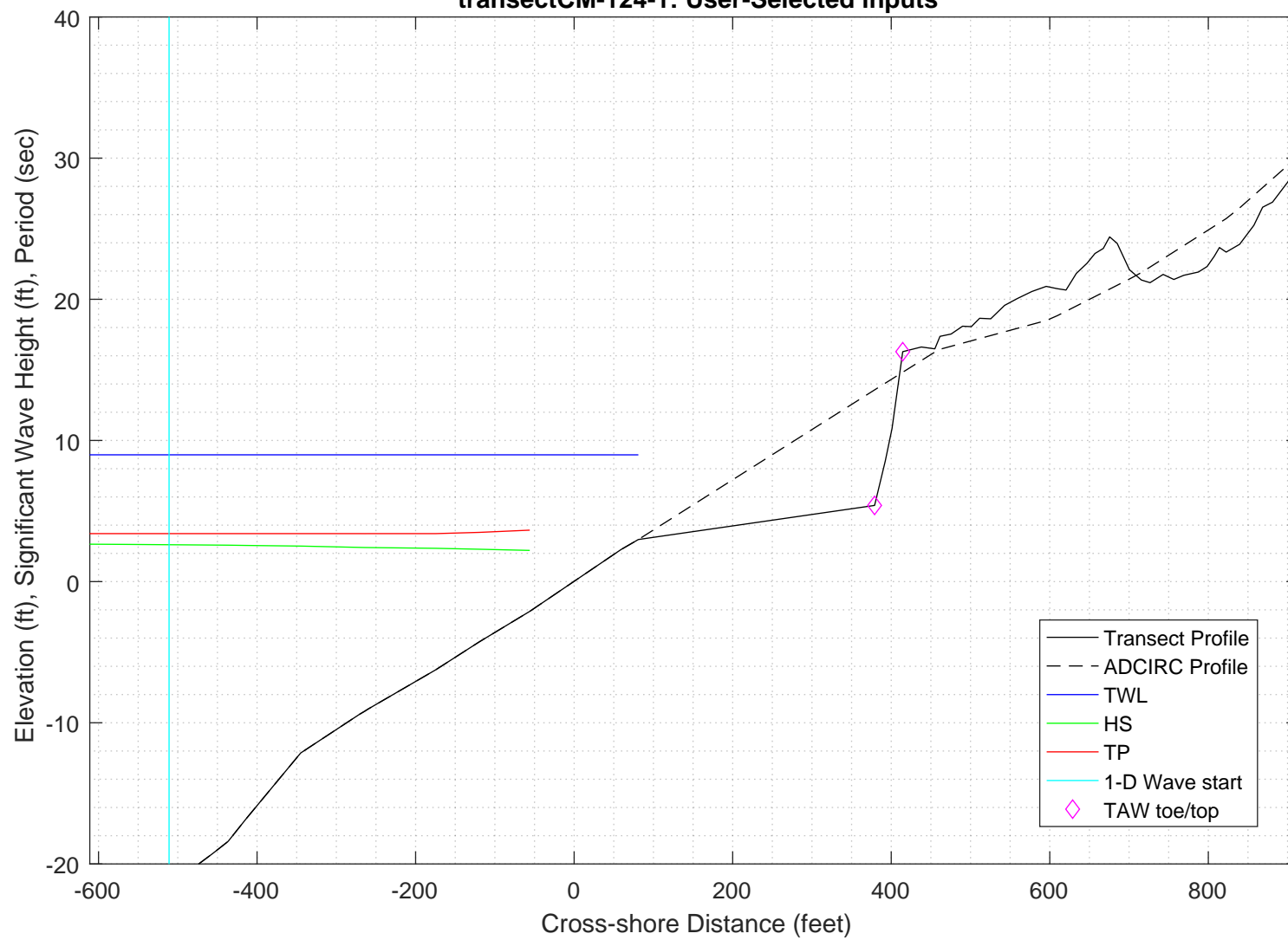
```
_____
PART 2: SWAN 1-D

swan input grid name: 2_swan/gridfiles/CM-124-1zmeters_xmeters.grd
swan file name:       2_swan/swanfiles/CM-124-1.swn
swan output name:     2_swan/swanfiles/CM-124-1.dat

Boundary Conditions:
    TWL- 2.7379 meters
    HS-  0.79654 meters
    PER- 3.4 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.089504 feet
SWAN output at toe:
    SETUP- 0.026568 feet
    HS-    1.7682 feet
    PER-   3.343 seconds

PART 2 COMPLETE_____
```

2-D ADCIRC+SWAN and SWAN 1-D results, Transect: CM-124-1

Legend:
- Transect Profile
- TWL (ADC 2D)
- TWL (SWN 1D)
- Hs (ADC 2D)
- Hs (SWN 1D)

X-axis: Station (ft)
Y-axis: Elevation, TWL, HS (ft)
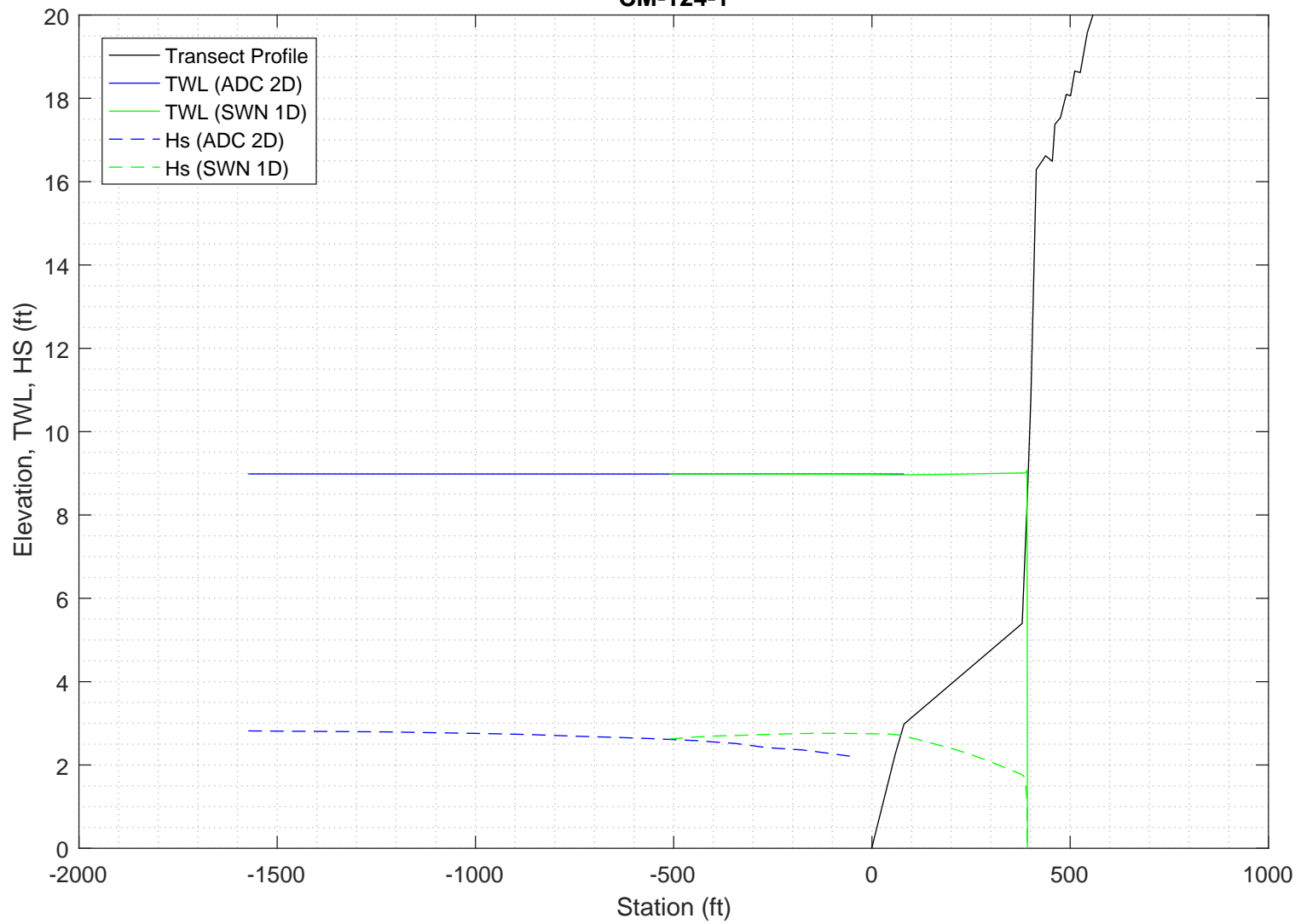
                    Execution started at 20200220.141919

                                      SWAN
                    SIMULATION OF WAVES IN NEAR SHORE AREAS
                             VERSION NUMBER 41.20A

 PROJECT '2018FemaAppeal' '1'

    '100-year Wind and Wave conditions'

 ! -- SET commands ---

  SET DEPMIN=0.01 MAXMES=999 MAXERR=3 PWTAIL=4

  SET LEVEL 0

  SET CARTESIAN

 ! -- MODE commands --

  MODE STATIONARY ONED

 !-- COORDINATES commands--

 COORDINATES CART

 !

 ! -- computational (CGRID) grid commands ------------------------------------

 !   xlenc=length of grid in meters

 ! mxc = number of mesh cells (one less than number of grid points)

 !CGRID REGular [xpc] [ypc] [alpc] [xlenc]   [ylenc] [mxc] [myc] &

 !   [CIRcle|SECtor[dir1] [dir2]] [mdc] [flow] [fhigh] [msc]

  CGRID REGULAR   0   0   0   277   0.   277   0   &
           CIRCLE   36   0.03   0.8   30
 Resolution in sigma-space: df/f = 0.1157

 ! -- READgrid ---- not used in 1-D mode ------------------------------------

 ! -- INPgrid commands --

 !INPgrid BOTtom REGular [xpinp] [ypinp] [alpinp] [mxinp] [myinp] [dxinp] [dyinp]

 !

  INPGRID BOTTOM REGULAR   0   0   0   277   0   1   1

 !READinp BOTtom [fac] 'fname1' [idla] [nhedf] [FREe|FORmat[form]|UNFormatted]

  READ   BOTTOM   -1. '../gridfiles/CM-124-1zmeters_xmeters.grd'   1   0   FREE

 !--

 ! -- WIND [vel] [dir]

