Appendix M Sewer Analysis Report

Appendices

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FUSCOE
ENGINEERING

SEWER ANALYSIS REPORT

OCMA MUSEUM HOUSE

Newport Beach, CA

Prepared for:

OCMA Urban Housing, LLC
18201 Von Karman Avenue, Suite 900
Irvine, CA 92612

Prepared by:

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16795 Von Karman, Suite 100
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REGISTERED PROFESSIONAL ENGINEER
SUSAN K. WILLIAMS
NO. 52976
CIVIL
STATE OF CALIFORNIA
7/16/16

Project Manager:
Oriana Slasor, P.E.

Date Prepared: October 2015
Date Resubmitted: July 2016

Job Number: 622-013

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FUSCOE ENGINEERING
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SEWER ANALYSIS REPORT

OCMA MUSEUM HOUSE

NEWPORT BEACH, CA

July 2016

622-013

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SEWER ANALYSIS REPORT

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SEWER ANALYSIS REPORT

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622-013

Table of Contents

1.0 INTRODUCTION

1.1 PURPOSE OF STUDY

The purpose of this analysis is to calculate and compare the sanitary sewer flows for the existing and proposed conditions for the proposed OCMA Museum House project, located in City of Newport Beach, California. In addition, the report includes recommendations for sewer upgrades that would be required to accommodate wastewater flows associated with the proposed project development.

1.2 SITE DESCRIPTION

The OCMA Museum House project site is located at 850 San Clemente Drive, and encompasses a total area of two acres. The existing site consists of the Orange County Museum of Art (OCMA) building, related utility infrastructure, and parking.

The site is bounded to the north by the San Joaquin Plaza Apartments project, to the east by a parking garage, and to the south by San Clemente Drive. Santa Barbara Drive is to the west of the project. Santa Cruz Drive is to the east. A Location Map is included on Page 2 of this report.