 WIND   25.1 0

 ! -- BOUnd SHAPespec

 BOUND SHAPE JONSWAP 3.3 PEAK DSPR POWER

 ! -- BOUndspec

 ! BOU SIDE W CCW CON FILE 'swanspec.txt' 1

 BOUN SIDE W CCW CONSTANT PAR   0.79654   3.4   0 2

 !-- BOUndnest1 - optional for boundary from parent run

 !-- BOUndnest2

 !-- BOUndnest3

 !-- INITial -- usest to specify initial values

 !

```
!---------------- P H Y S I C S ------------------------
!-- GEN1 [cf10] [cf20] [cf30] [cf40] [edm1pm] [cdrag] [umin] [cfpm]
!-- GEN2 [cf10] [cf20] [cf30] [cf40] [cf50] [cf60] [edm1pm] [cdrag] [umin] [cfpm]
    GEN3 KOMEN
!   whitecapping ( on by default)
!-- WCAPping KOMen [cds2] [stpm] [powst] [delta] [powk]
    WCAP KOM
!   quadruplet wave interactions
!-- QUADrupl [iquad] [lambda] [Cn14] [Csh1] [Csh2]
! -- BREaking CONstant [alpha] [gamma]
     BREAK    CON      1.      0.73
!-- FRICtion JONswap CONstant [cfjon]
    FRIC    JONSWAP CON       0.038
!-- TRIad [itriad] [trfac] [cutfr]   [a]  [b]  [urcrit] [urslim]
! TRIAD       1     0.65    2.5     0.95 -0.75  0.2       0.01
   TRIAD
!-- VEGEtation [height] [diamtr] [nstems] [drag]
!-- MUD [layer] [rhom] [viscm]
!- LIMiter [ursell] [qb] deactivates quadruplets with Ursell number exceeds ursell
!-- OBSTacle -- not in 1-D
!-- SETUP [supcor]
    SETUP    0
!
! ---------------- N U M E R I C S -----------------------------
!
!-- PROP  can use BBST or GSE instead of default
! -- NUMeric -- lots of options
!     NUM ACCUR npnts=100. stat 30
    NUMeric STOPC
!
! ------------------O U T P U T -------------------------------
!
!OUTPut OPTIons "comment' (TABLE [field]) (BLOck [ndec] [len]) (SPEC [ndec])
 OUTPUT OPTIONS '%' TABLE 16
 $BLOCK 9 1000 SPEC 8
!CURve 'sname' [xp1] [yp1] <[int]   [xp]   [yp] >
 CURVE 'curve' 0     0       277  277     0
!TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)
 Table 'curve'   HEADER 'CM-124-1.dat' XP YP HSIGN TPS RTP TMM10 DIR &
 DSPR DEPTH SETUP
!QUANTITY XP hexp=99999
!
!-------------------------------------------
 COMPUTE STATIONARY
-----------------------------------------------------------------
                COMPUTATIONAL PART OF SWAN
-----------------------------------------------------------------
```

```
One-dimensional mode of SWAN is activated
Gridresolution        : MXC               278 MYC                 1
                       : MCGRD             279
                       : MSC                31 MDC                36
                       : MTC                 1
                       : NSTATC              0 ITERMX             50
Propagation flags      : ITFRE               1 IREFR               1
Source term flags      : IBOT                1 ISURF              1
                       : IWCAP               1 IWIND               3
                       : ITRIAD              1 IQUAD               2
                       : IVEG                0 ITURBV             0
                       : IMUD                0
Spatial step           : DX        0.1000E+01 DY       0.1000E+01
Spectral bin           : df/f      0.1157E+00 DDIR     0.1000E+02
Physical constants     : GRAV      0.9810E+01 RHO      0.1025E+04
Wind input             : WSPEED    0.2510E+02 DIR      0.0000E+00
Tail parameters        : E(f)      0.4000E+01 E(k)     0.2500E+01
                       : A(f)      0.5000E+01 A(k)     0.3000E+01
Accuracy parameters    : DREL      0.1000E-01 NPNTS    0.9950E+02
                       : DHABS     0.0000E+00 CURVAT   0.5000E-02
                       : GRWMX     0.1000E+00
Drying/flooding        : LEVEL     0.0000E+00 DEPMIN   0.1000E-01
The Cartesian convention for wind and wave directions is used
Scheme for geographic propagation is SORDUP
Scheme geogr. space  : PROPSC              2 ICMAX               7
Scheme spectral space: CSS       0.5000E+00 CDD      0.5000E+00
Current is off
Quadruplets            : IQUAD               2
                       : LAMBDA    0.2500E+00 CNL4     0.3000E+08
                       : CSH1      0.5500E+01 CSH2     0.8330E+00
                       : CSH3     -0.1250E+01
Maximum Ursell nr for Snl4 :     0.1000E+02
Triads                 : ITRIAD              1 TRFAC    0.8000E+00
                       : CUTFR     0.2500E+01 URCRI    0.2000E+00
Minimum Ursell nr for Snl3 :     0.1000E-01
JONSWAP ('73)          : GAMMA     0.3800E-01
Vegetation is off
Turbulence is off
Fluid mud is off
W-cap Komen ('84)      : EMPCOF (CDS2):   0.2360E-04
W-cap Komen ('84)      : APM (STPM)   :   0.3020E-02
W-cap Komen ('84)      : POWST        :   0.2000E+01
W-cap Komen ('84)      : DELTA        :   0.1000E+01
W-cap Komen ('84)      : POWK         :   0.1000E+01
Wind drag is fit
Snyder/Komen wind input
Battjes&Janssen ('78): ALPHA     0.1000E+01 GAMMA    0.7300E+00
Set-up                 : SUPCOR    0.0000E+00
Diffraction is off
Janssen ('89,'90)    : ALPHA     0.1000E-01 KAPPA    0.4100E+00
Janssen ('89,'90)    : RHOA      0.1280E+01 RHOW     0.1025E+04

1st and 2nd gen. wind: CF10      0.1880E+03 CF20     0.5900E+00
                       : CF30      0.1200E+00 CF40     0.2500E+03
                       : CF50      0.2300E-02 CF60    -0.2230E+00
                       : CF70      0.0000E+00 CF80    -0.5600E+00
                       : RHOAW     0.1249E-02 EDMLPM   0.3600E-02
                       : CDRAG     0.1230E-02 UMIN     0.1000E+01
                       : LIM_PM    0.1300E+00

   -----------------------------------------------------------------
   First guess by 2nd generation model flags for first iteration:
   ITER       1 GRWMX       0.1000E+23 ALFA        0.0000E+00
   IWIND      2 IWCAP       0 IQUAD       0
   ITRIAD     1 IBOT        1 ISURF       1
   IVEG       0 ITURBV      0 IMUD        0
   -----------------------------------------------------------------
iteration   1; sweep 1
iteration   1; sweep 2
iteration   1; sweep 3
iteration   1; sweep 4
not possible to compute, first iteration

   -----------------------------------------------------------------
   Options given by user are activated for proceeding calculation:
   ITER       2 GRWMX       0.1000E+00 ALFA        0.0000E+00
   IWIND      3 IWCAP       1 IQUAD       2
   ITRIAD     1 IBOT        1 ISURF       1
   IVEG       0 ITURBV      0 IMUD        0
   -----------------------------------------------------------------
iteration   2; sweep 1
iteration   2; sweep 2
iteration   2; sweep 3
iteration   2; sweep 4
accuracy OK in   2.90 % of wet grid points ( 99.50 % required)

iteration   3; sweep 1
iteration   3; sweep 2
iteration   3; sweep 3
```

```
iteration     3; sweep 4
accuracy OK in   0.37 % of wet grid points ( 99.50 % required)

iteration     4; sweep 1
iteration     4; sweep 2
iteration     4; sweep 3
iteration     4; sweep 4
accuracy OK in  19.21 % of wet grid points ( 99.50 % required)

iteration     5; sweep 1
iteration     5; sweep 2
iteration     5; sweep 3
iteration     5; sweep 4
accuracy OK in  54.72 % of wet grid points ( 99.50 % required)

iteration     6; sweep 1
iteration     6; sweep 2
iteration     6; sweep 3
iteration     6; sweep 4
accuracy OK in  80.80 % of wet grid points ( 99.50 % required)

iteration     7; sweep 1
iteration     7; sweep 2
iteration     7; sweep 3
iteration     7; sweep 4
accuracy OK in 100.00 % of wet grid points ( 99.50 % required)


STOP
```

```
%    Xp            Yp            Hsig          TPsmoo        RTpeak        Tm_10         Dir           Dspr          Depth         Setup
%    [m]           [m]           [m]           [sec]         [sec]         [sec]         [degr]        [degr]        [m]           [m]
%
       0.            0.          0.79987        3.3388        3.3473        3.0583        0.001        31.5297        9.3100        0.000000
       1.            0.          0.80057        3.3387        3.3473        3.0563        0.001        31.5322        9.2700       -0.000004
       2.            0.          0.80126        3.3386        3.3473        3.0543        0.001        31.5348        9.2300       -0.000007
       3.            0.          0.80195        3.3385        3.3473        3.0523        0.001        31.5369        9.1900       -0.000011
       4.            0.          0.80261        3.3384        3.3473        3.0503        0.001        31.5389        9.1400       -0.000015
       5.            0.          0.80330        3.3383        3.3473        3.0483        0.001        31.5413        9.1000       -0.000019
       6.            0.          0.80398        3.3382        3.3473        3.0463        0.001        31.5437        9.0600       -0.000023
       7.            0.          0.80467        3.3381        3.3473        3.0443        0.001        31.5461        9.0200       -0.000027
       8.            0.          0.80534        3.3380        3.3473        3.0424        0.001        31.5482        8.9800       -0.000031
       9.            0.          0.80598        3.3379        3.3473        3.0403        0.001        31.5503        8.9300       -0.000035
      10.            0.          0.80665        3.3378        3.3473        3.0384        0.001        31.5530        8.8900       -0.000039
      11.            0.          0.80740        3.3377        3.3473        3.0360        0.003        31.5532        8.8500       -0.000044
      12.            0.          0.80820        3.3376        3.3473        3.0334        0.007        31.5519        8.8100       -0.000048
      13.            0.          0.80897        3.3375        3.3473        3.0309        0.012        31.5524        8.7699       -0.000052
      14.            0.          0.80971        3.3374        3.3473        3.0285        0.017        31.5540        8.7299       -0.000057
      15.            0.          0.81041        3.3373        3.3473        3.0261        0.022        31.5553        8.6799       -0.000062
      16.            0.          0.81111        3.3372        3.3473        3.0240        0.025        31.5577        8.6399       -0.000066
      17.            0.          0.81185        3.3371        3.3473        3.0217        0.031        31.5611        8.5999       -0.000071
      18.            0.          0.81257        3.3370        3.3473        3.0194        0.038        31.5647        8.5599       -0.000076
      19.            0.          0.81320        3.3369        3.3473        3.0173        0.041        31.5682        8.5099       -0.000081
      20.            0.          0.81385        3.3368        3.3473        3.0154        0.043        31.5717        8.4699       -0.000085
      21.            0.          0.81447        3.3367        3.3473        3.0133        0.044        31.5745        8.4199       -0.000091
      22.            0.          0.81516        3.3366        3.3473        3.0111        0.051        31.5789        8.3799       -0.000095
      23.            0.          0.81582        3.3364        3.3473        3.0088        0.058        31.5805        8.3299       -0.000101
      24.            0.          0.81636        3.3363        3.3473        3.0064        0.062        31.5787        8.2599       -0.000107
      25.            0.          0.81688        3.3361        3.3473        3.0041        0.066        31.5750        8.1899       -0.000114
      26.            0.          0.81732        3.3360        3.3473        3.0017        0.068        31.5717        8.1099       -0.000121
      27.            0.          0.81778        3.3358        3.3473        2.9995        0.071        31.5689        8.0399       -0.000128
      28.            0.          0.81822        3.3356        3.3473        2.9973        0.073        31.5664        7.9699       -0.000135
      29.            0.          0.81869        3.3355        3.3473        2.9949        0.081        31.5663        7.8999       -0.000142
      30.            0.          0.81915        3.3353        3.3473        2.9926        0.087        31.5659        7.8299       -0.000149
      31.            0.          0.81963        3.3352        3.3473        2.9904        0.091        31.5639        7.7698       -0.000156
      32.            0.          0.82004        3.3350        3.3473        2.9881        0.094        31.5604        7.6998       -0.000164
      33.            0.          0.82044        3.3349        3.3473        2.9859        0.097        31.5553        7.6298       -0.000171
      34.            0.          0.82084        3.3347        3.3473        2.9836        0.101        31.5503        7.5598       -0.000180
      35.            0.          0.82128        3.3346        3.3473        2.9815        0.104        31.5449        7.4998       -0.000187
      36.            0.          0.82165        3.3344        3.3473        2.9792        0.108        31.5385        7.4298       -0.000196
      37.            0.          0.82197        3.3342        3.3473        2.9771        0.110        31.5318        7.3598       -0.000205
      38.            0.          0.82226        3.3341        3.3473        2.9750        0.112        31.5262        7.2898       -0.000214
      39.            0.          0.82255        3.3339        3.3473        2.9729        0.116        31.5222        7.2198       -0.000223
      40.            0.          0.82291        3.3338        3.3473        2.9707        0.124        31.5215        7.1598       -0.000231
      41.            0.          0.82317        3.3336        3.3473        2.9686        0.129        31.5173        7.0898       -0.000241
      42.            0.          0.82339        3.3334        3.3473        2.9665        0.132        31.5108        7.0197       -0.000251
      43.            0.          0.82361        3.3333        3.3473        2.9645        0.135        31.5044        6.9497       -0.000261
      44.            0.          0.82386        3.3331        3.3473        2.9626        0.138        31.4981        6.8897       -0.000270
      45.            0.          0.82402        3.3330        3.3473        2.9606        0.140        31.4904        6.8197       -0.000281
      46.            0.          0.82416        3.3328        3.3473        2.9586        0.142        31.4808        6.7497       -0.000292
      47.            0.          0.82429        3.3327        3.3473        2.9566        0.143        31.4696        6.6797       -0.000303
      48.            0.          0.82442        3.3325        3.3473        2.9546        0.146        31.4592        6.6097       -0.000315
      49.            0.          0.82463        3.3324        3.3473        2.9526        0.149        31.4482        6.5497       -0.000326
      50.            0.          0.82476        3.3322        3.3473        2.9505        0.154        31.4361        6.4797       -0.000339
      51.            0.          0.82499        3.3321        3.3473        2.9485        0.158        31.4284        6.4196       -0.000351
      52.            0.          0.82547        3.3320        3.3473        2.9468        0.162        31.4244        6.3896       -0.000359
      53.            0.          0.82584        3.3319        3.3473        2.9451        0.166        31.4208        6.3496       -0.000368
      54.            0.          0.82619        3.3318        3.3473        2.9435        0.168        31.4188        6.3096       -0.000378
      55.            0.          0.82662        3.3317        3.3473        2.9420        0.171        31.4176        6.2796       -0.000386
      56.            0.          0.82694        3.3316        3.3473        2.9404        0.174        31.4150        6.2396       -0.000396
      57.            0.          0.82725        3.3315        3.3473        2.9389        0.177        31.4140        6.1996       -0.000406
      58.            0.          0.82766        3.3314        3.3473        2.9374        0.182        31.4141        6.1696       -0.000414
      59.            0.          0.82797        3.3313        3.3473        2.9358        0.186        31.4121        6.1296       -0.000425
```

60.	0.	0.82826	3.3312	3.3473	2.9343	0.189	31.4084	6.0896	-0.000435
61.	0.	0.82860	3.3312	3.3473	2.9327	0.193	31.4047	6.0496	-0.000446
62.	0.	0.82905	3.3311	3.3473	2.9311	0.199	31.4010	6.0195	-0.000456
63.	0.	0.82938	3.3310	3.3473	2.9295	0.205	31.3956	5.9795	-0.000467
64.	0.	0.82968	3.3309	3.3473	2.9279	0.209	31.3917	5.9395	-0.000478
65.	0.	0.83006	3.3308	3.3473	2.9265	0.211	31.3866	5.9095	-0.000488
66.	0.	0.83035	3.3307	3.3473	2.9250	0.212	31.3783	5.8695	-0.000500
67.	0.	0.83063	3.3306	3.3473	2.9235	0.213	31.3708	5.8295	-0.000512
68.	0.	0.83099	3.3306	3.3473	2.9222	0.213	31.3634	5.7995	-0.000522
69.	0.	0.83123	3.3305	3.3473	2.9208	0.214	31.3545	5.7595	-0.000535
70.	0.	0.83146	3.3304	3.3473	2.9194	0.216	31.3465	5.7195	-0.000547
71.	0.	0.83180	3.3303	3.3473	2.9181	0.219	31.3384	5.6894	-0.000558
72.	0.	0.83204	3.3303	3.3473	2.9166	0.222	31.3283	5.6494	-0.000571
73.	0.	0.83228	3.3302	3.3473	2.9152	0.226	31.3189	5.6094	-0.000584
74.	0.	0.83262	3.3301	3.3473	2.9138	0.229	31.3091	5.5794	-0.000595
75.	0.	0.83288	3.3301	3.3473	2.9124	0.231	31.2989	5.5394	-0.000609
76.	0.	0.83324	3.3300	3.3473	2.9110	0.233	31.2880	5.5094	-0.000621
77.	0.	0.83349	3.3299	3.3473	2.9096	0.235	31.2771	5.4694	-0.000636
78.	0.	0.83382	3.3299	3.3473	2.9083	0.239	31.2679	5.4394	-0.000648
79.	0.	0.83415	3.3298	3.3473	2.9070	0.242	31.2591	5.4093	-0.000661
80.	0.	0.83445	3.3297	3.3473	2.9057	0.247	31.2491	5.3793	-0.000673
81.	0.	0.83464	3.3297	3.3473	2.9044	0.252	31.2392	5.3393	-0.000688
82.	0.	0.83492	3.3296	3.3473	2.9032	0.257	31.2300	5.3093	-0.000700
83.	0.	0.83522	3.3296	3.3473	2.9020	0.261	31.2191	5.2793	-0.000714
84.	0.	0.83551	3.3295	3.3473	2.9009	0.263	31.2053	5.2493	-0.000727
85.	0.	0.83567	3.3295	3.3473	2.8996	0.266	31.1909	5.2093	-0.000743
86.	0.	0.83593	3.3294	3.3473	2.8985	0.268	31.1783	5.1792	-0.000757
87.	0.	0.83619	3.3294	3.3473	2.8975	0.270	31.1660	5.1492	-0.000771
88.	0.	0.83644	3.3293	3.3473	2.8964	0.273	31.1511	5.1192	-0.000785
89.	0.	0.83661	3.3293	3.3473	2.8952	0.275	31.1350	5.0792	-0.000802
90.	0.	0.83694	3.3292	3.3473	2.8940	0.278	31.1207	5.0492	-0.000818
91.	0.	0.83728	3.3292	3.3473	2.8928	0.280	31.1071	5.0192	-0.000833
92.	0.	0.83760	3.3291	3.3473	2.8916	0.283	31.0899	4.9892	-0.000849
93.	0.	0.83779	3.3291	3.3473	2.8904	0.285	31.0714	4.9491	-0.000868
94.	0.	0.83807	3.3291	3.3473	2.8893	0.287	31.0544	4.9191	-0.000884
95.	0.	0.83833	3.3290	3.3473	2.8883	0.289	31.0349	4.8891	-0.000901
96.	0.	0.83847	3.3290	3.3473	2.8872	0.291	31.0145	4.8491	-0.000921
97.	0.	0.83871	3.3290	3.3473	2.8862	0.293	30.9959	4.8191	-0.000938
98.	0.	0.83896	3.3290	3.3473	2.8852	0.295	30.9776	4.7890	-0.000955
99.	0.	0.83917	3.3289	3.3473	2.8842	0.297	30.9570	4.7590	-0.000972
100.	0.	0.83926	3.3289	3.3473	2.8832	0.300	30.9358	4.7190	-0.000993
101.	0.	0.83946	3.3289	3.3473	2.8823	0.303	30.9164	4.6890	-0.001011
102.	0.	0.83969	3.3289	3.3473	2.8813	0.305	30.8969	4.6590	-0.001029
103.	0.	0.83992	3.3288	3.3473	2.8804	0.308	30.8742	4.6290	-0.001048
104.	0.	0.84002	3.3288	3.3473	2.8793	0.311	30.8476	4.5889	-0.001071
105.	0.	0.84011	3.3288	3.3473	2.8783	0.314	30.8224	4.5489	-0.001095
106.	0.	0.84029	3.3288	3.3473	2.8774	0.318	30.7973	4.5189	-0.001114
107.	0.	0.84034	3.3288	3.3473	2.8764	0.322	30.7689	4.4789	-0.001139
108.	0.	0.84041	3.3288	3.3473	2.8754	0.328	30.7432	4.4388	-0.001164
109.	0.	0.84059	3.3288	3.3473	2.8745	0.333	30.7163	4.4088	-0.001185
110.	0.	0.84062	3.3289	3.3473	2.8736	0.335	30.6889	4.3688	-0.001211
111.	0.	0.84076	3.3288	3.3473	2.8727	0.337	30.6603	4.3388	-0.001232
112.	0.	0.84076	3.3289	3.3473	2.8718	0.338	30.6277	4.2987	-0.001259
113.	0.	0.84077	3.3289	3.3473	2.8710	0.339	30.5971	4.2587	-0.001287
114.	0.	0.84090	3.3289	3.3473	2.8702	0.338	30.5669	4.2287	-0.001310
115.	0.	0.84094	3.3289	3.3473	2.8693	0.339	30.5405	4.1887	-0.001339
116.	0.	0.84109	3.3289	3.3473	2.8685	0.343	30.5141	4.1586	-0.001363
117.	0.	0.84108	3.3290	3.3473	2.8677	0.346	30.4824	4.1186	-0.001393
118.	0.	0.84105	3.3290	3.3473	2.8670	0.351	30.4520	4.0786	-0.001423
119.	0.	0.84112	3.3290	3.3473	2.8663	0.355	30.4216	4.0486	-0.001448
120.	0.	0.84106	3.3291	3.3473	2.8656	0.360	30.3914	4.0085	-0.001480
121.	0.	0.84112	3.3291	3.3473	2.8650	0.364	30.3642	3.9785	-0.001505
122.	0.	0.84117	3.3291	3.3473	2.8644	0.368	30.3337	3.9485	-0.001532
123.	0.	0.84112	3.3292	3.3473	2.8637	0.371	30.3018	3.9084	-0.001566
124.	0.	0.84119	3.3292	3.3473	2.8631	0.374	30.2686	3.8784	-0.001593
125.	0.	0.84112	3.3293	3.3473	2.8625	0.379	30.2353	3.8384	-0.001629
126.	0.	0.84117	3.3293	3.3473	2.8620	0.383	30.2052	3.8083	-0.001658

127.	0.	0.84120	3.3294	3.3473	2.8615	0.388	30.1715	3.7783	-0.001687
128.	0.	0.84111	3.3294	3.3473	2.8610	0.393	30.1361	3.7383	-0.001725
129.	0.	0.84111	3.3295	3.3473	2.8606	0.398	30.0993	3.7082	-0.001755
130.	0.	0.84102	3.3296	3.3473	2.8602	0.402	30.0615	3.6682	-0.001795
131.	0.	0.84104	3.3296	3.3473	2.8598	0.407	30.0272	3.6382	-0.001827
132.	0.	0.84104	3.3297	3.3473	2.8594	0.412	29.9888	3.6081	-0.001860
133.	0.	0.84092	3.3298	3.3473	2.8591	0.415	29.9477	3.5681	-0.001903
134.	0.	0.84091	3.3298	3.3473	2.8589	0.418	29.9098	3.5381	-0.001937
135.	0.	0.84088	3.3299	3.3473	2.8586	0.420	29.8673	3.5080	-0.001973
136.	0.	0.84075	3.3300	3.3473	2.8584	0.422	29.8226	3.4680	-0.002018
137.	0.	0.84067	3.3300	3.3473	2.8582	0.424	29.7766	3.4379	-0.002055
138.	0.	0.84049	3.3301	3.3473	2.8581	0.426	29.7307	3.3979	-0.002102
139.	0.	0.84040	3.3302	3.3473	2.8579	0.427	29.6842	3.3679	-0.002140
140.	0.	0.84019	3.3303	3.3473	2.8578	0.429	29.6311	3.3278	-0.002190
141.	0.	0.83999	3.3304	3.3473	2.8576	0.430	29.5753	3.2878	-0.002242
142.	0.	0.83980	3.3306	3.3473	2.8576	0.431	29.5231	3.2477	-0.002295
143.	0.	0.83972	3.3306	3.3473	2.8575	0.433	29.4725	3.2177	-0.002338
144.	0.	0.83953	3.3308	3.3473	2.8574	0.435	29.4155	3.1776	-0.002394
145.	0.	0.83933	3.3309	3.3473	2.8574	0.437	29.3554	3.1375	-0.002452
146.	0.	0.83914	3.3310	3.3473	2.8574	0.439	29.2930	3.0975	-0.002512
147.	0.	0.83897	3.3312	3.3473	2.8575	0.440	29.2347	3.0574	-0.002574
148.	0.	0.83890	3.3312	3.3473	2.8575	0.441	29.1779	3.0274	-0.002625
149.	0.	0.83876	3.3314	3.3473	2.8576	0.441	29.1128	2.9873	-0.002691
150.	0.	0.83861	3.3315	3.3473	2.8578	0.443	29.0439	2.9472	-0.002760
151.	0.	0.83845	3.3317	3.3473	2.8580	0.444	28.9719	2.9072	-0.002831
152.	0.	0.83832	3.3318	3.3473	2.8583	0.448	28.9048	2.8671	-0.002905
153.	0.	0.83827	3.3319	3.3473	2.8586	0.452	28.8384	2.8370	-0.002965
154.	0.	0.83815	3.3321	3.3473	2.8590	0.455	28.7644	2.7970	-0.003044
155.	0.	0.83802	3.3323	3.3473	2.8595	0.457	28.6857	2.7569	-0.003126
156.	0.	0.83788	3.3324	3.3473	2.8601	0.456	28.6023	2.7168	-0.003211
157.	0.	0.83779	3.3326	3.3473	2.8608	0.456	28.5242	2.6767	-0.003299
158.	0.	0.83772	3.3327	3.3473	2.8614	0.456	28.4516	2.6466	-0.003370
159.	0.	0.83762	3.3329	3.3473	2.8623	0.456	28.3691	2.6065	-0.003464
160.	0.	0.83750	3.3331	3.3473	2.8631	0.458	28.2814	2.5664	-0.003561
161.	0.	0.83737	3.3332	3.3473	2.8641	0.460	28.1894	2.5263	-0.003661
162.	0.	0.83726	3.3334	3.3473	2.8651	0.463	28.1015	2.4862	-0.003766
163.	0.	0.83714	3.3335	3.3473	2.8660	0.465	28.0142	2.4562	-0.003848
164.	0.	0.83698	3.3337	3.3473	2.8672	0.470	27.9130	2.4160	-0.003959
165.	0.	0.83678	3.3339	3.3473	2.8684	0.477	27.8054	2.3759	-0.004074
166.	0.	0.83656	3.3341	3.3473	2.8698	0.485	27.6922	2.3358	-0.004192
167.	0.	0.83631	3.3343	3.3473	2.8712	0.495	27.5832	2.2957	-0.004313
168.	0.	0.83596	3.3344	3.3473	2.8723	0.504	27.4754	2.2656	-0.004405
169.	0.	0.83557	3.3346	3.3473	2.8738	0.516	27.3505	2.2255	-0.004531
170.	0.	0.83506	3.3348	3.3473	2.8754	0.527	27.2150	2.1853	-0.004658
171.	0.	0.83444	3.3351	3.3473	2.8770	0.539	27.0715	2.1452	-0.004787
172.	0.	0.83373	3.3353	3.3473	2.8785	0.551	26.9321	2.1051	-0.004915
173.	0.	0.83281	3.3354	3.3473	2.8796	0.563	26.7923	2.0750	-0.005004
174.	0.	0.83184	3.3356	3.3473	2.8810	0.578	26.6420	2.0349	-0.005129
175.	0.	0.83061	3.3357	3.3473	2.8817	0.593	26.4882	2.0048	-0.005210
176.	0.	0.82933	3.3359	3.3473	2.8825	0.611	26.3201	1.9647	-0.005328
177.	0.	0.82776	3.3361	3.3473	2.8826	0.629	26.1603	1.9346	-0.005394
178.	0.	0.82606	3.3361	3.3473	2.8821	0.650	25.9961	1.9045	-0.005454
179.	0.	0.82414	3.3361	3.3473	2.8811	0.673	25.8144	1.8745	-0.005504
180.	0.	0.82218	3.3361	3.3473	2.8799	0.703	25.6264	1.8344	-0.005591
181.	0.	0.81988	3.3360	3.3473	2.8769	0.734	25.4969	1.8144	-0.005562
182.	0.	0.81725	3.3358	3.3473	2.8727	0.759	25.4139	1.8146	-0.005422
183.	0.	0.81499	3.3355	3.3473	2.8691	0.798	25.3255	1.8047	-0.005344
184.	0.	0.81277	3.3351	3.3473	2.8655	0.844	25.2398	1.7947	-0.005267
185.	0.	0.81048	3.3348	3.3473	2.8618	0.893	25.1580	1.7848	-0.005185
186.	0.	0.80817	3.3344	3.3473	2.8579	0.944	25.0918	1.7749	-0.005098
187.	0.	0.80563	3.3340	3.3473	2.8535	0.992	25.0414	1.7750	-0.004954
188.	0.	0.80328	3.3336	3.3473	2.8498	1.045	24.9758	1.7651	-0.004867
189.	0.	0.80090	3.3332	3.3473	2.8460	1.103	24.9085	1.7552	-0.004777
190.	0.	0.79844	3.3328	3.3473	2.8421	1.166	24.8428	1.7453	-0.004683
191.	0.	0.79608	3.3324	3.3473	2.8384	1.234	24.7865	1.7354	-0.004592
192.	0.	0.79347	3.3320	3.3473	2.8341	1.295	24.7436	1.7356	-0.004444
193.	0.	0.79108	3.3315	3.3473	2.8306	1.364	24.6840	1.7256	-0.004354

194.	0.	0.78862	3.3311	3.3473	2.8270	1.436	24.6211	1.7157	-0.004261
195.	0.	0.78609	3.3307	3.3473	2.8235	1.511	24.5569	1.7058	-0.004165
196.	0.	0.78351	3.3302	3.3473	2.8198	1.588	24.4921	1.6959	-0.004065
197.	0.	0.78094	3.3298	3.3473	2.8160	1.668	24.4400	1.6860	-0.003961
198.	0.	0.77812	3.3294	3.3473	2.8115	1.743	24.4009	1.6862	-0.003798
199.	0.	0.77558	3.3290	3.3473	2.8076	1.828	24.3449	1.6763	-0.003697
200.	0.	0.77306	3.3287	3.3473	2.8036	1.919	24.2844	1.6664	-0.003595
201.	0.	0.77054	3.3285	3.3473	2.7994	2.017	24.2228	1.6565	-0.003492
202.	0.	0.76808	3.3283	3.3473	2.7950	2.119	24.1716	1.6466	-0.003388
203.	0.	0.76535	3.3281	3.3473	2.7897	2.217	24.1331	1.6468	-0.003222
204.	0.	0.76295	3.3280	3.3473	2.7852	2.328	24.0756	1.6369	-0.003120
205.	0.	0.76056	3.3279	3.3473	2.7803	2.444	24.0120	1.6270	-0.003018
206.	0.	0.75813	3.3279	3.3473	2.7753	2.564	23.9457	1.6171	-0.002912
207.	0.	0.75573	3.3278	3.3473	2.7700	2.692	23.8917	1.6072	-0.002803
208.	0.	0.75305	3.3276	3.3473	2.7638	2.812	23.8516	1.6074	-0.002631
209.	0.	0.75068	3.3276	3.3473	2.7585	2.941	23.7918	1.5975	-0.002524
210.	0.	0.74826	3.3275	3.3473	2.7530	3.072	23.7274	1.5876	-0.002414
211.	0.	0.74578	3.3275	3.3473	2.7474	3.206	23.6610	1.5777	-0.002300
212.	0.	0.74327	3.3275	3.3473	2.7416	3.342	23.5926	1.5678	-0.002183
213.	0.	0.74075	3.3274	3.3473	2.7356	3.482	23.5367	1.5579	-0.002061
214.	0.	0.73795	3.3274	3.3473	2.7287	3.616	23.4960	1.5581	-0.001875
215.	0.	0.73538	3.3274	3.3473	2.7231	3.754	23.4362	1.5482	-0.001755
216.	0.	0.73268	3.3274	3.3473	2.7178	3.888	23.3722	1.5384	-0.001632
217.	0.	0.72992	3.3274	3.3473	2.7125	4.023	23.3058	1.5285	-0.001505
218.	0.	0.72714	3.3274	3.3473	2.7070	4.160	23.2527	1.5186	-0.001374
219.	0.	0.72409	3.3274	3.3473	2.7005	4.291	23.2154	1.5188	-0.001178
220.	0.	0.72133	3.3275	3.3473	2.6951	4.423	23.1574	1.5089	-0.001051
221.	0.	0.71853	3.3276	3.3473	2.6897	4.556	23.0949	1.4991	-0.000920
222.	0.	0.71565	3.3276	3.3473	2.6842	4.689	23.0304	1.4892	-0.000785
223.	0.	0.71273	3.3277	3.3473	2.6786	4.828	22.9790	1.4794	-0.000644
224.	0.	0.70957	3.3278	3.3473	2.6718	4.962	22.9442	1.4796	-0.000439
225.	0.	0.70663	3.3279	3.3473	2.6665	5.098	22.8889	1.4697	-0.000300
226.	0.	0.70360	3.3280	3.3473	2.6613	5.233	22.8296	1.4598	-0.000159
227.	0.	0.70050	3.3282	3.3473	2.6560	5.369	22.7687	1.4500	-0.000013
228.	0.	0.69735	3.3283	3.3473	2.6507	5.509	22.7226	1.4401	0.000139
229.	0.	0.69400	3.3284	3.3473	2.6442	5.646	22.6946	1.4404	0.000354
230.	0.	0.69092	3.3286	3.3473	2.6390	5.782	22.6447	1.4305	0.000500
231.	0.	0.68779	3.3288	3.3473	2.6337	5.917	22.5901	1.4206	0.000649
232.	0.	0.68461	3.3290	3.3473	2.6284	6.052	22.5337	1.4108	0.000801
233.	0.	0.68136	3.3292	3.3473	2.6230	6.187	22.4763	1.4010	0.000957
234.	0.	0.67809	3.3294	3.3473	2.6175	6.327	22.4342	1.3911	0.001118
235.	0.	0.67462	3.3296	3.3473	2.6108	6.466	22.4110	1.3913	0.001343
236.	0.	0.67141	3.3298	3.3473	2.6055	6.601	22.3644	1.3815	0.001498
237.	0.	0.66813	3.3301	3.3473	2.6003	6.734	22.3118	1.3717	0.001656
238.	0.	0.66477	3.3303	3.3473	2.5950	6.866	22.2562	1.3618	0.001818
239.	0.	0.66136	3.3306	3.3473	2.5898	7.001	22.2149	1.3520	0.001985
240.	0.	0.65775	3.3309	3.3473	2.5832	7.136	22.1911	1.3522	0.002216
241.	0.	0.65435	3.3311	3.3473	2.5782	7.263	22.1423	1.3424	0.002380
242.	0.	0.65084	3.3314	3.3473	2.5733	7.380	22.0839	1.3325	0.002547
243.	0.	0.64725	3.3317	3.3473	2.5685	7.494	22.0222	1.3227	0.002718
244.	0.	0.64360	3.3321	3.3473	2.5636	7.611	21.9762	1.3129	0.002895
245.	0.	0.63979	3.3324	3.3473	2.5574	7.727	21.9492	1.3131	0.003134
246.	0.	0.63617	3.3326	3.3473	2.5526	7.834	21.8975	1.3033	0.003306
247.	0.	0.63250	3.3330	3.3473	2.5480	7.937	21.8391	1.2935	0.003481
248.	0.	0.62876	3.3333	3.3473	2.5434	8.037	21.7776	1.2837	0.003659
249.	0.	0.62499	3.3337	3.3473	2.5387	8.144	21.7318	1.2738	0.003841
250.	0.	0.62113	3.3341	3.3473	2.5327	8.250	21.7045	1.2741	0.004081
251.	0.	0.61742	3.3344	3.3473	2.5282	8.345	21.6523	1.2643	0.004256
252.	0.	0.61369	3.3348	3.3473	2.5239	8.437	21.5938	1.2544	0.004432
253.	0.	0.60989	3.3351	3.3473	2.5195	8.523	21.5322	1.2446	0.004612
254.	0.	0.60601	3.3355	3.3473	2.5151	8.606	21.4684	1.2348	0.004795
255.	0.	0.60212	3.3360	3.3473	2.5107	8.694	21.4207	1.2250	0.004982
256.	0.	0.59819	3.3364	3.3473	2.5050	8.783	21.3910	1.2252	0.005224
257.	0.	0.59437	3.3368	3.3473	2.5009	8.858	21.3370	1.2154	0.005404
258.	0.	0.59050	3.3372	3.3473	2.4968	8.925	21.2745	1.2056	0.005584
259.	0.	0.58657	3.3377	3.3473	2.4928	8.987	21.2080	1.1958	0.005768
260.	0.	0.58262	3.3381	3.3473	2.4888	9.055	21.1574	1.1860	0.005956

261.	0.	0.57867	3.3385	3.3473	2.4834	9.126	21.1248	1.1862	0.006196
262.	0.	0.57485	3.3390	3.3473	2.4796	9.182	21.0671	1.1764	0.006373
263.	0.	0.57097	3.3394	3.3473	2.4759	9.231	21.0019	1.1666	0.006552
264.	0.	0.56705	3.3399	3.3473	2.4722	9.276	20.9324	1.1567	0.006734
265.	0.	0.56311	3.3403	3.3473	2.4684	9.327	20.8792	1.1469	0.006920
266.	0.	0.55918	3.3407	3.3473	2.4631	9.381	20.8441	1.1472	0.007157
267.	0.	0.55539	3.3412	3.3473	2.4596	9.419	20.7833	1.1373	0.007331
268.	0.	0.55154	3.3416	3.3473	2.4562	9.452	20.7150	1.1275	0.007507
269.	0.	0.54762	3.3421	3.3473	2.4528	9.480	20.6431	1.1177	0.007687
270.	0.	0.54369	3.3425	3.3473	2.4493	9.516	20.5880	1.1079	0.007871
271.	0.	0.53894	3.3430	3.3473	2.4447	9.346	20.2012	1.1081	0.008098
272.	0.	0.53327	3.3448	3.3473	2.4731	8.819	18.8767	0.9272	0.007235
273.	0.	0.51772	3.3496	3.3473	2.4840	8.253	16.8841	0.6966	0.006595
274.	0.	0.45425	3.3588	3.3473	2.5049	7.076	14.9133	0.4710	0.011047
275.	0.	0.33661	3.3733	3.3473	2.5203	5.947	15.3337	0.2473	0.027281
276.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
277.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000