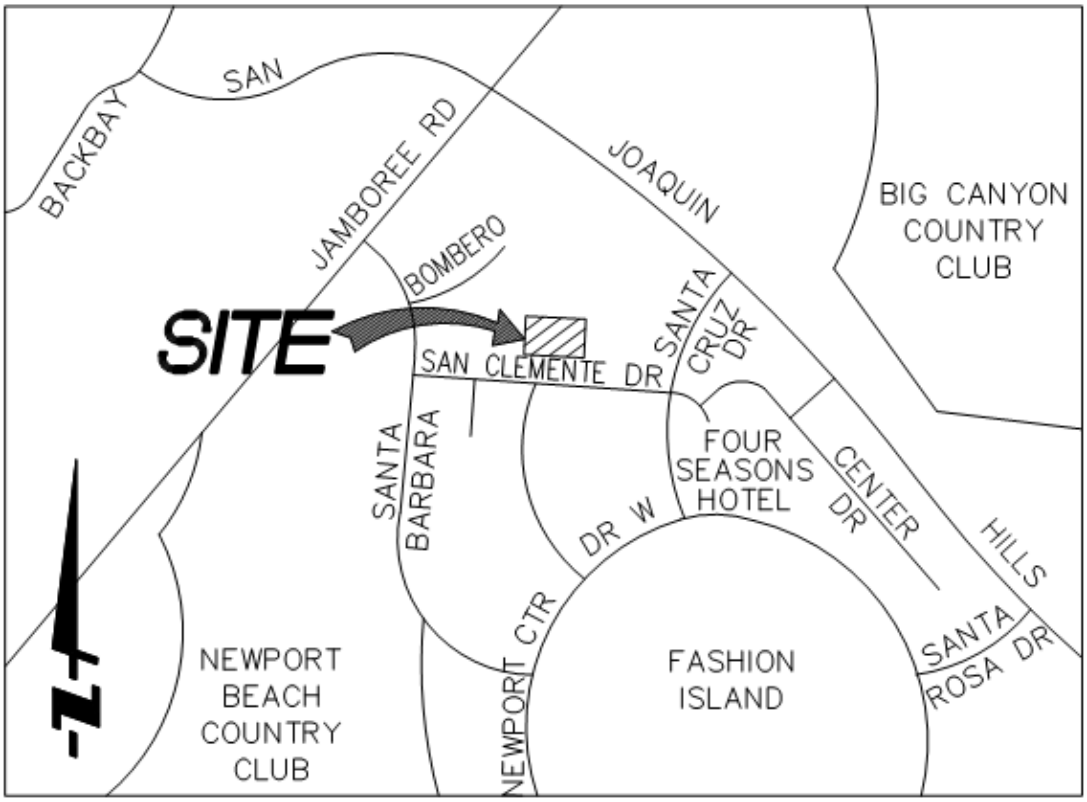
1.3 EXISTING SEWER FACILITIES

Wastewater from the site currently discharges into an existing City-owned 8" VCP sewer line, within an easement, through the adjacent parking lot to the west of the site, before turning southerly, and discharging to an existing 8" VCP sewer in San Clemente Drive. The sewer line in San Clemente Drive drains southwesterly, conveying the wastewater to an 8" VCP sewer line in Santa Barbara Drive, and then northwesterly, to Jamboree Road, where it discharges into an Orange County Sanitation District (OCSD) trunk sewer manhole at the intersection of Jamboree Road and Santa Barbara Drive.

The existing OCSD sewer line in Jamboree Road is an 18" trunk sewer line, and flows in a southerly direction. We have received information from OCSD, regarding their trunk sewer on Jamboree Road in the vicinity of our project, and it appears that the City's sewer lateral and connection at Santa Barbara Drive is not impacted by projected peak flows in the OCSD trunk line. Based on OCSD Network for this sewer line (See Appendix 2), the projected peak flow depth for this 18" line is 0.306' (3.7") at the manhole in the Santa Barbara Drive/Jamboree Road intersection. In addition, based on the existing 8" sewer profile at Santa Barbara Drive/Jamboree Road intersection, the invert of the existing 8" sewer is1-foot higher than the invert of the existing 18" trunk line at the manhole. Therefore, the flow depth in the existing 8" sewer in Santa Barbara is not affected by the peak flow depth in the existing OCSD 18" trunk sewer. An Existing Condition Public Sewer Exhibit is included as Appendix 1. Existing Sewer Information is included as Appendix 2.

1.4 PROPOSED DEVELOPMENT

The proposed project development will consist of 100 condominium units, along with proposed amenities. Recreation centers, such as pools, fitness, spa facility, and other amenities; along with common-area landscaping are included in the proposed development. A Conceptual Site Plan is included as Appendix 3.



LOCATION MAP
NTS

2.0 METHODOLOGY

As mentioned previously, the wastewater flows will be conveyed from the proposed project through the existing 8" City-owned sewer system. The slopes of the sewer reaches vary from 0.6% at the downstream reach, to 3% in San Clemente Drive. In addition, there is an 8" reach of sewer, within a public sewer easement at 888 San Clemente Drive, which has a slope of 1%. Using the Kutter Flow Depth analyses (See Appendix 7), it was determined that the capacities of these reaches are as follows:

- Existing 8"VCP @ Slope = 0.6% (Santa Barbara Drive) - Capacity = 0.450 cfs
- Existing 8" VCP @ Slope = 1.088% (Santa Barbara Drive) - Capacity = 0.759 cfs
- Existing 8" VCP @ Slope = 1.00% (888 San Clemente Drive) - Capacity = 0.550 cfs

The next step was to determine the existing and proposed condition wastewater flows, and then analyze the capacity of the existing sewer system to accommodate these flows.

The existing peak flow rates in the City's 8" VCP sanitary sewer system in Santa Barbara Drive were determined by flow tests conducted between September 15, 2015 and September 29, 2015 by USCubed (See Sewer Monitoring Report in Appendix 4). The manhole flow tests were conducted using 15 minute intervals for data collection at two sewer manholes; one manhole (SB-01) located in Santa Barbara Drive, upstream of the Police Station lateral, and the other manhole (J-01), on Jamboree Road, north of Santa Barbara Drive, servicing the Police Station. The combined peak flow rate that was measured in each of the two monitored manholes was used as the current peak flow in the sewer system. Then, the flows were compared with the proposed flows from the Meridian Report, prepared in 2013 by Fuscoe Engineering. The following is the discussion of the existing and proposed condition sewer flows.