_____
PART 3: WHAFIS

WHAFIS input: CM-124-1.dat
WHAFIS output: CM-124-1.out

PART 3 COMPLETE_____

WHAFIS Elevation, and Total stillWater Level, transect: CM-124-1
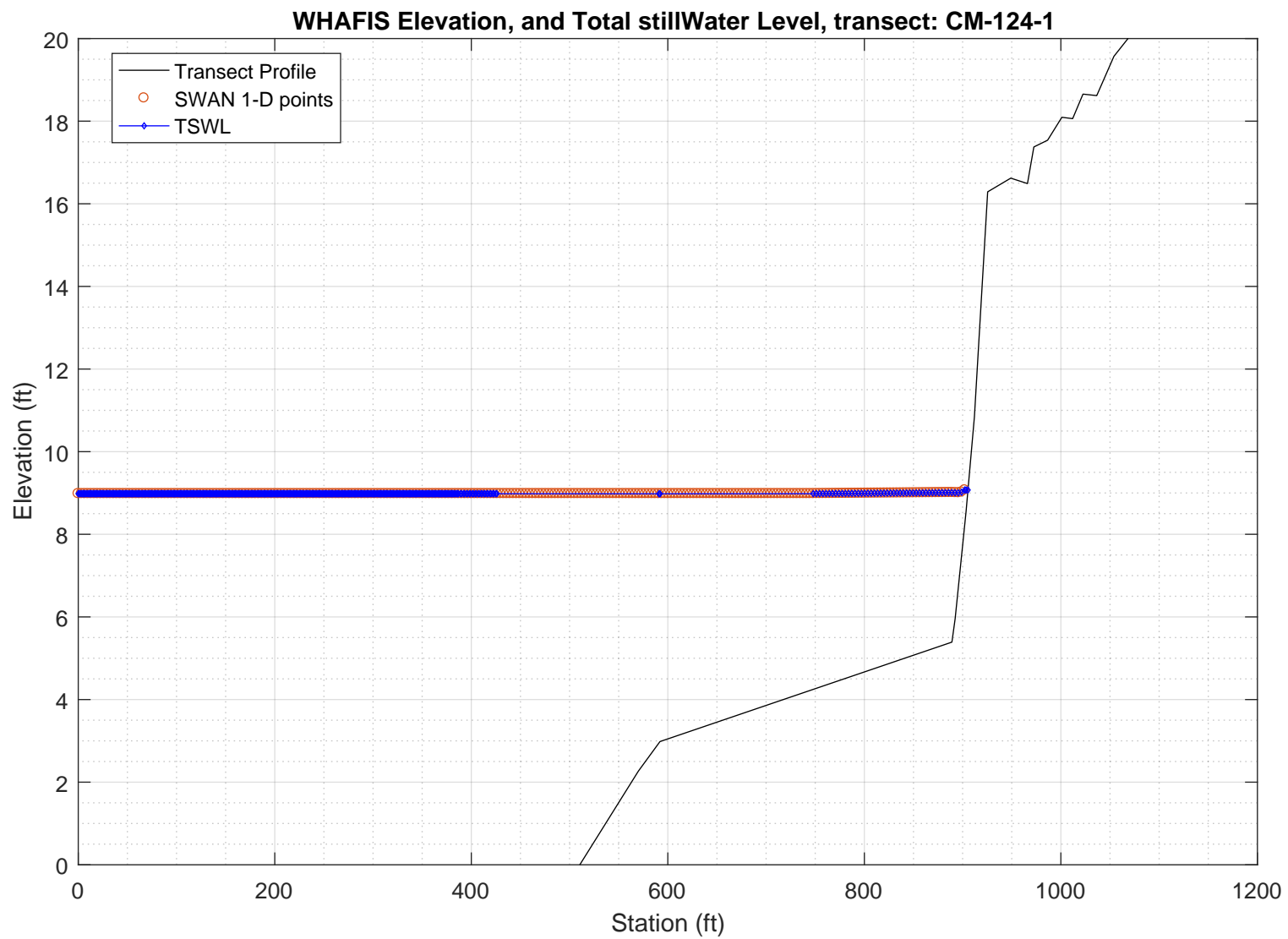
```
WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Thu Feb 20 14:57:36 2020
Input file:  C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-124-1.dat
Output file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-124-1.out
                                    header
                            THIS IS A 100-YEAR CASE
                  THE FOLLOWING NON-DEFAULT WIND SPEEDS ARE BEING USED
                      WINDIF  56.14  WINDOF  56.14  WINDVH  60.00
                                  PART1 INPUT
     IE     0.000  -21.564    1.000    1.000    8.983    4.181    3.400   56.140    0.042    0.000
     OF     1.000  -21.522    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF     2.000  -21.481    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF     3.000  -21.439    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF     4.000  -21.397    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF     5.000  -21.355    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF     6.000  -21.313    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF     7.000  -21.272    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF     8.000  -21.230    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF     9.000  -21.188    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    10.000  -21.146    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    11.000  -21.104    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    12.000  -21.062    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    13.000  -21.021    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    14.000  -20.979    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    15.000  -20.937    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    16.000  -20.895    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    17.000  -20.853    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    18.000  -20.812    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    19.000  -20.770    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    20.000  -20.728    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    21.000  -20.686    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    22.000  -20.644    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    23.000  -20.602    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    24.000  -20.561    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    25.000  -20.519    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    26.000  -20.477    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    27.000  -20.435    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    28.000  -20.393    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    29.000  -20.352    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    30.000  -20.310    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    31.000  -20.268    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    32.000  -20.226    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    33.000  -20.184    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    34.000  -20.142    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    35.000  -20.101    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    36.000  -20.059    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    37.000  -20.017    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    38.000  -19.975    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    39.000  -19.933    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    40.000  -19.892    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    41.000  -19.850    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    42.000  -19.808    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    43.000  -19.766    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    44.000  -19.724    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    45.000  -19.683    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    46.000  -19.641    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    47.000  -19.599    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    48.000  -19.557    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    49.000  -19.515    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    50.000  -19.473    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    51.000  -19.432    0.000    8.983    0.000    0.000    0.000    0.000    0.041    0.000
     OF    52.000  -19.390    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    53.000  -19.348    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    54.000  -19.306    0.000    8.983    0.000    0.000    0.000    0.000    0.042    0.000
     OF    55.000  -19.264    0.000    8.983    0.000    0.000    0.000    0.000    0.043    0.000
     OF    56.000  -19.220    0.000    8.983    0.000    0.000    0.000    0.000    0.045    0.000
     OF    57.000  -19.175    0.000    8.983    0.000    0.000    0.000    0.000    0.045    0.000
     OF    58.000  -19.131    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    59.000  -19.087    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    60.000  -19.043    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    61.000  -18.999    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    62.000  -18.955    0.000    8.983    0.000    0.000    0.000    0.000    0.045    0.000
     OF    63.000  -18.910    0.000    8.983    0.000    0.000    0.000    0.000    0.045    0.000
     OF    64.000  -18.866    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    65.000  -18.822    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    66.000  -18.778    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    67.000  -18.734    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    68.000  -18.690    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    69.000  -18.646    0.000    8.983    0.000    0.000    0.000    0.000    0.045    0.000
     OF    70.000  -18.601    0.000    8.983    0.000    0.000    0.000    0.000    0.045    0.000
     OF    71.000  -18.557    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    72.000  -18.513    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    73.000  -18.469    0.000    8.983    0.000    0.000    0.000    0.000    0.044    0.000
     OF    74.000  -18.425    0.000    8.983    0.000    0.000    0.000    0.000    0.052    0.000
     OF    75.000  -18.366    0.000    8.983    0.000    0.000    0.000    0.000    0.065    0.000
     OF    76.000  -18.295    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    77.000  -18.225    0.000    8.983    0.000    0.000    0.000    0.000    0.070    0.000
     OF    78.000  -18.155    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    79.000  -18.084    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    80.000  -18.014    0.000    8.983    0.000    0.000    0.000    0.000    0.070    0.000
     OF    81.000  -17.944    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    82.000  -17.873    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    83.000  -17.803    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    84.000  -17.732    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    85.000  -17.662    0.000    8.983    0.000    0.000    0.000    0.000    0.070    0.000
     OF    86.000  -17.592    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    87.000  -17.521    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    88.000  -17.451    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    89.000  -17.380    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    90.000  -17.310    0.000    8.983    0.000    0.000    0.000    0.000    0.070    0.000
     OF    91.000  -17.240    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
     OF    92.000  -17.169    0.000    8.983    0.000    0.000    0.000    0.000    0.071    0.000
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OF	93.000	-17.099	0.000	8.983	0.000	0.000	0.000	0.000	0.070	0.000
OF	94.000	-17.029	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	95.000	-16.958	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	96.000	-16.888	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	97.000	-16.817	0.000	8.983	0.000	0.000	0.000	0.000	0.069	0.000
OF	98.000	-16.749	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	99.000	-16.681	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	100.000	-16.614	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	101.000	-16.546	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	102.000	-16.478	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	103.000	-16.411	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	104.000	-16.343	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	105.000	-16.275	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	106.000	-16.207	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	107.000	-16.140	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	108.000	-16.072	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	109.000	-16.004	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	110.000	-15.936	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	111.000	-15.868	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	112.000	-15.801	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	113.000	-15.733	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	114.000	-15.665	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	115.000	-15.597	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	116.000	-15.530	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	117.000	-15.462	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	118.000	-15.394	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	119.000	-15.327	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	120.000	-15.259	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	121.000	-15.191	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	122.000	-15.123	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	123.000	-15.055	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	124.000	-14.988	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	125.000	-14.920	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	126.000	-14.852	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	127.000	-14.784	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	128.000	-14.717	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	129.000	-14.649	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	130.000	-14.581	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	131.000	-14.514	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	132.000	-14.446	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	133.000	-14.378	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	134.000	-14.310	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	135.000	-14.242	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	136.000	-14.175	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	137.000	-14.107	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	138.000	-14.039	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	139.000	-13.972	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	140.000	-13.904	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	141.000	-13.836	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	142.000	-13.768	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	143.000	-13.701	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	144.000	-13.633	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	145.000	-13.565	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	146.000	-13.497	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	147.000	-13.430	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	148.000	-13.362	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	149.000	-13.294	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	150.000	-13.226	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	151.000	-13.159	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	152.000	-13.091	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	153.000	-13.023	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	154.000	-12.955	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	155.000	-12.888	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	156.000	-12.820	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	157.000	-12.752	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	158.000	-12.684	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	159.000	-12.617	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	160.000	-12.549	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	161.000	-12.481	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	162.000	-12.413	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	163.000	-12.345	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	164.000	-12.278	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	165.000	-12.210	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	166.000	-12.142	0.000	8.982	0.000	0.000	0.000	0.000	0.053	0.000
OF	167.000	-12.104	0.000	8.982	0.000	0.000	0.000	0.000	0.038	0.000
OF	168.000	-12.067	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	169.000	-12.030	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	170.000	-11.993	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	171.000	-11.956	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	172.000	-11.919	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	173.000	-11.882	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	174.000	-11.845	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	175.000	-11.808	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	176.000	-11.772	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	177.000	-11.735	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	178.000	-11.698	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	179.000	-11.661	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	180.000	-11.624	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	181.000	-11.587	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	182.000	-11.550	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	183.000	-11.513	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	184.000	-11.476	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	185.000	-11.439	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	186.000	-11.402	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	187.000	-11.365	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	188.000	-11.328	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	189.000	-11.291	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	190.000	-11.255	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	191.000	-11.218	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	192.000	-11.181	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	193.000	-11.144	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	194.000	-11.107	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000

OF	195.000	-11.070	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	196.000	-11.033	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	197.000	-10.996	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	198.000	-10.959	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	199.000	-10.922	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	200.000	-10.885	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	201.000	-10.848	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	202.000	-10.811	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	203.000	-10.775	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	204.000	-10.738	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	205.000	-10.701	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	206.000	-10.664	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	207.000	-10.627	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	208.000	-10.590	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	209.000	-10.553	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	210.000	-10.516	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	211.000	-10.479	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	212.000	-10.442	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	213.000	-10.405	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	214.000	-10.368	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	215.000	-10.331	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	216.000	-10.295	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	217.000	-10.258	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	218.000	-10.221	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	219.000	-10.184	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	220.000	-10.147	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	221.000	-10.110	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	222.000	-10.073	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	223.000	-10.036	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	224.000	-10.000	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	225.000	-9.963	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	226.000	-9.926	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	227.000	-9.889	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	228.000	-9.852	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	229.000	-9.815	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	230.000	-9.778	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	231.000	-9.741	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	232.000	-9.704	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	233.000	-9.667	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	234.000	-9.630	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	235.000	-9.593	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	236.000	-9.556	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	237.000	-9.519	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	238.000	-9.483	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	239.000	-9.446	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	240.000	-9.409	0.000	8.982	0.000	0.000	0.000	0.000	0.035	0.000
OF	241.000	-9.375	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	242.000	-9.342	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	243.000	-9.308	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	244.000	-9.275	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	245.000	-9.242	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	246.000	-9.208	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	247.000	-9.175	0.000	8.982	0.000	0.000	0.000	0.000	0.035	0.000
OF	248.000	-9.139	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	249.000	-9.102	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	250.000	-9.065	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	251.000	-9.031	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	252.000	-8.998	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	253.000	-8.965	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	254.000	-8.933	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	255.000	-8.900	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	256.000	-8.868	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	257.000	-8.835	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	258.000	-8.802	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	259.000	-8.770	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	260.000	-8.737	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	261.000	-8.705	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	262.000	-8.672	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	263.000	-8.639	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	264.000	-8.607	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	265.000	-8.574	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	266.000	-8.542	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	267.000	-8.509	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	268.000	-8.476	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	269.000	-8.444	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	270.000	-8.411	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	271.000	-8.379	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	272.000	-8.346	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	273.000	-8.314	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	274.000	-8.281	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	275.000	-8.248	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	276.000	-8.216	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	277.000	-8.183	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	278.000	-8.151	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	279.000	-8.118	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	280.000	-8.085	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	281.000	-8.053	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	282.000	-8.020	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	283.000	-7.988	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	284.000	-7.955	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	285.000	-7.922	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	286.000	-7.890	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	287.000	-7.857	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	288.000	-7.825	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	289.000	-7.792	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	290.000	-7.759	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	291.000	-7.727	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	292.000	-7.694	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	293.000	-7.662	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	294.000	-7.629	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	295.000	-7.596	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	296.000	-7.564	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000

OF	297.000	-7.531	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	298.000	-7.499	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	299.000	-7.466	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	300.000	-7.433	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	301.000	-7.401	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	302.000	-7.368	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	303.000	-7.336	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	304.000	-7.303	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	305.000	-7.270	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	306.000	-7.238	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	307.000	-7.205	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	308.000	-7.173	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	309.000	-7.140	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	310.000	-7.108	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	311.000	-7.075	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	312.000	-7.042	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	313.000	-7.010	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	314.000	-6.977	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	315.000	-6.944	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	316.000	-6.912	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	317.000	-6.879	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	318.000	-6.847	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	319.000	-6.814	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	320.000	-6.781	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	321.000	-6.749	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	322.000	-6.716	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	323.000	-6.684	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	324.000	-6.651	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	325.000	-6.618	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	326.000	-6.586	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	327.000	-6.553	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	328.000	-6.521	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	329.000	-6.488	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	330.000	-6.456	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	331.000	-6.423	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	332.000	-6.390	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	333.000	-6.358	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	334.000	-6.325	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	335.000	-6.293	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	336.000	-6.260	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	337.000	-6.225	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	338.000	-6.189	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	339.000	-6.153	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	340.000	-6.117	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	341.000	-6.081	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	342.000	-6.045	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	343.000	-6.009	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	344.000	-5.973	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	345.000	-5.937	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	346.000	-5.901	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	347.000	-5.865	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	348.000	-5.829	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	349.000	-5.792	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	350.000	-5.756	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	351.000	-5.720	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	352.000	-5.684	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	353.000	-5.648	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	354.000	-5.612	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	355.000	-5.576	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	356.000	-5.540	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	357.000	-5.504	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	358.000	-5.468	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	359.000	-5.432	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	360.000	-5.396	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	361.000	-5.360	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	362.000	-5.324	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	363.000	-5.288	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	364.000	-5.252	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	365.000	-5.216	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	366.000	-5.180	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	367.000	-5.144	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	368.000	-5.108	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	369.000	-5.072	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	370.000	-5.036	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	371.000	-5.000	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	372.000	-4.964	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	373.000	-4.928	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	374.000	-4.892	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	375.000	-4.856	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	376.000	-4.820	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	377.000	-4.784	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	378.000	-4.748	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	379.000	-4.712	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	380.000	-4.676	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	381.000	-4.640	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	382.000	-4.604	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	383.000	-4.568	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	384.000	-4.532	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	385.000	-4.496	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	386.000	-4.460	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	387.000	-4.424	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	389.000	-4.352	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	390.000	-4.315	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	392.000	-4.245	0.000	8.982	0.000	0.000	0.000	0.000	0.035	0.000
OF	393.000	-4.211	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	395.000	-4.143	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	396.000	-4.109	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	398.000	-4.042	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	399.000	-4.007	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	401.000	-3.940	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	402.000	-3.906	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	404.000	-3.838	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000

OF	405.000	-3.804	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	407.000	-3.736	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	408.000	-3.702	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	410.000	-3.634	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	411.000	-3.600	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	413.000	-3.533	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	414.000	-3.499	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	416.000	-3.431	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	417.000	-3.397	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	419.000	-3.329	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	420.000	-3.295	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	422.000	-3.227	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	423.000	-3.193	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	425.000	-3.125	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	426.000	-3.091	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
IF	591.000	2.950	0.000	8.981	0.000	0.000	0.000	0.000	0.037	0.000
IF	592.000	2.983	0.000	8.981	0.000	0.000	0.000	0.000	0.008	0.000
IF	748.000	4.247	0.000	8.983	0.000	0.000	0.000	0.000	0.008	0.000
IF	751.300	4.273	0.000	8.984	0.000	0.000	0.000	0.000	0.008	0.000
IF	754.600	4.300	0.000	8.984	0.000	0.000	0.000	0.000	0.008	0.000
IF	757.900	4.326	0.000	8.985	0.000	0.000	0.000	0.000	0.008	0.000
IF	761.200	4.353	0.000	8.985	0.000	0.000	0.000	0.000	0.008	0.000
IF	764.400	4.380	0.000	8.986	0.000	0.000	0.000	0.000	0.008	0.000
IF	767.700	4.406	0.000	8.986	0.000	0.000	0.000	0.000	0.008	0.000
IF	771.000	4.433	0.000	8.987	0.000	0.000	0.000	0.000	0.008	0.000
IF	774.300	4.459	0.000	8.987	0.000	0.000	0.000	0.000	0.008	0.000
IF	777.600	4.486	0.000	8.988	0.000	0.000	0.000	0.000	0.008	0.000
IF	780.800	4.513	0.000	8.988	0.000	0.000	0.000	0.000	0.008	0.000
IF	784.100	4.539	0.000	8.989	0.000	0.000	0.000	0.000	0.008	0.000
IF	787.400	4.566	0.000	8.990	0.000	0.000	0.000	0.000	0.008	0.000
IF	790.700	4.592	0.000	8.990	0.000	0.000	0.000	0.000	0.008	0.000
IF	794.000	4.619	0.000	8.991	0.000	0.000	0.000	0.000	0.008	0.000
IF	797.200	4.646	0.000	8.991	0.000	0.000	0.000	0.000	0.008	0.000
IF	800.500	4.672	0.000	8.992	0.000	0.000	0.000	0.000	0.008	0.000
IF	803.800	4.699	0.000	8.993	0.000	0.000	0.000	0.000	0.008	0.000
IF	807.100	4.725	0.000	8.993	0.000	0.000	0.000	0.000	0.008	0.000
IF	810.400	4.752	0.000	8.994	0.000	0.000	0.000	0.000	0.008	0.000
IF	813.600	4.778	0.000	8.995	0.000	0.000	0.000	0.000	0.008	0.000
IF	816.900	4.805	0.000	8.995	0.000	0.000	0.000	0.000	0.008	0.000
IF	820.200	4.832	0.000	8.996	0.000	0.000	0.000	0.000	0.008	0.000
IF	823.500	4.858	0.000	8.997	0.000	0.000	0.000	0.000	0.008	0.000
IF	826.800	4.885	0.000	8.997	0.000	0.000	0.000	0.000	0.008	0.000
IF	830.100	4.911	0.000	8.998	0.000	0.000	0.000	0.000	0.008	0.000
IF	833.300	4.938	0.000	8.998	0.000	0.000	0.000	0.000	0.008	0.000
IF	836.600	4.964	0.000	8.999	0.000	0.000	0.000	0.000	0.008	0.000
IF	839.900	4.991	0.000	9.000	0.000	0.000	0.000	0.000	0.008	0.000
IF	843.200	5.018	0.000	9.000	0.000	0.000	0.000	0.000	0.008	0.000
IF	846.500	5.044	0.000	9.001	0.000	0.000	0.000	0.000	0.008	0.000
IF	849.700	5.071	0.000	9.002	0.000	0.000	0.000	0.000	0.008	0.000
IF	853.000	5.097	0.000	9.002	0.000	0.000	0.000	0.000	0.008	0.000
IF	856.300	5.124	0.000	9.003	0.000	0.000	0.000	0.000	0.008	0.000
IF	859.600	5.150	0.000	9.003	0.000	0.000	0.000	0.000	0.008	0.000
IF	862.900	5.177	0.000	9.004	0.000	0.000	0.000	0.000	0.008	0.000
IF	866.100	5.204	0.000	9.005	0.000	0.000	0.000	0.000	0.008	0.000
IF	869.400	5.230	0.000	9.005	0.000	0.000	0.000	0.000	0.008	0.000
IF	872.700	5.257	0.000	9.006	0.000	0.000	0.000	0.000	0.008	0.000
IF	876.000	5.283	0.000	9.007	0.000	0.000	0.000	0.000	0.008	0.000
IF	879.300	5.310	0.000	9.007	0.000	0.000	0.000	0.000	0.008	0.000
IF	882.500	5.337	0.000	9.008	0.000	0.000	0.000	0.000	0.008	0.000
IF	885.800	5.363	0.000	9.008	0.000	0.000	0.000	0.000	0.008	0.000
IF	889.100	5.390	0.000	9.009	0.000	0.000	0.000	0.000	0.090	0.000
IF	892.400	5.954	0.000	9.006	0.000	0.000	0.000	0.000	0.201	0.000
IF	895.700	6.719	0.000	9.004	0.000	0.000	0.000	0.000	0.235	0.000
IF	898.900	7.485	0.000	9.019	0.000	0.000	0.000	0.000	0.235	0.000
IF	902.200	8.250	0.000	9.072	0.000	0.000	0.000	0.000	0.231	0.000
IF	903.500	8.547	0.000	9.072	0.000	0.000	0.000	0.000	0.257	0.000
IF	905.400	9.072	0.000	9.072	0.000	0.000	0.000	0.000	0.276	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	END STATION	END ELEVATION	FETCH LENGTH	SURGE ELEV 10-YEAR	SURGE ELEV 100-YEAR	INITIAL WAVE HEIGHT	INITIAL W. PERIOD		BOTTOM SLOPE	AVERAGE A-ZONES
IE	0.000	-21.564	1.000	1.000	8.983	4.181	3.400	56.140	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	1.000	-21.522	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2.000	-21.481	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3.000	-21.439	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	4.000	-21.397	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	5.000	-21.355	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	6.000	-21.313	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	7.000	-21.272	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	8.000	-21.230	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	9.000	-21.188	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	10.000	-21.146	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	11.000	-21.104	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	12.000	-21.062	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	13.000	-21.021	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	14.000	-20.979	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	15.000	-20.937	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	16.000	-20.895	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	17.000	-20.853	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	18.000	-20.812	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	19.000	-20.770	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	20.000	-20.728	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	21.000	-20.686	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	22.000	-20.644	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	23.000	-20.602	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	24.000	-20.561	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	25.000	-20.519	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	26.000	-20.477	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	27.000	-20.435	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	28.000	-20.393	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	29.000	-20.352	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	30.000	-20.310	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	31.000	-20.268	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	32.000	-20.226	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	33.000	-20.184	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	34.000	-20.142	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	35.000	-20.101	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	36.000	-20.059	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	37.000	-20.017	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	38.000	-19.975	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	39.000	-19.933	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	40.000	-19.892	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	41.000	-19.850	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	42.000	-19.808	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	43.000	-19.766	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	44.000	-19.724	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000

OF	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	45.000	-19.683	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	46.000	-19.641	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	47.000	-19.599	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	48.000	-19.557	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	49.000	-19.515	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	50.000	-19.473	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	51.000	-19.432	0.000	8.983	0.000	0.000	0.000	0.000	0.041	0.000
OF	52.000	-19.390	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	53.000	-19.348	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	54.000	-19.306	0.000	8.983	0.000	0.000	0.000	0.000	0.042	0.000
OF	55.000	-19.264	0.000	8.983	0.000	0.000	0.000	0.000	0.043	0.000
OF	56.000	-19.220	0.000	8.983	0.000	0.000	0.000	0.000	0.045	0.000
OF	57.000	-19.175	0.000	8.983	0.000	0.000	0.000	0.000	0.045	0.000
OF	58.000	-19.131	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	59.000	-19.087	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	60.000	-19.043	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	61.000	-18.999	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	62.000	-18.955	0.000	8.983	0.000	0.000	0.000	0.000	0.045	0.000
OF	63.000	-18.910	0.000	8.983	0.000	0.000	0.000	0.000	0.045	0.000
OF	64.000	-18.866	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	65.000	-18.822	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	66.000	-18.778	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	67.000	-18.734	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	68.000	-18.690	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	69.000	-18.646	0.000	8.983	0.000	0.000	0.000	0.000	0.045	0.000
OF	70.000	-18.601	0.000	8.983	0.000	0.000	0.000	0.000	0.045	0.000
OF	71.000	-18.557	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	72.000	-18.513	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	73.000	-18.469	0.000	8.983	0.000	0.000	0.000	0.000	0.044	0.000
OF	74.000	-18.425	0.000	8.983	0.000	0.000	0.000	0.000	0.052	0.000
OF	75.000	-18.366	0.000	8.983	0.000	0.000	0.000	0.000	0.065	0.000
OF	76.000	-18.295	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	77.000	-18.225	0.000	8.983	0.000	0.000	0.000	0.000	0.070	0.000