<u>Existing Condition Flows:</u>

2015 Test results / Meridian Report comparison:

- Santa Barbara Drive (SB-01) (upstream police station connection): 0.390 cfs (0.436 cfs (Meridian) – 0.0464 cfs (police flows) = 0.390 cfs, to accommodate Meridian project);
- Jamboree Road (J-01) to SB Sewer Line = 0.0464 cfs (police station flows);
- San Clemente Drive: Use SB-01 flows: 0.362 cfs
- Total Existing Flows in Downstream Reach of Sewer System (8" sewer in Santa Barbara Drive at Jamboree Road): 0.362 + 0.0464 = 0.4084 cfs (use 0.436 cfs, to accommodate Meridian project).

The existing measured flows include a portion of the Meridian project. According to the results of the Sewer Analysis Report for Meridian project, the total proposed wastewater flows in the downstream reach of this sewer system is 0.436 cfs. A portion of this project has been developed, and a portion is still undergoing construction. Therefore, the existing flows in the sewer system, following completion and "move-in" of the Meridian project are assumed to be 0.436 cfs. Since the flattest slope for this system (s = 0.6%) has capacity to convey 0.451 cfs, the existing system is deemed adequate to convey the existing condition wastewater flows.

Proposed Condition Flows:

To determine the total proposed flow to the sewer line, the existing flows above (0.436 cfs), were added to the proposed net new flows generated by the OCMA Museum House project. (For the proposed 100 condominium units, the net peak flow was determined to be 0.16 cfs – see Sewer Generation Calculations in Appendix 6.) The new wastewater flows are calculated to be 0.436 + 0.16 = 0.596 cfs for the downstream reach, which will require a minimum of a 10"-diameter (43% full), or a 12"-diameter (33% full) to replace the existing 82 feet of 8"- diameter VCP (s = 0.006), per Kutter Flow Depth Calculations in Appendix 7 . Based on our experience with the City, we believe that they will require a minimum 12"-diameter VCP sewer to replace the existing 8" VCP.

In addition to the capacity of the existing 82 lineal feet of 8" sewer at s = 0.006 (0.6%), the capacity for the next upstream reach (SB-01 to J-01) of sewer. Proposed flows in this reach are (0.596 - 0.0464 = 0.550) 0.550 cfs, and the slope of this reach of 8"-diameter sewer is 1.88%. The proposed condition flows will be at 42% full for this reach (SB-01 to J-01), which is acceptable.

The existing 8" sewer line in the public easement at 888 San Clemente Drive has a slope of s = 0.01 (1%). Using the proposed net new flows of 0.16 cfs, along with the SB-01 flows of 0.362 cfs, the proposed maximum flow is this reach is 0.522 cfs, which is associated with a flow-depth of 48.3% full.

Also, since the remaining upstream reaches have slopes which are greater than 1.88%, these reaches are also deemed adequate to convey the proposed condition wastewater flows.

Design Criteria and Sewer Generation Rates are included as Appendix 5 of this report. Kutter Flow-Depth Calculations are included in Appendix 7.

3.0 PROPOSED SEWER IMPROVEMENTS

Based on the results of the proposed wastewater flows in the existing sewer system downstream of the OCMA Museum House Project, along with the Kutter Flow Depth Calculations, it was determined that the downstream reach of 82 lineal feet of 8" sewer line (slope = 0.6%) will exceed the design capacity of 1/2 full for the peak wastewater condition. Therefore, it is recommended that this reach of 8" VCP sewer be replaced with 12" VCP.

Installation of the proposed 12" VCP sewer will require connection into the existing Orange County Sanitation District sewer system at the OCSD manhole. Meetings and discussions with OCSD staff are ongoing to determine whether the proposed 12" lateral will be able to core into the existing manhole, or if a new manhole will be required. Documentation of meetings and other correspondence are included in Appendix 8 of this report.

4.0 RESULTS AND CONCLUSIONS

Existing Public Sewer Line

The table below shows the capacity status of the existing 8" VCP sewer in San Clemente Drive, and Santa Barbara Drive, from Santa Clemente Drive to Jamboree Road, in the vicinity of the project site. Existing condition and proposed condition wastewater flows are included in the analysis. Flow Depth Calculations are included in Appendix 7.