OF	78.000	-18.155	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	79.000	-18.084	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	80.000	-18.014	0.000	8.983	0.000	0.000	0.000	0.000	0.070	0.000
OF	81.000	-17.944	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	82.000	-17.873	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	83.000	-17.803	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	84.000	-17.732	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	85.000	-17.662	0.000	8.983	0.000	0.000	0.000	0.000	0.070	0.000
OF	86.000	-17.592	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	87.000	-17.521	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	88.000	-17.451	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	89.000	-17.380	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	90.000	-17.310	0.000	8.983	0.000	0.000	0.000	0.000	0.070	0.000
OF	91.000	-17.240	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	92.000	-17.169	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	93.000	-17.099	0.000	8.983	0.000	0.000	0.000	0.000	0.070	0.000
OF	94.000	-17.029	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	95.000	-16.958	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	96.000	-16.888	0.000	8.983	0.000	0.000	0.000	0.000	0.071	0.000
OF	97.000	-16.817	0.000	8.983	0.000	0.000	0.000	0.000	0.069	0.000
OF	98.000	-16.749	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	99.000	-16.681	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	100.000	-16.614	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	101.000	-16.546	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	102.000	-16.478	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	103.000	-16.411	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	104.000	-16.343	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	105.000	-16.275	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	106.000	-16.207	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	107.000	-16.140	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	108.000	-16.072	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	109.000	-16.004	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	110.000	-15.936	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	111.000	-15.868	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
OF	112.000	-15.801	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	113.000	-15.733	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	114.000	-15.665	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	115.000	-15.597	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	116.000	-15.530	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	117.000	-15.462	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	118.000	-15.394	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	119.000	-15.327	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	120.000	-15.259	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	121.000	-15.191	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	122.000	-15.123	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	123.000	-15.055	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	124.000	-14.988	0.000	8.983	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	125.000	-14.920	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	126.000	-14.852	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	127.000	-14.784	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	128.000	-14.717	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	129.000	-14.649	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	130.000	-14.581	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	131.000	-14.514	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	132.000	-14.446	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	133.000	-14.378	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	134.000	-14.310	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	135.000	-14.242	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	136.000	-14.175	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	137.000	-14.107	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	138.000	-14.039	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	139.000	-13.972	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	140.000	-13.904	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	141.000	-13.836	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	142.000	-13.768	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	143.000	-13.701	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	144.000	-13.633	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	145.000	-13.565	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	146.000	-13.497	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000

OF	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	147.000	-13.430	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	148.000	-13.362	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	149.000	-13.294	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	150.000	-13.226	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	151.000	-13.159	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	152.000	-13.091	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	153.000	-13.023	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	154.000	-12.955	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	155.000	-12.888	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	156.000	-12.820	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	157.000	-12.752	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	158.000	-12.684	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	159.000	-12.617	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	160.000	-12.549	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	161.000	-12.481	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	162.000	-12.413	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	163.000	-12.345	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	164.000	-12.278	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	165.000	-12.210	0.000	8.982	0.000	0.000	0.000	0.000	0.068	0.000
OF	166.000	-12.142	0.000	8.982	0.000	0.000	0.000	0.000	0.053	0.000
OF	167.000	-12.104	0.000	8.982	0.000	0.000	0.000	0.000	0.038	0.000
OF	168.000	-12.067	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	169.000	-12.030	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	170.000	-11.993	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	171.000	-11.956	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	172.000	-11.919	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	173.000	-11.882	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	174.000	-11.845	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	175.000	-11.808	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	176.000	-11.772	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	177.000	-11.735	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	178.000	-11.698	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	179.000	-11.661	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	180.000	-11.624	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000

OF	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	181.000	-11.587	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	182.000	-11.550	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	183.000	-11.513	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	184.000	-11.476	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	185.000	-11.439	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	186.000	-11.402	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	187.000	-11.365	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	188.000	-11.328	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	189.000	-11.291	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	190.000	-11.255	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	191.000	-11.218	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	192.000	-11.181	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	193.000	-11.144	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	194.000	-11.107	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	195.000	-11.070	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	196.000	-11.033	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	197.000	-10.996	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	198.000	-10.959	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	199.000	-10.922	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	200.000	-10.885	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	201.000	-10.848	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	202.000	-10.811	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	203.000	-10.775	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	204.000	-10.738	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	205.000	-10.701	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	206.000	-10.664	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	207.000	-10.627	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	208.000	-10.590	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	209.000	-10.553	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	210.000	-10.516	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	211.000	-10.479	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	212.000	-10.442	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	213.000	-10.405	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	214.000	-10.368	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	215.000	-10.331	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	216.000	-10.295	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	217.000	-10.258	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	218.000	-10.221	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	219.000	-10.184	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	220.000	-10.147	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	221.000	-10.110	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	222.000	-10.073	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	223.000	-10.036	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	224.000	-10.000	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	225.000	-9.963	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	226.000	-9.926	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	227.000	-9.889	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	228.000	-9.852	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	229.000	-9.815	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	230.000	-9.778	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	231.000	-9.741	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	232.000	-9.704	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	233.000	-9.667	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	234.000	-9.630	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	235.000	-9.593	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	236.000	-9.556	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	237.000	-9.519	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	238.000	-9.483	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	239.000	-9.446	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	240.000	-9.409	0.000	8.982	0.000	0.000	0.000	0.000	0.035	0.000
OF	241.000	-9.375	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	242.000	-9.342	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	243.000	-9.308	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	244.000	-9.275	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	245.000	-9.242	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	246.000	-9.208	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	247.000	-9.175	0.000	8.982	0.000	0.000	0.000	0.000	0.035	0.000
OF	248.000	-9.139	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	249.000	-9.102	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
OF	250.000	-9.065	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	251.000	-9.031	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	252.000	-8.998	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	253.000	-8.965	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	254.000	-8.933	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	255.000	-8.900	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	256.000	-8.868	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	257.000	-8.835	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	258.000	-8.802	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	259.000	-8.770	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	260.000	-8.737	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	261.000	-8.705	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	262.000	-8.672	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	263.000	-8.639	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	264.000	-8.607	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	265.000	-8.574	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	266.000	-8.542	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	267.000	-8.509	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	268.000	-8.476	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	269.000	-8.444	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	270.000	-8.411	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	271.000	-8.379	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	272.000	-8.346	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	273.000	-8.314	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	274.000	-8.281	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	275.000	-8.248	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	276.000	-8.216	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	277.000	-8.183	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	278.000	-8.151	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	279.000	-8.118	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	280.000	-8.085	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	281.000	-8.053	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	282.000	-8.020	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	283.000	-7.988	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	284.000	-7.955	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	285.000	-7.922	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	286.000	-7.890	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	287.000	-7.857	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	288.000	-7.825	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	289.000	-7.792	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	290.000	-7.759	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	291.000	-7.727	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	292.000	-7.694	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	293.000	-7.662	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	294.000	-7.629	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	295.000	-7.596	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	296.000	-7.564	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	297.000	-7.531	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	298.000	-7.499	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	299.000	-7.466	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	300.000	-7.433	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	301.000	-7.401	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	302.000	-7.368	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	303.000	-7.336	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	304.000	-7.303	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	305.000	-7.270	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	306.000	-7.238	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	307.000	-7.205	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	308.000	-7.173	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	309.000	-7.140	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	310.000	-7.108	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	311.000	-7.075	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	312.000	-7.042	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	313.000	-7.010	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	314.000	-6.977	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	315.000	-6.944	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	316.000	-6.912	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	317.000	-6.879	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	318.000	-6.847	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	319.000	-6.814	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	320.000	-6.781	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	321.000	-6.749	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	322.000	-6.716	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	323.000	-6.684	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	324.000	-6.651	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	325.000	-6.618	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	326.000	-6.586	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	327.000	-6.553	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	328.000	-6.521	0.000	8.982	0.000	0.000	0.000	0.000	0.032	0.000
OF	329.000	-6.488	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	330.000	-6.456	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	331.000	-6.423	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	332.000	-6.390	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	333.000	-6.358	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	334.000	-6.325	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	335.000	-6.293	0.000	8.982	0.000	0.000	0.000	0.000	0.033	0.000
OF	336.000	-6.260	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	337.000	-6.225	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	338.000	-6.189	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	339.000	-6.153	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	340.000	-6.117	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	341.000	-6.081	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	342.000	-6.045	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	343.000	-6.009	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	344.000	-5.973	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	345.000	-5.937	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	346.000	-5.901	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	347.000	-5.865	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	348.000	-5.829	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	349.000	-5.792	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	350.000	-5.756	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	351.000	-5.720	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	352.000	-5.684	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	353.000	-5.648	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	354.000	-5.612	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	355.000	-5.576	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	356.000	-5.540	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	357.000	-5.504	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	358.000	-5.468	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	359.000	-5.432	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	360.000	-5.396	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	361.000	-5.360	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	362.000	-5.324	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	363.000	-5.288	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	364.000	-5.252	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	365.000	-5.216	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	366.000	-5.180	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	367.000	-5.144	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	368.000	-5.108	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	369.000	-5.072	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	370.000	-5.036	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	371.000	-5.000	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	372.000	-4.964	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	373.000	-4.928	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	374.000	-4.892	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	375.000	-4.856	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	376.000	-4.820	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	377.000	-4.784	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	378.000	-4.748	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	379.000	-4.712	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	380.000	-4.676	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	381.000	-4.640	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	382.000	-4.604	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	383.000	-4.568	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	384.000	-4.532	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	385.000	-4.496	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	386.000	-4.460	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	387.000	-4.424	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	389.000	-4.352	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	390.000	-4.315	0.000	8.982	0.000	0.000	0.000	0.000	0.036	0.000
OF	392.000	-4.245	0.000	8.982	0.000	0.000	0.000	0.000	0.035	0.000
OF	393.000	-4.211	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	395.000	-4.143	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	396.000	-4.109	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	398.000	-4.042	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	399.000	-4.007	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	401.000	-3.940	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	402.000	-3.906	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	404.000	-3.838	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	405.000	-3.804	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	407.000	-3.736	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	408.000	-3.702	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	410.000	-3.634	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	411.000	-3.600	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	413.000	-3.533	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	414.000	-3.499	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	416.000	-3.431	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	417.000	-3.397	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	419.000	-3.329	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	420.000	-3.295	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	422.000	-3.227	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	423.000	-3.193	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	425.000	-3.125	0.000	8.982	0.000	0.000	0.000	0.000	0.034	0.000
OF	426.000	-3.091	0.000	8.982	0.000	0.000	0.000	0.000	0.037	0.000
IF	591.000	2.950	0.000	8.981	0.000	0.000	0.000	0.000	0.037	0.000
IF	592.000	2.983	0.000	8.981	0.000	0.000	0.000	0.000	0.008	0.000
IF	748.000	4.247	0.000	8.983	0.000	0.000	0.000	0.000	0.008	0.000
IF	751.300	4.273	0.000	8.984	0.000	0.000	0.000	0.000	0.008	0.000
IF	754.600	4.300	0.000	8.984	0.000	0.000	0.000	0.000	0.008	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	757.900	4.326	0.000	8.985	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	761.200	4.353	0.000	8.985	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	764.400	4.380	0.000	8.986	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	767.700	4.406	0.000	8.986	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	771.000	4.433	0.000	8.987	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	774.300	4.459	0.000	8.987	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	777.600	4.486	0.000	8.988	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	780.800	4.513	0.000	8.988	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	784.100	4.539	0.000	8.989	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	787.400	4.566	0.000	8.990	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	790.700	4.592	0.000	8.990	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	794.000	4.619	0.000	8.991	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	797.200	4.646	0.000	8.991	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	800.500	4.672	0.000	8.992	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	803.800	4.699	0.000	8.993	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	807.100	4.725	0.000	8.993	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	810.400	4.752	0.000	8.994	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	813.600	4.778	0.000	8.995	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	816.900	4.805	0.000	8.995	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	820.200	4.832	0.000	8.996	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	823.500	4.858	0.000	8.997	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	826.800	4.885	0.000	8.997	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	830.100	4.911	0.000	8.998	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	833.300	4.938	0.000	8.998	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	836.600	4.964	0.000	8.999	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	839.900	4.991	0.000	9.000	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	843.200	5.018	0.000	9.000	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	846.500	5.044	0.000	9.001	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	849.700	5.071	0.000	9.002	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	853.000	5.097	0.000	9.002	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	856.300	5.124	0.000	9.003	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	859.600	5.150	0.000	9.003	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	862.900	5.177	0.000	9.004	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	866.100	5.204	0.000	9.005	0.000	0.000	0.000	0.000	0.008	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	869.400	5.230	0.000	9.005	0.000	0.000	0.000	0.000	0.008	0.000
IF	872.700	5.257	0.000	9.006	0.000	0.000	0.000	0.000	0.008	0.000
IF	876.000	5.283	0.000	9.007	0.000	0.000	0.000	0.000	0.008	0.000
IF	879.300	5.310	0.000	9.007	0.000	0.000	0.000	0.000	0.008	0.000
IF	882.500	5.337	0.000	9.008	0.000	0.000	0.000	0.000	0.008	0.000
IF	885.800	5.363	0.000	9.008	0.000	0.000	0.000	0.000	0.008	0.000
IF	889.100	5.390	0.000	9.009	0.000	0.000	0.000	0.000	0.090	0.000
IF	892.400	5.954	0.000	9.006	0.000	0.000	0.000	0.000	0.201	0.000
IF	895.700	6.719	0.000	9.004	0.000	0.000	0.000	0.000	0.235	0.000
IF	898.900	7.485	0.000	9.019	0.000	0.000	0.000	0.000	0.235	0.000
IF	902.200	8.250	0.000	9.072	0.000	0.000	0.000	0.000	0.231	0.000
IF	903.500	8.547	0.000	9.072	0.000	0.000	0.000	0.000	0.257	0.000
IF	905.400	9.072	0.000	9.072	0.000	0.000	0.000	0.000	0.276	0.000

---END OF TRANSECT--

NOTE:
SURGE ELEVATION INCLUDES CONTRIBUTIONS FROM ASTRONOMICAL AND STORM TIDES.

1

PART2: CONTROLLING WAVE HEIGHTS, SPECTRAL
PEAK WAVE PERIOD, AND WAVE CREST ELEVATIONS

LOCATION		CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	4.18	3.40	11.91
OF	1.00	4.18	3.40	11.91
OF	2.00	4.18	3.40	11.91
OF	3.00	4.18	3.40	11.91
OF	4.00	4.18	3.40	11.91
OF	5.00	4.18	3.40	11.91
OF	6.00	4.18	3.40	11.91
OF	7.00	4.18	3.40	11.91
OF	8.00	4.18	3.40	11.91
OF	9.00	4.18	3.40	11.91
OF	10.00	4.18	3.40	11.91
OF	11.00	4.18	3.40	11.91
OF	12.00	4.18	3.40	11.91
OF	13.00	4.18	3.40	11.91
OF	14.00	4.18	3.40	11.91
OF	15.00	4.18	3.40	11.91
OF	16.00	4.18	3.40	11.91
OF	17.00	4.18	3.40	11.91
OF	18.00	4.18	3.40	11.91
OF	19.00	4.18	3.40	11.91
OF	20.00	4.18	3.40	11.91
OF	21.00	4.18	3.40	11.91
OF	22.00	4.18	3.40	11.91
OF	23.00	4.18	3.40	11.91
OF	24.00	4.18	3.40	11.91
OF	25.00	4.18	3.40	11.91
OF	26.00	4.18	3.40	11.91
OF	27.00	4.18	3.40	11.91
OF	28.00	4.18	3.40	11.91
OF	29.00	4.18	3.40	11.91
OF	30.00	4.18	3.40	11.91
OF	31.00	4.18	3.40	11.91
OF	32.00	4.18	3.40	11.91
OF	33.00	4.18	3.40	11.91
OF	34.00	4.18	3.40	11.91
OF	35.00	4.18	3.40	11.91
OF	36.00	4.18	3.40	11.91
OF	37.00	4.18	3.40	11.91
OF	38.00	4.19	3.40	11.91
OF	39.00	4.19	3.40	11.91
OF	40.00	4.19	3.40	11.91
OF	41.00	4.19	3.40	11.91
OF	42.00	4.19	3.40	11.91
OF	43.00	4.19	3.40	11.91
OF	44.00	4.19	3.40	11.91
OF	45.00	4.19	3.40	11.91
OF	46.00	4.19	3.40	11.91
OF	47.00	4.19	3.40	11.91
OF	48.00	4.19	3.40	11.91
OF	49.00	4.19	3.40	11.91
OF	50.00	4.19	3.40	11.91
OF	51.00	4.19	3.40	11.91
OF	52.00	4.19	3.40	11.91
OF	53.00	4.19	3.40	11.91
OF	54.00	4.19	3.40	11.91

OF	55.00	4.19	3.40	11.91
OF	56.00	4.19	3.40	11.91
OF	57.00	4.19	3.40	11.91
OF	58.00	4.19	3.40	11.91
OF	59.00	4.19	3.40	11.91
OF	60.00	4.19	3.40	11.91
OF	61.00	4.19	3.40	11.91
OF	62.00	4.19	3.40	11.91
OF	63.00	4.19	3.40	11.91
OF	64.00	4.19	3.40	11.91
OF	65.00	4.19	3.41	11.91
OF	66.00	4.19	3.41	11.91
OF	67.00	4.19	3.41	11.91
OF	68.00	4.19	3.41	11.91
OF	69.00	4.19	3.41	11.91
OF	70.00	4.19	3.41	11.91
OF	71.00	4.19	3.41	11.91
OF	72.00	4.19	3.41	11.91
OF	73.00	4.19	3.41	11.91
OF	74.00	4.19	3.41	11.91
OF	75.00	4.19	3.41	11.91
OF	76.00	4.19	3.41	11.91
OF	77.00	4.18	3.41	11.91
OF	78.00	4.18	3.41	11.91
OF	79.00	4.18	3.41	11.91
OF	80.00	4.18	3.41	11.91
OF	81.00	4.18	3.41	11.91
OF	82.00	4.18	3.41	11.91
OF	83.00	4.18	3.41	11.91
OF	84.00	4.18	3.41	11.91
OF	85.00	4.18	3.41	11.91
OF	86.00	4.18	3.41	11.91
OF	87.00	4.18	3.41	11.91
OF	88.00	4.18	3.41	11.91
OF	89.00	4.18	3.41	11.91
OF	90.00	4.18	3.41	11.91
OF	91.00	4.18	3.41	11.91
OF	92.00	4.18	3.41	11.91
OF	93.00	4.18	3.41	11.91
OF	94.00	4.18	3.41	11.91
OF	95.00	4.18	3.41	11.91
OF	96.00	4.18	3.41	11.91
OF	97.00	4.18	3.41	11.91
OF	98.00	4.18	3.41	11.91
OF	99.00	4.18	3.41	11.91
OF	100.00	4.18	3.41	11.91
OF	101.00	4.18	3.41	11.91
OF	102.00	4.17	3.41	11.91
OF	103.00	4.17	3.41	11.91
OF	104.00	4.17	3.41	11.90
OF	105.00	4.17	3.41	11.90
OF	106.00	4.17	3.41	11.90
OF	107.00	4.17	3.41	11.90
OF	108.00	4.17	3.41	11.90
OF	109.00	4.17	3.41	11.90
OF	110.00	4.17	3.41	11.90
OF	111.00	4.17	3.41	11.90
OF	112.00	4.17	3.41	11.90
OF	113.00	4.17	3.41	11.90
OF	114.00	4.17	3.41	11.90
OF	115.00	4.17	3.41	11.90
OF	116.00	4.17	3.41	11.90
OF	117.00	4.17	3.41	11.90
OF	118.00	4.17	3.41	11.90
OF	119.00	4.17	3.41	11.90
OF	120.00	4.17	3.41	11.90
OF	121.00	4.16	3.41	11.90
OF	122.00	4.16	3.41	11.90
OF	123.00	4.16	3.41	11.90
OF	124.00	4.16	3.41	11.90
OF	125.00	4.16	3.41	11.90
OF	126.00	4.16	3.41	11.89
OF	127.00	4.16	3.41	11.89
OF	128.00	4.16	3.41	11.89
OF	129.00	4.16	3.41	11.89
OF	130.00	4.16	3.41	11.89
OF	131.00	4.16	3.41	11.89
OF	132.00	4.16	3.41	11.89
OF	133.00	4.16	3.41	11.89
OF	134.00	4.16	3.41	11.89
OF	135.00	4.15	3.41	11.89
OF	136.00	4.15	3.41	11.89
OF	137.00	4.15	3.41	11.89
OF	138.00	4.15	3.41	11.89
OF	139.00	4.15	3.41	11.89
OF	140.00	4.15	3.41	11.89
OF	141.00	4.15	3.41	11.89
OF	142.00	4.15	3.41	11.89
OF	143.00	4.15	3.41	11.89
OF	144.00	4.15	3.41	11.88
OF	145.00	4.15	3.41	11.88
OF	146.00	4.15	3.41	11.88
OF	147.00	4.14	3.41	11.88
OF	148.00	4.14	3.41	11.88
OF	149.00	4.14	3.41	11.88
OF	150.00	4.14	3.41	11.88
OF	151.00	4.14	3.41	11.88
OF	152.00	4.14	3.41	11.88
OF	153.00	4.14	3.41	11.88
OF	154.00	4.14	3.41	11.88
OF	155.00	4.14	3.41	11.88
OF	156.00	4.14	3.41	11.88

OF	157.00	4.13	3.41	11.88
OF	158.00	4.13	3.41	11.88
OF	159.00	4.13	3.41	11.87
OF	160.00	4.13	3.41	11.87
OF	161.00	4.13	3.41	11.87
OF	162.00	4.13	3.41	11.87
OF	163.00	4.13	3.41	11.87
OF	164.00	4.13	3.41	11.87
OF	165.00	4.13	3.41	11.87
OF	166.00	4.13	3.41	11.87
OF	167.00	4.12	3.41	11.87
OF	168.00	4.12	3.41	11.87
OF	169.00	4.12	3.41	11.87
OF	170.00	4.12	3.41	11.87
OF	171.00	4.12	3.41	11.87
OF	172.00	4.12	3.41	11.87
OF	173.00	4.12	3.41	11.87
OF	174.00	4.12	3.41	11.87
OF	175.00	4.12	3.41	11.87
OF	176.00	4.12	3.41	11.87
OF	177.00	4.12	3.41	11.87
OF	178.00	4.12	3.41	11.87
OF	179.00	4.12	3.41	11.87
OF	180.00	4.12	3.41	11.87
OF	181.00	4.12	3.41	11.86
OF	182.00	4.12	3.41	11.86
OF	183.00	4.12	3.41	11.86
OF	184.00	4.12	3.41	11.86
OF	185.00	4.12	3.41	11.86
OF	186.00	4.12	3.41	11.86
OF	187.00	4.12	3.41	11.86
OF	188.00	4.11	3.41	11.86
OF	189.00	4.11	3.41	11.86
OF	190.00	4.11	3.41	11.86
OF	191.00	4.11	3.41	11.86
OF	192.00	4.11	3.41	11.86
OF	193.00	4.11	3.41	11.86
OF	194.00	4.11	3.41	11.86
OF	195.00	4.11	3.42	11.86
OF	196.00	4.11	3.42	11.86
OF	197.00	4.11	3.42	11.86
OF	198.00	4.11	3.42	11.86
OF	199.00	4.11	3.42	11.86
OF	200.00	4.11	3.42	11.86
OF	201.00	4.11	3.42	11.86
OF	202.00	4.11	3.42	11.86
OF	203.00	4.11	3.42	11.86
OF	204.00	4.11	3.42	11.86
OF	205.00	4.11	3.42	11.86
OF	206.00	4.11	3.42	11.86
OF	207.00	4.10	3.42	11.86
OF	208.00	4.10	3.42	11.85
OF	209.00	4.10	3.42	11.85
OF	210.00	4.10	3.42	11.85
OF	211.00	4.10	3.42	11.85
OF	212.00	4.10	3.42	11.85
OF	213.00	4.10	3.42	11.85
OF	214.00	4.10	3.42	11.85
OF	215.00	4.10	3.42	11.85
OF	216.00	4.10	3.42	11.85
OF	217.00	4.10	3.42	11.85
OF	218.00	4.10	3.42	11.85
OF	219.00	4.10	3.42	11.85
OF	220.00	4.10	3.42	11.85
OF	221.00	4.10	3.42	11.85
OF	222.00	4.10	3.42	11.85
OF	223.00	4.09	3.42	11.85
OF	224.00	4.09	3.42	11.85
OF	225.00	4.09	3.42	11.85
OF	226.00	4.09	3.42	11.85
OF	227.00	4.09	3.42	11.85
OF	228.00	4.09	3.42	11.85
OF	229.00	4.09	3.42	11.85
OF	230.00	4.09	3.42	11.85
OF	231.00	4.09	3.42	11.84
OF	232.00	4.09	3.42	11.84
OF	233.00	4.09	3.42	11.84
OF	234.00	4.09	3.42	11.84
OF	235.00	4.09	3.42	11.84
OF	236.00	4.09	3.42	11.84
OF	237.00	4.09	3.42	11.84
OF	238.00	4.09	3.42	11.84
OF	239.00	4.08	3.42	11.84
OF	240.00	4.08	3.42	11.84
OF	241.00	4.08	3.42	11.84
OF	242.00	4.08	3.42	11.84
OF	243.00	4.08	3.42	11.84
OF	244.00	4.08	3.42	11.84
OF	245.00	4.08	3.42	11.84
OF	246.00	4.08	3.42	11.84
OF	247.00	4.08	3.42	11.84
OF	248.00	4.08	3.42	11.84
OF	249.00	4.08	3.42	11.84
OF	250.00	4.08	3.42	11.84
OF	251.00	4.08	3.42	11.84
OF	252.00	4.08	3.42	11.84
OF	253.00	4.08	3.42	11.84
OF	254.00	4.08	3.42	11.84
OF	255.00	4.08	3.42	11.83
OF	256.00	4.07	3.42	11.83
OF	257.00	4.07	3.42	11.83
OF	258.00	4.07	3.42	11.83

OF	259.00	4.07	3.42	11.83
OF	260.00	4.07	3.42	11.83
OF	261.00	4.07	3.42	11.83
OF	262.00	4.07	3.42	11.83
OF	263.00	4.07	3.42	11.83
OF	264.00	4.07	3.42	11.83
OF	265.00	4.07	3.42	11.83
OF	266.00	4.07	3.42	11.83
OF	267.00	4.07	3.42	11.83
OF	268.00	4.07	3.42	11.83
OF	269.00	4.07	3.42	11.83
OF	270.00	4.07	3.42	11.83
OF	271.00	4.07	3.42	11.83
OF	272.00	4.07	3.42	11.83
OF	273.00	4.06	3.42	11.83
OF	274.00	4.06	3.42	11.83
OF	275.00	4.06	3.42	11.83
OF	276.00	4.06	3.42	11.83
OF	277.00	4.06	3.42	11.83
OF	278.00	4.06	3.42	11.83
OF	279.00	4.06	3.42	11.82
OF	280.00	4.06	3.42	11.82
OF	281.00	4.06	3.42	11.82
OF	282.00	4.06	3.42	11.82
OF	283.00	4.06	3.42	11.82
OF	284.00	4.06	3.42	11.82
OF	285.00	4.06	3.42	11.82
OF	286.00	4.06	3.42	11.82
OF	287.00	4.06	3.42	11.82
OF	288.00	4.06	3.42	11.82
OF	289.00	4.06	3.42	11.82
OF	290.00	4.05	3.42	11.82
OF	291.00	4.05	3.42	11.82
OF	292.00	4.05	3.42	11.82
OF	293.00	4.05	3.42	11.82
OF	294.00	4.05	3.42	11.82
OF	295.00	4.05	3.42	11.82
OF	296.00	4.05	3.42	11.82
OF	297.00	4.05	3.42	11.82
OF	298.00	4.05	3.42	11.82
OF	299.00	4.05	3.42	11.82
OF	300.00	4.05	3.42	11.82
OF	301.00	4.05	3.42	11.82
OF	302.00	4.05	3.42	11.82
OF	303.00	4.05	3.42	11.81
OF	304.00	4.05	3.42	11.81
OF	305.00	4.05	3.42	11.81
OF	306.00	4.04	3.42	11.81
OF	307.00	4.04	3.42	11.81
OF	308.00	4.04	3.42	11.81
OF	309.00	4.04	3.42	11.81
OF	310.00	4.04	3.42	11.81
OF	311.00	4.04	3.42	11.81
OF	312.00	4.04	3.42	11.81
OF	313.00	4.04	3.42	11.81
OF	314.00	4.04	3.42	11.81
OF	315.00	4.04	3.42	11.81
OF	316.00	4.04	3.42	11.81
OF	317.00	4.04	3.42	11.81
OF	318.00	4.04	3.42	11.81
OF	319.00	4.04	3.42	11.81
OF	320.00	4.04	3.42	11.81
OF	321.00	4.04	3.42	11.81
OF	322.00	4.03	3.42	11.81
OF	323.00	4.03	3.42	11.81
OF	324.00	4.03	3.42	11.81
OF	325.00	4.03	3.42	11.81
OF	326.00	4.03	3.42	11.80
OF	327.00	4.03	3.42	11.80
OF	328.00	4.03	3.43	11.80
OF	329.00	4.03	3.43	11.80
OF	330.00	4.03	3.43	11.80
OF	331.00	4.03	3.43	11.80
OF	332.00	4.03	3.43	11.80
OF	333.00	4.03	3.43	11.80
OF	334.00	4.03	3.43	11.80
OF	335.00	4.03	3.43	11.80
OF	336.00	4.03	3.43	11.80
OF	337.00	4.03	3.43	11.80
OF	338.00	4.02	3.43	11.80
OF	339.00	4.02	3.43	11.80
OF	340.00	4.02	3.43	11.80
OF	341.00	4.02	3.43	11.80
OF	342.00	4.02	3.43	11.80
OF	343.00	4.02	3.43	11.80
OF	344.00	4.02	3.43	11.80
OF	345.00	4.02	3.43	11.80
OF	346.00	4.02	3.43	11.80
OF	347.00	4.02	3.43	11.80
OF	348.00	4.02	3.43	11.79
OF	349.00	4.02	3.43	11.79
OF	350.00	4.02	3.43	11.79
OF	351.00	4.02	3.43	11.79
OF	352.00	4.02	3.43	11.79
OF	353.00	4.01	3.43	11.79
OF	354.00	4.01	3.43	11.79
OF	355.00	4.01	3.43	11.79
OF	356.00	4.01	3.43	11.79
OF	357.00	4.01	3.43	11.79
OF	358.00	4.01	3.43	11.79
OF	359.00	4.01	3.43	11.79
OF	360.00	4.01	3.43	11.79

OF	361.00	4.01	3.43	11.79
OF	362.00	4.01	3.43	11.79
OF	363.00	4.01	3.43	11.79
OF	364.00	4.01	3.43	11.79
OF	365.00	4.01	3.43	11.79
OF	366.00	4.01	3.43	11.79
OF	367.00	4.01	3.43	11.79
OF	368.00	4.00	3.43	11.79
OF	369.00	4.00	3.43	11.78
OF	370.00	4.00	3.43	11.78
OF	371.00	4.00	3.43	11.78
OF	372.00	4.00	3.43	11.78
OF	373.00	4.00	3.43	11.78
OF	374.00	4.00	3.43	11.78
OF	375.00	4.00	3.43	11.78
OF	376.00	4.00	3.43	11.78
OF	377.00	4.00	3.43	11.78
OF	378.00	4.00	3.43	11.78
OF	379.00	4.00	3.43	11.78
OF	380.00	4.00	3.43	11.78
OF	381.00	4.00	3.43	11.78
OF	382.00	4.00	3.43	11.78
OF	383.00	4.00	3.43	11.78
OF	384.00	3.99	3.43	11.78
OF	385.00	3.99	3.43	11.78
OF	386.00	3.99	3.43	11.78
OF	387.00	3.99	3.43	11.78
OF	389.00	3.99	3.43	11.78
OF	390.00	3.99	3.43	11.78
OF	392.00	3.99	3.43	11.78
OF	393.00	3.99	3.43	11.77
OF	395.00	3.99	3.43	11.77
OF	396.00	3.99	3.43	11.77
OF	398.00	3.99	3.43	11.77
OF	399.00	3.99	3.43	11.77
OF	401.00	3.99	3.43	11.77
OF	402.00	3.99	3.43	11.77
OF	404.00	3.98	3.43	11.77
OF	405.00	3.98	3.43	11.77
OF	407.00	3.98	3.43	11.77
OF	408.00	3.98	3.43	11.77
OF	410.00	3.98	3.43	11.77
OF	411.00	3.98	3.43	11.77
OF	413.00	3.98	3.43	11.77
OF	414.00	3.98	3.43	11.77
OF	416.00	3.98	3.43	11.77
OF	417.00	3.98	3.43	11.77
OF	419.00	3.98	3.43	11.77
OF	420.00	3.98	3.43	11.77
OF	422.00	3.98	3.43	11.77
OF	423.00	3.98	3.43	11.77
OF	425.00	3.98	3.43	11.77
OF	426.00	3.98	3.43	11.77
	541.50	4.03	3.44	11.80
IF	591.00	3.92	3.44	11.73
IF	592.00	3.93	3.44	11.73
	701.20	3.50	3.45	11.43
IF	748.00	3.27	3.45	11.27
IF	751.30	3.26	3.45	11.26
IF	754.60	3.24	3.45	11.25
IF	757.90	3.23	3.45	11.24
IF	761.20	3.21	3.45	11.23
IF	764.40	3.19	3.45	11.22
IF	767.70	3.18	3.45	11.21
IF	771.00	3.16	3.45	11.20
IF	774.30	3.15	3.45	11.19
IF	777.60	3.13	3.45	11.18
IF	780.80	3.11	3.45	11.17
IF	784.10	3.10	3.45	11.16
IF	787.40	3.08	3.45	11.15
IF	790.70	3.07	3.45	11.14
IF	794.00	3.05	3.45	11.13
IF	797.20	3.03	3.46	11.12
IF	800.50	3.02	3.46	11.11
IF	803.80	3.00	3.46	11.09
IF	807.10	2.99	3.46	11.08
IF	810.40	2.97	3.46	11.07
IF	813.60	2.96	3.46	11.06
IF	816.90	2.94	3.46	11.05
IF	820.20	2.92	3.46	11.04
IF	823.50	2.91	3.46	11.03
IF	826.80	2.89	3.46	11.02
IF	830.10	2.87	3.46	11.01
IF	833.30	2.86	3.46	11.00
IF	836.60	2.84	3.46	10.99
IF	839.90	2.82	3.46	10.98
IF	843.20	2.81	3.46	10.97
IF	846.50	2.79	3.46	10.96
IF	849.70	2.78	3.46	10.94
IF	853.00	2.76	3.46	10.93
IF	856.30	2.74	3.46	10.92
IF	859.60	2.73	3.46	10.91
IF	862.90	2.71	3.46	10.90
IF	866.10	2.69	3.46	10.89
IF	869.40	2.68	3.46	10.88
IF	872.70	2.66	3.46	10.87
IF	876.00	2.64	3.46	10.86
IF	879.30	2.63	3.46	10.85
IF	882.50	2.61	3.46	10.83
IF	885.80	2.59	3.46	10.82
IF	889.10	2.58	3.46	10.81
IF	892.40	2.20	3.46	10.55

```
IF     895.70        1.68        3.46       10.18
IF     898.90        1.15        3.46        9.82
IF     902.20        0.63        3.46        9.51
IF     903.50        0.40        3.46        9.35
IF     905.40        0.01        3.46        9.08
PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE
NO AREAS ABOVE 100-YEAR SURGE IN THIS TRANSECT
          PART4 LOCATION OF SURGE CHANGES
STATION          10-YEAR SURGE           100-YEAR SURGE
125.00               1.00                    8.98
591.00               1.00                    8.98
748.00               1.00                    8.98
751.30               1.00                    8.98
757.90               1.00                    8.98
764.40               1.00                    8.99
771.00               1.00                    8.99
777.60               1.00                    8.99
784.10               1.00                    8.99
787.40               1.00                    8.99
794.00               1.00                    8.99
800.50               1.00                    8.99
803.80               1.00                    8.99
810.40               1.00                    8.99
813.60               1.00                    8.99
820.20               1.00                    9.00
823.50               1.00                    9.00
830.10               1.00                    9.00
836.60               1.00                    9.00
839.90               1.00                    9.00
846.50               1.00                    9.00
849.70               1.00                    9.00
856.30               1.00                    9.00
862.90               1.00                    9.00
866.10               1.00                    9.01
872.70               1.00                    9.01
876.00               1.00                    9.01
882.50               1.00                    9.01
889.10               1.00                    9.01
892.40               1.00                    9.01
895.70               1.00                    9.00
898.90               1.00                    9.02
902.20               1.00                    9.07
              PART5  LOCATION OF V ZONES
       STATION OF GUTTER        LOCATION OF ZONE
            804.38                  WINDWARD
        PART6 NUMBERED A ZONES AND V ZONES
STATION OF GUTTER  ELEVATION  ZONE DESIGNATION    FHF
       0.00          11.91
                                V22  EL=12     120
     124.00          11.90
                                V22  EL=12     120
     125.00          11.90
                                V22  EL=12     120
     426.00          11.77
                                V22  EL=12     120
     591.00          11.73
                                V22  EL=12     120
     592.00          11.73
                                V22  EL=12     120
     675.85          11.50
                                V22  EL=11     120
     748.00          11.27
                                V22  EL=11     120
     751.30          11.26
                                V22  EL=11     120
     754.60          11.25
                                V22  EL=11     120
     757.90          11.24
                                V22  EL=11     120
     761.20          11.23
                                V22  EL=11     120
     764.40          11.22
                                V22  EL=11     120
     767.70          11.21
                                V22  EL=11     120
     771.00          11.20
                                V22  EL=11     120
     774.30          11.19
                                V22  EL=11     120
     777.60          11.18
                                V22  EL=11     120
     780.80          11.17
                                V22  EL=11     120
     784.10          11.16
                                V22  EL=11     120
     787.40          11.15
                                V22  EL=11     120
     790.70          11.14
                                V22  EL=11     120
     794.00          11.13
                                V22  EL=11     120
     797.20          11.12
                                V22  EL=11     120
     800.50          11.11
                                V22  EL=11     120
     803.80          11.09
                                V22  EL=11     120
     804.38          11.09
                                A20  EL=11     100
     807.10          11.08
                                A20  EL=11     100
     810.40          11.07
```
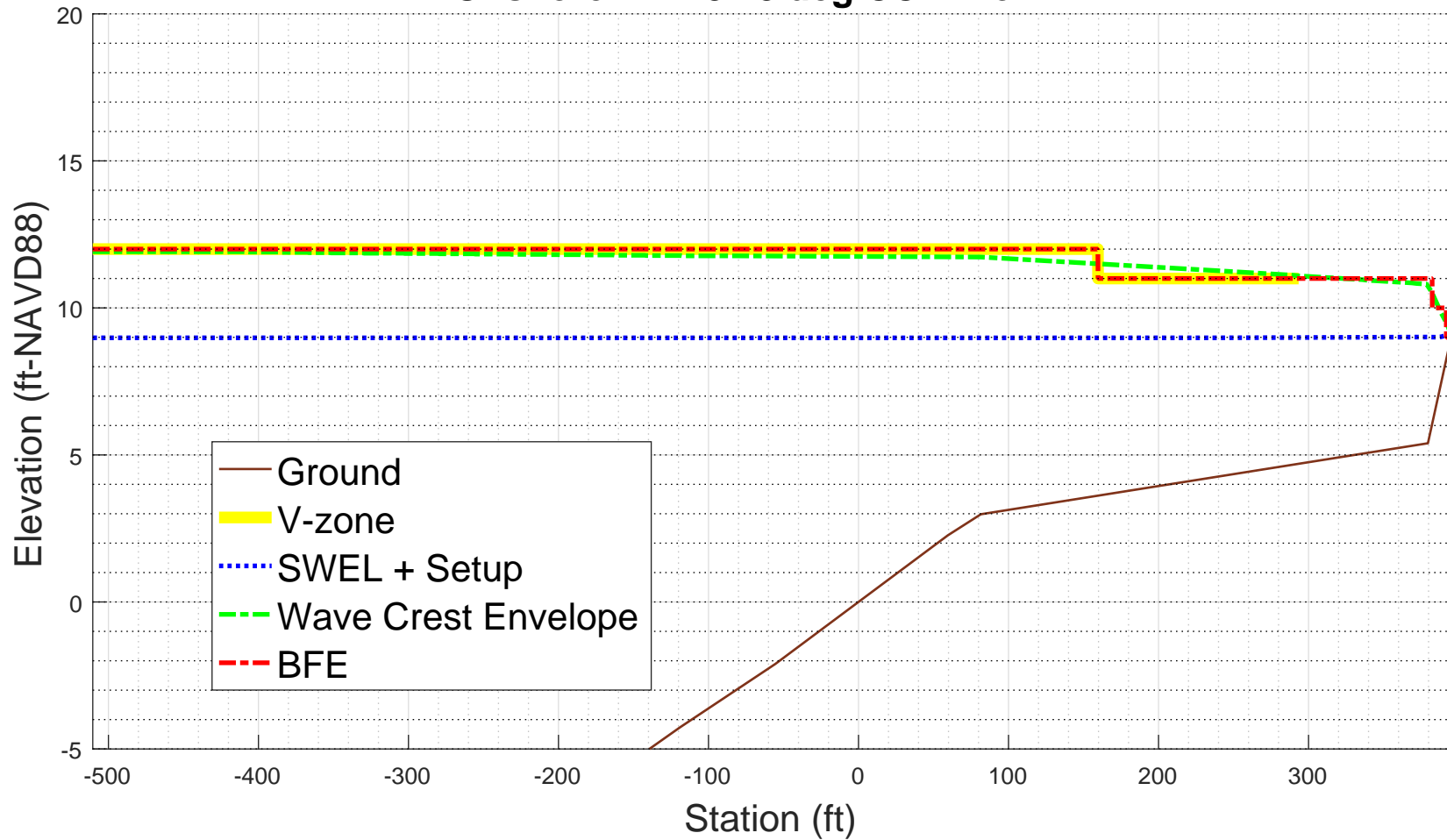
		A20	EL=11	100
813.60	11.06			
		A20	EL=11	100
816.90	11.05			
		A20	EL=11	100
820.20	11.04			
		A20	EL=11	100
823.50	11.03			
		A20	EL=11	100
826.80	11.02			
		A20	EL=11	100
830.10	11.01			
		A20	EL=11	100
833.30	11.00			
		A20	EL=11	100
836.60	10.99			
		A20	EL=11	100
839.90	10.98			
		A20	EL=11	100
843.20	10.97			
		A20	EL=11	100
846.50	10.96			
		A20	EL=11	100
849.70	10.94			
		A20	EL=11	100
853.00	10.93			
		A20	EL=11	100
856.30	10.92			
		A20	EL=11	100
859.60	10.91			
		A20	EL=11	100
862.90	10.90			
		A20	EL=11	100
866.10	10.89			
		A20	EL=11	100
869.40	10.88			
		A20	EL=11	100
872.70	10.87			
		A20	EL=11	100
876.00	10.86			
		A20	EL=11	100
879.30	10.85			
		A20	EL=11	100
882.50	10.83			
		A20	EL=11	100
885.80	10.82			
		A20	EL=11	100
889.10	10.81			
		A20	EL=11	100
892.40	10.55			
		A20	EL=11	100
892.84	10.50			
		A20	EL=10	100
895.70	10.18			
		A20	EL=10	100
898.90	9.82			
		A20	EL=10	100
902.20	9.51			
		A20	EL=10	100
902.30	9.50			
		A20	EL= 9	100
905.40	9.08			

ZONE TERMINATED AT END OF TRANSECT
PART 7   POSTSCRIPT NOTES
PS# 1   START(418537.5119,4848490.095)
PS# 2   END(418596.5287,4848082.7142)

-1.000000e+00

CM-124-1
100-year WHAFIS Output
Zero Station: -70.01211781, 43.78360151
Onshore Dir: -81.8 deg CCW from E

Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE

Elevation (ft-NAVD88)

Station (ft)

Iterative TAW for CM-124-1

Two Percent Run-up Elevation is 13.8 Feet-NAVD88

Run-up Height is 4.8 Feet

Legend:
- Ground
- ◇ TAW Segments
- SWEL
- Final 2% Run-up
- * R2 iterations
- * Toe|SWEL-1.5*H0

X-axis: Distance from zero NAVD88 shoreline (feet)

Y-axis: Elevation (Feet-NAVD88)
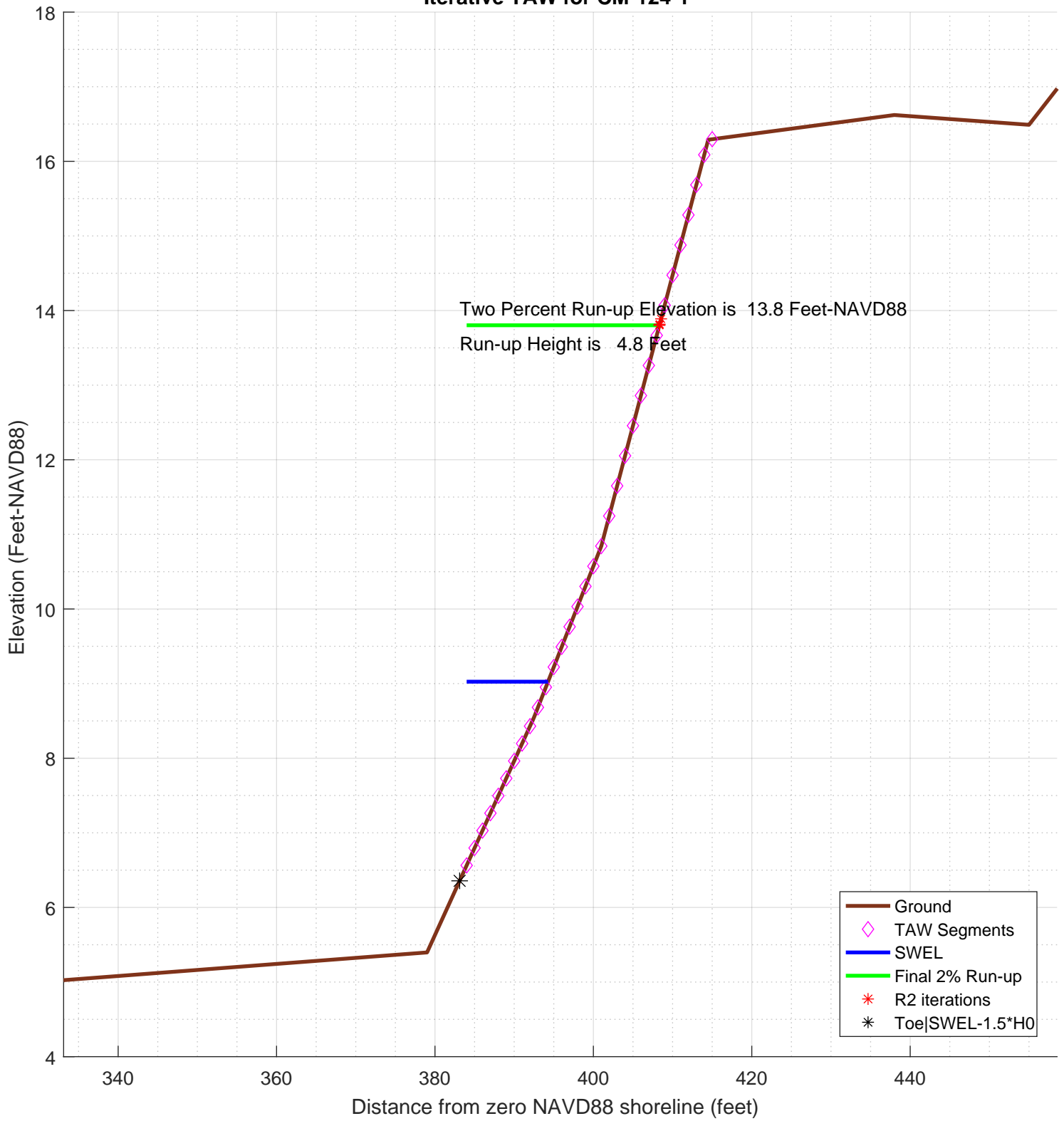
```
diary on          % begin recording