Existing Public Sewer System in Santa Barbara Drive & San Clemente Drive – Flow Table

Public Sewer Line Location	Existing Slope	Ex. Pipe Dia	Exist Condition Peak Flow (using total at downstream end of reach) (cfs)	Existing Condition Flow Depth (in)	% Full (Existing Condition Flow Rate)	Additional Flow From Project (cfs)	Total Proposed Flow (cfs)	Flow Depth With Additional Flow (in)	% Full (Proposed Condition Flow Rate)
MH-SB01 + *Meridian* Project Santa Barbara	0.0188	8" VCP	0.390	2.80"	35%	0.16	0.550	3.35"	42%
MH-SB01 888 San Clemente Drive	0.010	8" VCP	0.362	3.2"	40%	0.16	0.522	3.9"	48.3%
Downstream Reach in Santa Barbara Drive	0.006	8" VCP	0.436	3.94"	49.3%	0.16	0.596	Pipe Capacity Exceeded	

Proposed Public Sewer Line in Santa Barbara Drive at Jamboree Road

The table below shows the capacity status of the sewer replacement of the existing 8" VCP sewer in Santa Barbara Drive at Jamboree Road. This option would require removal of existing 82 lineal feet of existing 8" VCP in Santa Barbara Drive at Jamboree Road, and installing 12" VCP. Existing Condition and Proposed Condition flows are included in the analysis. Flow Depth Calculations are included in Appendix 7.

Proposed Public Sewer Line in Santa Barbara Drive at Jamboree Road – Flow Table

Public Sewer Line Location	Existing Slope	Proposed Pipe Dia	Exist Condition Peak Flow (cfs)	Existing Condition Flow Depth (in)	% Pipe Depth Used (Existing Condition Flow Rate)	Total Additional Flow From Project (cfs)	Total Proposed Flow (cfs)	Proposed Flow Depth With Additional Flow (in)	% Full (Proposed Condition Flow Rate in Proposed VCP)
Santa Barbara Drive	0.006 (82L.F.)	12" VCP	0.436	3.94" in 8" VCP	49.3%	0.16	0.596	3.95" in 12" VCP	33%

5.0 APPENDICES

Appendix 1 Existing Condition Public Sewer Exhibit

Appendix 2 Existing Sewer Information

Appendix 3 Conceptual Site Plan

Appendix 4 Sewer Monitoring Report

Appendix 5 Design Criteria and Sewer Generation Rates

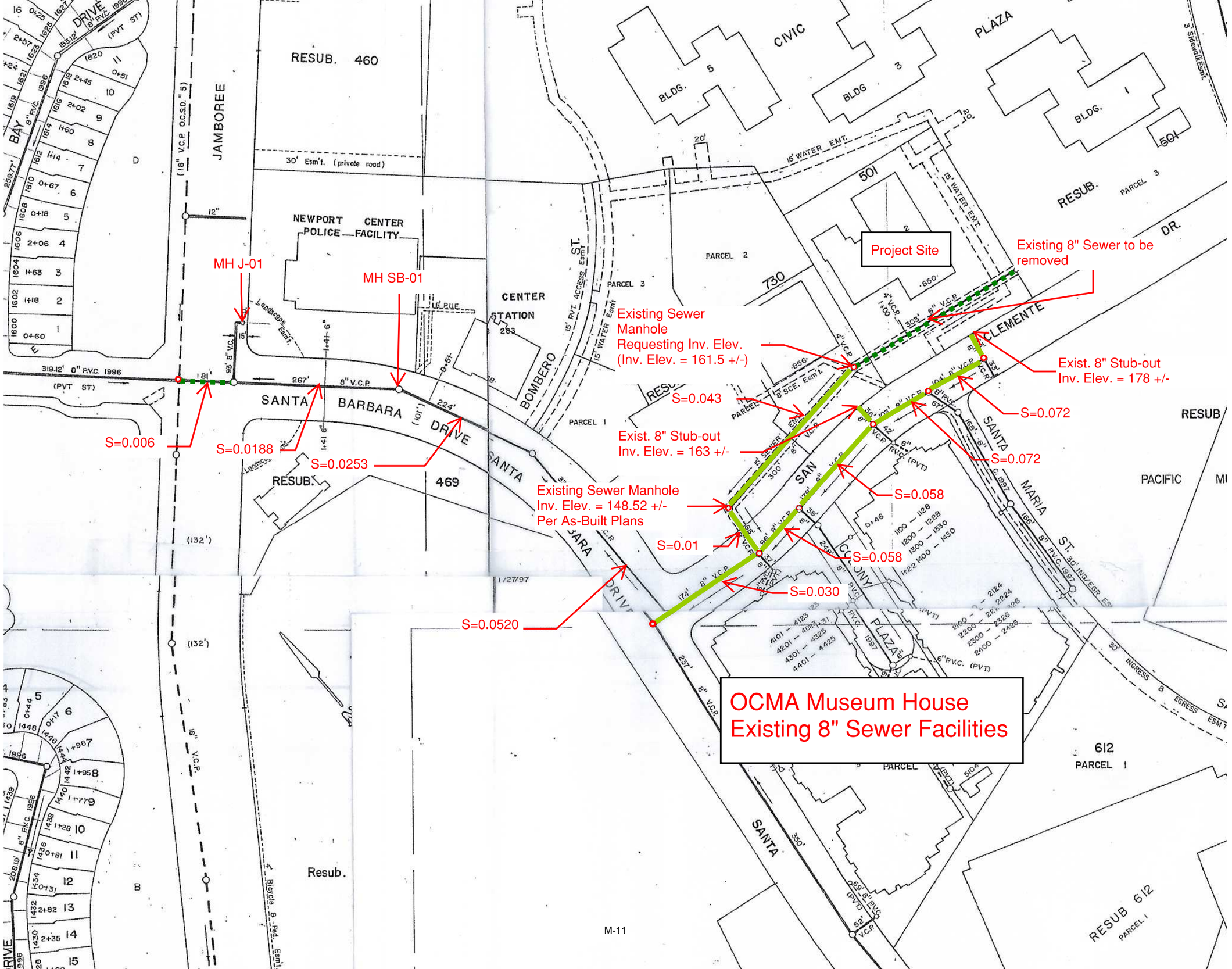
Appendix 6 Sewer Generation Calculations

Appendix 7 Kutter Flow Depth Calculations

Appendix 8 Correspondence & Meeting Minutes

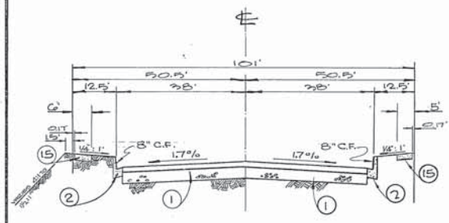
Appendix 1

Existing Condition Public Sewer Exhibit


MH J-01
MH SB-01
Project Site
Existing 8" Sewer to be removed
Existing Sewer Manhole
Requesting Inv. Elev.
(Inv. Elev. = 161.5 +/-)
Exist. 8" Stub-out
Inv. Elev. = 178 +/-
S=0.043
S=0.072
Exist. 8" Stub-out
Inv. Elev. = 163 +/-
S=0.072
S=0.006
S=0.0188
S=0.0253
S=0.058
Existing Sewer Manhole
Inv. Elev. = 148.52 +/-
Per As-Built Plans
S=0.01
S=0.058
S=0.030
S=0.0520
OCMA Museum House
Existing 8" Sewer Facilities
JAMBOREE
SANTA BARBARA DRIVE
SAN CLEMENTE
NEWPORT CENTER POLICE FACILITY
CIVIC CENTER PLAZA
BOMBERO ST.
RESUB. 460
RESUB. 469
RESUB 612
PARCEL 1
PARCEL 2
PARCEL 3
15' WATER EMT.
15' PVT. ACCESS Esmt.
30' Esm't. (private road)
8" V.C.P.
8" P.V.C.
6" P.V.C. (PVT)
319.12' 8" P.V.C. 1996
(PVT ST)
Resub.
M-11