% FEMA appeal for The Town of Harpswell, Cumberland county, Maine
% TRANSECT ID: CM-124-1
% calculation by SJH, Ransom Consulting, Inc. 20-Feb-2020
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20200220
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%


%------------------------------------------------------------------------
% CONFIG
%------------------------------------------------------------------------
fname='inpfiles/CM-124-1sta_ele_include.csv';   % file with station, elevation, include
                                  % third colunm is 0 for excluded points
imgname='logfiles/CM-124-1-runup';
SWEL=8.9825;  % 100-yr still water level including wave setup.
H0=1.7682;    % significant wave height at toe of structure
Tp=3.343;     % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=1;   % this may get changed automatically below
gamma_rough=1;
gamma_beta=1;
gamma_perm=1;

setupAtToe=0.026568;
maxSetup=0.089504;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for CM-124-1'

plotTitle =

Iterative TAW for CM-124-1



% END CONFIG
%------------------------------

SWEL=SWEL+setupAtToe

SWEL =

                 9.009068

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                 9.098572



% FIND WAVELENGTH USING DEEPWATER DISPERSION RELATION
% using English units
L0=32.15/(2*pi)*T0^2

L0 =

          47.2594313608359


% Find Hb (Munk, 1949)
%Hb=H0/(3.3*(H0/L0)^(1/3))
%Db=-Hb/.78+SWEL;  % depth at breaking

% The toe elevation here is only used to determine the average
% structure slope, it is not used to depth limit the wave height.
% Any depth limiting or other modification of the wave height
```

```
% to make it consitent with TAW guidance should be performed
% prior to the input of the significant wave height given above.
Ztoe=SWEL-1.5*H0