Appendix 2

Existing Sewer Information



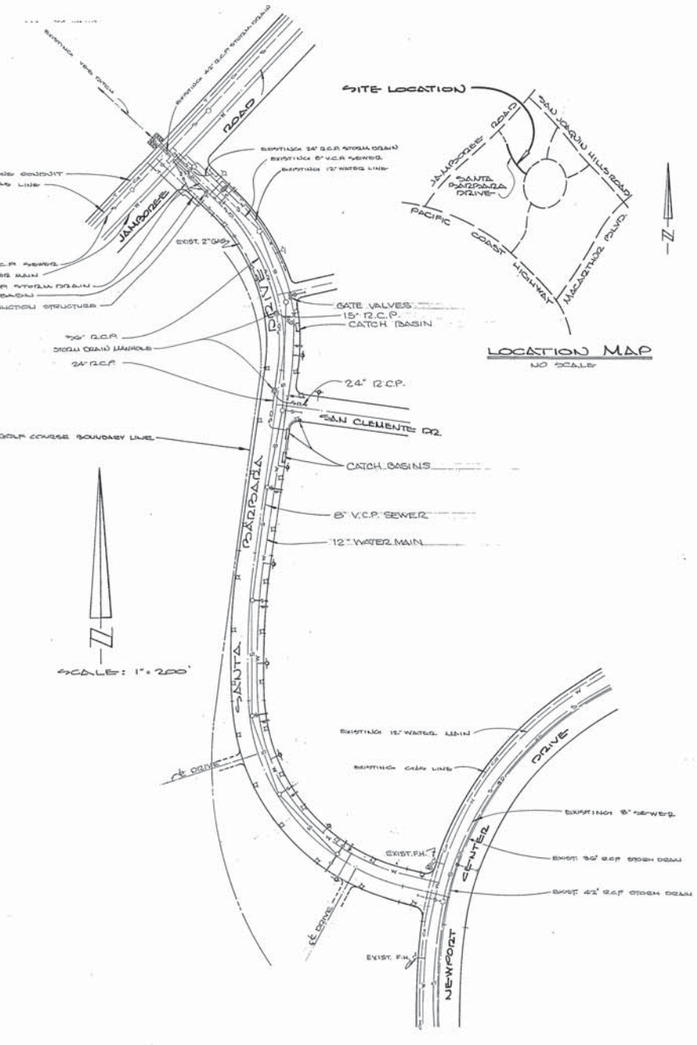
TYPICAL SECTION
SANTA BARBARA DRIVE

CONSTRUCTION NOTES

1. PLACE 4" A.C. OVER 8" A.B.
2. CONST. CONCRETE CURB & GUTTER PER STD. 105-L TYPE A.
3.
4. CONST. 8" TO 6" C.F. CURB ONLY.
5. CONST. 12" A.C. WATER MAIN. (CLASS 200)
6. CONST. 8" V.C.P. SEWER
7. CONST. 48" DIA. SEWER MANHOLE PER STD. 402-L.
8. CONST. 36" R.C.P. ("D" LOAD AS SHOWN ON THESE PLANS)
9. CONST. 24" R.C.P. ("D" LOAD AS SHOWN ON THESE PLANS)
10. CONST. 15" R.C.P. ("D" LOAD AS SHOWN ON THESE PLANS)
11. CONST. MANHOLE #4 PER STD. PLAN NO. 308-L
12. CONST. CATCH BASIN CURB INLET 'OL' PER STD. PLAN 306-L.
13. CONST. CATCH BASIN CURB INLET 'OL-A' PER STD. PLAN 305-L.
14. REMOVE STREET BARRICADE.
15. CONST. CONC. SIDEWALK PER STD. PLAN 110 -L.
16. CONST. LOCAL DEPRESSION PER STD. PLAN 304-L.
17. CONST. CURB INLET TYPE 'OS' PER STD. PLAN 306-L.
18. PLACE FIREHYDRANT ASSEMBLY PER STD. PLAN 501-L.
19. PLACE GATE VALVES AS INDICATED.
20. FEATHER AS REQUIRED BY FIELD ENGINEER.
21. REMOVE EXISTING CLEARANCE MARKERS.
22. CONST. 8" A.C.P. WATER. (CLASS 200)
23. CONST. STANDARD SURVEY MONUMENT PER STD. PLAN 124-L.
24. CONST. 4" A.C.P. WATER LINE, CLASS 200.
25. CONST. CONC CURB & GUTTER PER STD. 105-L TYPE "A" VARYING CURB FACE FROM 8" C.F. TO 6" C.F.
26. CONST. COMMERCIAL DRIVEWAY APPROACH, TYPE II, PER STD. 112-L, WIDTH AND CURB RETURN RADII AS SHOWN.
27. CONST. 6" V.C.P. SEWER LATERAL.
28. REMOVE EXIST. CONC. CURB, GUTTER & SIDEWALK.