Ztoe =

                  6.356768


% read the transect
[sta,dep,inc] = textread(fname,'%n%n%n%*[^\n]','delimiter',',','headerlines',0);

% remove unselected points
k=find(inc==0);
sta(k)=[];
dep(k)=[];

sta_org=sta;  % used for plotting purposes
dep_org=dep;


% initial guess at maximum run-up elevation to estimate slope
Z2=SWEL+1.5*H0

Z2 =

                 11.661368


% determine station at the max runup and -1.5*H0 (i.e. the toe)
top_sta=-999;
toe_sta=-999;
for kk=1:length(sta)-1
    if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
        top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
    end
    if  ((Ztoe > dep(kk)) & (Ztoe <= dep(kk+1)))    % here is the intersection of Ztoe with profile
        toe_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Ztoe)
    end
end

toe_sta =

          383.113881459383


top_sta =

          403.028129353382

% check to make sure we got them, if not extend the end slopes outward
S=diff(dep)./diff(sta);
if toe_sta==-999
   dy=dep(1)-Ztoe;
   toe_sta=sta(1)-dy/S(1)
end
if top_sta==-999
   dy=Z2-dep(end);
   top_sta=sta(end)+dy/S(end)
end

% just so the reader can tell the values aren't -999 anymore
top_sta

top_sta =

          403.028129353382

toe_sta

toe_sta =

          383.113881459383



% check for case where the toe of slope is below SWL-1.5*H0
% in this case interpolate setup from the setupAtToe(really setup as first station), and the max setup
% also un-include points seaward of SWL-1.5*H0
if Ztoe > dep(1)
   dd=SWEL_fore-dep;
   k=find(dd<0,1); % k is index of first land point
   staAtSWL=interp1(dep(k-1:k),sta(k-1:k),SWEL_fore);
   dsta=staAtSWL-sta(1);
   dsetup=maxSetup-setupAtToe;
   dsetdsta=dsetup/dsta;
   setup=setupAtToe+dsetdsta*(toe_sta-sta(1));
   sprintf('-!!- Location of SWEL-1.5*H0 is %4.1f ft landward of toe of slope',dsta)
   sprintf('-!!- Setup is interpolated between setup at toe of slope and max setup')
```

```
    sprintf('-!!-       setup is adjusted to %4.2f feet',setup)
    SWEL=SWEL-setupAtToe+setup;
    sprintf('-!!-       SWEL is adjusted to %4.2f feet',SWEL)
    k=find(dep < SWEL-1.5*H0)
    sta(k)=[];
    dep(k)=[];
else
    sprintf('-!!- The User has selected a starting point that is %4.2f feet above the elevation of SWEL-1.5H0\n',dep(1
    sprintf('-!!- This may be reasonable for some cases.  However the user may want to consider:\n')
    sprintf('-!!-   1) Selecting a starting point that is at or below %4.2f feet elevation, or\n', Ztoe)
    sprintf('-!!-   2) Reducing the incident wave height to a depth limited condition.\n')
end

ans =

-!!- Location of SWEL-1.5*H0 is 15.5 ft landward of toe of slope


ans =

-!!- Setup is interpolated between setup at toe of slope and max setup


ans =

-!!-      setup is adjusted to 0.04 feet


ans =

-!!-      SWEL is adjusted to 9.03 feet


k =

     1
     2
     3
     4
     5



% now iterate converge on a runup elevation
tol=0.01;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf ('!---------------- STARTING ITERATION %d -----------------!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

    R2=R2_new
    Z2=R2+SWEL
    % determine slope for this iteration
    top_sta=-999;
    for kk=1:length(sta)-1
       if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
          top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
          break;
       end
    end
    if top_sta==-999
       dy=Z2-dep(end);
       top_sta=sta(end)+dy/S(end)
    end

    % get the length of the slope (not accounting for berm)
    Lslope=top_sta-toe_sta
```

```
% loop over profile segments to determine berm factor
% re-calculate influence of depth of berm based on this run-up elevation
% check for berm, berm width, berm height
berm_width=0;
rdh_sum=0;
Berm_Segs=[];
Berm_Heights=[];
for kk=1:length(sta)-1
    ddep=dep(kk+1)-dep(kk);
    dsta=sta(kk+1)-sta(kk);
    s=ddep/dsta;
    if  (s < 1/15)      % count it as a berm if slope is flatter than 1:15 (see TAW manual)
        sprintf ('Berm Factor Calculation: Iteration %d, Profile Segment: %d',iter,kk)
        berm_width=berm_width+dsta;    % tally the width of all berm segments
        % compute the rdh for this segment and weight it by the segment length
        dh=SWEL-(dep(kk)+dep(kk+1))/2
        if  dh < 0
            chi=R2;
        else
            chi=2* H0;
        end
        if (dh <= R2 & dh >=-2*H0)
            rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
        else
            rdh=1;
        end
        rdh_sum=rdh_sum + rdh * dsta
        Berm_Segs=[Berm_Segs, kk];
        Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
    end
    if dep(kk) >= Z2  % jump out of loop if we reached limit of run-up for this iteration
        break
    end
end
sprintf ('!------- End Berm Factor Calculation, Iter: %d ---------!',iter)
berm_width
rB=berm_width/Lslope
if (berm_width > 0)
    rdh_mean=rdh_sum/berm_width
else
    rdh_mean=1
end
gamma_berm=1- rB * (1-rdh_mean)
if gamma_berm > 1
    gamma_berm=1
end
if gamma_berm < 0.6
    gamma_berm =0.6
end
% Iribarren number
slope=(Z2-Ztoe)/(Lslope-berm_width)
Irb=(slope/(sqrt(H0/L0)))
% runup height
gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough

% check validity
TAW_VALID=1;
if (Irb*gamma_berm < 0.5 | Irb*gamma_berm > 10 )
    sprintf('!!! - - Iribaren number: %6.2f is outside the valid range (0.5-10), TAW NOT VALID - - !!!\n', Irb*gam
    TAW_VALID=0;
else
    sprintf('!!! - - Iribaren number: %6.2f is in the valid range (0.5-10), TAW RECOMMENDED - - !!!\n', Irb*gamma_
end
islope=1/slope;
if (slope < 1/8 | slope > 1)
    sprintf('!!! - - slope: 1:%3.1f V:H is outside the valid range (1:8 - 1:1), TAW NOT VALID - - !!!\n', islope)
    TAW_VALID=0;
else
    sprintf('!!! - - slope: 1:%3.1f V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!\n', islope)
end
if TAW_VALID == 0
    TAW_ALWAYS_VALID=0;
end

if (Irb*gamma_berm < 1.8)
    R2_new=gamma*H0*1.77*Irb
else
    R2_new=gamma*H0*(4.3-(1.6/sqrt(Irb)))
end


% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
    disp ('!   Berm_width is greater than 1/4 wave length')
    disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on ber
    % do the foreshore calculation
```

```
        fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
        % get upper slope
        fore_toe_sta=-999;
        fore_toe_dep=-999;
        for kk=length(dep)-1:-1:1
            ddep=dep(kk+1)-dep(kk);
            dsta=sta(kk+1)-sta(kk);
            s=ddep/dsta;
            if s < 1/15
                break
            end
            fore_toe_sta=sta(kk);
            fore_toe_dep=dep(kk);
            upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
        end
        fore_Irb=upper_slope/(sqrt(fore_H0/L0));
        fore_gamma=gamma_perm*gamma_beta*gamma_rough;
        if (fore_Irb < 1.8)
            fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
        else
            fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
        end
        if berm_width >= L0
            R2_new=fore_R2
            disp ('berm is wider than one wavelength, use full shallow foreshore solution');
        else
            w2=(berm_width-0.25*L0)/(0.75*L0)
            w1=1-w2
            R2_new=w2*fore_R2 + w1*R2_new
        end
    end % end berm width check

    % convergence criterion
    R2del=abs(R2-R2_new)
    R2_all(iter)=R2_new;

    % get the new top station (for plot purposes)
    Z2=R2_new+SWEL
    top_sta=-999;
    for kk=1:length(sta)-1
        if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
            top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
            break;
        end
    end
    if top_sta==-999
        dy=Z2-dep(end);
        top_sta=sta(end)+dy/S(end);
    end
    topStaAll(iter)=top_sta;
end
ans =
!---------------- STARTING ITERATION 1 -----------------!
Ztoe =
                 6.356768
toe_sta =
        383.113881459383
top_sta =
        403.028129353382
Z2 =
                11.661368
H0 =
                   1.7682
Tp =
                    3.343
T0 =
        3.03909090909091
R2 =
                   5.3046
Z2 =
        14.3303257693142
top_sta =
        409.643929714403
Lslope =
        26.5300482550197
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
        0.300548181920686
Irb =
        1.55379120171371
gamma_berm =
```

```
        1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
     1
gamma =
     1
ans =
!!! - - Iribaren number:   1.55 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.3 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         4.86292207708021
R2del =
        0.441677922919785
Z2 =
         13.8886478463944
top_sta =
         408.549099569172
ans =
!---------------- STARTING ITERATION 2 -----------------!
Ztoe =
                 6.356768
toe_sta =
         383.113881459383
top_sta =
         408.549099569172
Z2 =
         13.8886478463944
H0 =
                   1.7682
Tp =
                    3.343
T0 =
         3.03909090909091
R2 =
         4.86292207708021
Z2 =
         13.8886478463944
top_sta =
         408.549099569172
Lslope =
         25.4352181097884
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
        0.296120120294778
Irb =
         1.53089875514819
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
     1
gamma =
     1
ans =
!!! - - Iribaren number:   1.53 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         4.79127526656987
R2del =
        0.0716468105103454
Z2 =
         13.8170010358841
top_sta =
         408.371501891032
ans =
!---------------- STARTING ITERATION 3 -----------------!
Ztoe =
                 6.356768
toe_sta =
         383.113881459383
top_sta =
         408.371501891032
Z2 =
```

```
                 13.8170010358841
H0 =
                            1.7682
Tp =
                             3.343
T0 =
             3.03909090909091
R2 =
             4.79127526656987
Z2 =
             13.8170010358841
top_sta =
             408.371501891032
Lslope =
              25.257620431649
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
      0
rB =
      0
rdh_mean =
      1
gamma_berm =
      1
slope =
             0.295365632565136
Irb =
             1.52699816127793
gamma_berm =
      1
gamma_perm =
      1
gamma_beta =
      1
gamma_rough =
      1
gamma =
      1
ans =
!!! - - Iribaren number:   1.53 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
             4.77906752332578
R2del =
           0.012207743244085
Z2 =
              13.80479329264
top_sta =
           408.341241411326
ans =
!---------------- STARTING ITERATION 4 -----------------!
Ztoe =
                    6.356768
toe_sta =
           383.113881459383
top_sta =
           408.341241411326
Z2 =
              13.80479329264
H0 =
                            1.7682
Tp =
                             3.343
T0 =
             3.03909090909091
R2 =
             4.77906752332578
Z2 =
              13.80479329264
top_sta =
           408.341241411326
Lslope =
              25.2273599519427
ans =
!------- End Berm Factor Calculation, Iter: 4 ---------!
berm_width =
      0
rB =
      0
rdh_mean =
      1
gamma_berm =
      1
slope =
             0.295236017832554
Irb =
             1.52632807161107
gamma_berm =
```

```
        1
gamma_perm =
        1
gamma_beta =
        1
gamma_rough =
        1
gamma =
        1
ans =
!!! - - Iribaren number:   1.53 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          4.77697033431417
R2del =
        0.00209718901161171
Z2 =
          13.8026961036284
top_sta =
          408.336042911959
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
          13.8026961036284
diary off
-1.000000e+00
-1.000000e+00
```

```
_____
PART 5: RUNUP2

        for transect: CM-124-1

Station locations shifted by: -0.59 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input


_____RUNUP2 INPUT CONVERSIONS_____
        for transect: CM-124-1

Incident significant wave height: 2.61 feet

Peak wave period: 3.40 seconds

Mean wave height: 1.64 feet

Local Depth below SWEL: 30.55 feet

Mean wave height deshoaled using Hunt approximation for
celerity assuming constant wave energy flux.
 References: R.G. Dean and R.A. Dalrymple. 2000.  Water

            Wave Mechanics for Engineers and Scientists. World
            Scientific Publishing Company, River Edge New Jersy

            USACE (1985), Direct Methods for Calculating Wavelength, CETN-1-17
            US Army Engineer Waterways Experiment Station Coastel Engineering
            Research Center, Vicksburg, MS

            also see Coastal Engineering Manual Part II-3
            for discussion of shoaling coefficient

    Depth, D = 30.55
    Period, T = 2.89
    Waveheight, H = 1.64
Deep water wavelength, L0 (ft)
    L0 = g*T*T/twopi
    L0 = 32.17*2.89*2.89/6.28 = 42.77
Deep water wave celerity, C0 (ft/s)
    C0 = L0/T
    C0 = 42.77/2.89 = 14.80
Angular frequency, sigma (rad/s)
    sigma = twopi/T
    sigma = 6.28/2.89 = 2.17
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
    y = sigma.*sigma.*D./g
    y = 2.17*2.17*30.55/32.17 = 4.49
    C1H = sqrt( g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)) )
    C1H = 14.79
Shoaling Coefficient KsH
    KsH = sqrt(C0/C1H)
    KsH = sqrt(14.80/14.79) = 1.00
Deepwater Wave Height H0_H (ft)
    H0_H = H/KsH
    H0_H = 1.64/1.00 = 1.64

Deepwater mean wave height: 1.64 feet

_____END RUNUP2 CONVERSIONS_____

_____RUNUP2 RESULTS_____
        for transect: CM-124-1

RUNUP2 SWEL:
9.00
9.00
9.00
9.00
```

```
9.00
9.00
9.00
9.00
9.00

RUNUP2 deepwater mean wave heights:
1.55
1.55
1.55
1.64
1.64
1.64
1.72
1.72
1.72

RUNUP2 mean wave periods:
2.75
2.89
3.03
2.75
2.89
3.03
2.75
2.89
3.03

RUNUP2 runup above SWEL:
1.13
1.19
1.25
1.00
1.04
1.09
0.91
0.93
0.96

RUNUP2 Mean runup height above SWEL: 1.06 feet

RUNUP2 2-percent runup height above SWEL: 2.32 feet

RUNUP2 2-percent runup elevation: 11.32 feet-NAVD88

RUNUP2 Messages:
No Messages

_____END RUNUP2 RESULTS_____


_____ACES BEACH RUNUP_____

Incident significant wave height: 2.61 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 2.29 feet

Peak wave period: 3.40 seconds

Average beach Slope: 1:24.45 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 1.40 feet

ACES Beach 2-percent runup elevation: 10.40 feet-NAVD88

ACES BEACH RUNUP is valid
```

_____END ACES BEACH RESULTS_____

PART 5 COMPLETE_____

```
  FEMA                                        sjh              job 2
  RUNUP2 transect: CM-124-1                                     1
3.00
  -21.56 -510.4 1.0
  -19.31 -456.4 1.0
  -18.43 -436.4 1.0
  -18.37 -435.4 1.0
  -16.75 -412.4 1.0
  -12.14 -344.4 1.0
  -12.10 -343.4 1.0
  -9.41 -270.4 1.0
  -9.18 -263.4 1.0
  -9.03 -259.4 1.0
  -6.26 -174.4 1.0
  -6.22 -173.4 1.0
  -4.28 -119.4 1.0
  -2.11 -55.4  1.0
   2.27  59.6   1.0
   2.98  81.6   1.0
   5.40  379.6  1.0
   8.55  393.1  1.0
  10.84 401.6  1.0
1 16.29 415.1  1.0
  9.0   1.55   2.75
  9.0   1.55   2.89
  9.0   1.55   3.03
  9.0   1.64   2.75
  9.0   1.64   2.89
  9.0   1.64   3.03
  9.0   1.72   2.75
  9.0   1.72   2.89
  9.0   1.72   3.03
```

****

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-510.0	-21.5		
			.00	1.00
2	-456.0	-19.3		
			22.22	1.00
3	-436.0	-18.4		
			10.00	1.00
4	-435.0	-18.3		
			14.38	1.00
5	-412.0	-16.7		
			14.78	1.00
6	-344.0	-12.1		
			FLAT	1.00
7	-343.0	-12.1		
			26.99	1.00
8	-270.4	-9.4		
			30.43	1.00
9	-263.4	-9.2		
			26.67	1.00
10	-259.4	-9.0		
			30.69	1.00
11	-174.4	-6.3		
			25.00	1.00
12	-173.4	-6.2		
			27.84	1.00
13	-119.4	-4.3		
			29.49	1.00
14	-55.4	-2.1		
			26.26	1.00
15	59.6	2.3		
			30.99	1.00
16	81.6	3.0		
			123.14	1.00
17	379.6	5.4		
			4.29	1.00
18	393.1	8.6		
			3.71	1.00
19	401.6	10.9		
			2.48	1.00
20	415.1	16.3		

LAST SLOPE 3.00   LAST ROUGHNESS   1.00

****

OUTPUT TABLE

INPUT PARAMETERS			RUNUP RESULTS			
---------------			-------------			
WATER LEVEL ABOVE DATUM (FT.)	DEEP WATER WAVE HEIGHT (FT.)	WAVE PERIOD (SEC.)	BREAKING SLOPE NUMBER	RUNUP SLOPE NUMBER	RUNUP ABOVE WATER LEVEL (FT.)	BREAKER DEPTH (FT.)
9.00	1.55	2.75	11	18	1.13	2.33
9.00	1.55	2.89	11	18	1.19	2.36
9.00	1.55	3.03	11	18	1.25	2.38
9.00	1.64	2.75	11	18	1.00	2.44
9.00	1.64	2.89	11	18	1.04	2.47
9.00	1.64	3.03	11	18	1.09	2.50
9.00	1.72	2.75	11	18	.91	2.55
9.00	1.72	2.89	11	18	.93	2.58
9.00	1.72	3.03	11	18	.96	2.61

Runup2 2% runup elevation for Transect: CM-124-1

Two Percent Run-up Elevation is 11.3 Feet-NAVD88

Run-up Height is   2.3 Feet

Elevation (ft)

Station (ft)

Ground
Swel
2% Runup