SPECIAL NOTES

1. ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH REGULATION OF THE U.S. DEPARTMENT OF LABOR AND WITH THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS' CONSTRUCTION SAFETY ORDERS.
   THE CITY, THE CIVIL ENGINEER AND THE SOILS ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH REGULATIONS OF THE U.S. DEPARTMENT OF LABOR, OR WITH THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS
2. STREET STRUCTURAL PAVEMENT SECTIONS SHOWN ARE MINIMUM AND ARE SUBJECT TO REVISION AFTER APPROPRIATE TESTING OF THE SUBGRADE MATERIALS HAS BEEN COMPLETED.
3. FIRE HYDRANTS SHALL BE RICH - VANGUARD # 6615 A.
4. ALL SEWER LINES SHALL HAVE PLASTIC COMPRESSION JOINTS.



INDEX MAP

LEGEND

WATER LINE ..... W, G.V., EX. F.H., F.H.
SEWER LINE ..... S, M.H.
STORM DRAIN ..... SD, S.D., C.B.
STREET LIGHT .....
STREET SIGN .....
TELEPHONE CONDUIT .. T T

LOCATION MAP
NO SCALE

STREET IMPROVEMENTS

1. CONST. 4" A.C. OVER 8" A.B.
2. CONST. CONCRETE CURB & GUTTER PER STD. 105-L TYPE "A".
3.
4. CONST. 8" TO 6" C.F. CURB ONLY.
14. REMOVE STREET BARRICADE.
19. CONST. CONCRETE SIDEWALK PER STD. PLAN, 110-L.
16. CONST. LOCAL DEPRESSION PER STD. PLAN 304-L
20. FEATHER AS REQUIRED BY FIELD ENGINEER.
21. REMOVE EXISTING CLEARANCE MARKERS.
23. CONST. STD. SURVEY MONUMENT PER STD 124-L.
25. CONST. CONC. CURB & GUTTER PER STD. 105-L TYPE "A" VARYING CURB FACE FROM 8" C.F TO 6" C.F.
26. CONST. COMMERCIAL DRIVEWAY APPROACH, TYPE II, PER STD. 112-L, WIDTH AND CURB RETURN RADII AS SHOWN.
28. REMOVE EXIST. CONC. CURB, GUTTER & SIDEWALK.
29. CONST. WHEEL CHAIR RAMP PER DETAIL ON SHEET NO. 2.
30. CONST. WHEEL CHAIR RAMP FOR DRIVEWAYS PER DETAIL ON SHEET NO. 2.

WATER SYSTEM

5. CONST. 12" A.C.P. WATER MAIN. (CLASS 200)
18. PLACE FIRE HYDRANT ASSEMBLY PER STD. PLAN 501-L.
19. PLACE GATE VALVES AS INDICATED.
22. CONST. 8" A.C.P. WATER. (CLASS 200)
24. CONST. 4" A.C.P. WATER LINE CLASS 200.

SEWER SYSTEM

6. CONST. 8" V.C.P. SEWER.
7. CONST. 48" DIA. SEWER MANHOLE PER STD. 402-L
27. CONST. 6" V.C.P. SEWER LATERAL.

STORM DRAIN SYSTEM

8. CONST. 36" R.C.P. ("D" LOAD AS SHOWN ON PLANS)
9. CONST. 24" R.C.P. ("D" LOAD AS SHOWN ON PLANS)
10. CONST. 15" R.C.P. ("D" LOAD AS SHOWN ON PLANS)
11. CONST. M.H. #4 PER STD. NO 308-L.
12. CONST. C.B. CURB INLET 'OL' PER STD. PLAN 306-L.
13. CONST. C.B. CURB INLET 'OL-A' PER STD. PLAN 305-L.
17. CONST. CURB INLET TYPE 'OS' PER STD. PLAN 306-L.

PRIVATE ENGINEERS NOTICE TO CONTRACTORS

THE EXISTENCE & LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN AND ANY OTHER UTILITIES OR STRUCTURES NOT SHOWN ON THESE PLANS

NOTE:
ALL IMPROVEMENTS TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF NEWPORT BEACH STANDARD SPECIFICATIONS (ADOPTED 9-10-73) & APPLICABLE STANDARD DRAWINGS (LATEST REVISIONS)

BENCH MARK:
O.C.B.M. 37-68-G3
2" I.P. WITH COPPER NAIL, 1' DEEP, EST'LY SIDE OF MACARTHUR BLVD WHITE PADDLE BOARD 2'± SO. MARKED 1/4 SEC. BENCH MARK 2.5' WEST
ELEV. = 227.050 (1964) M.S.L.

PREPARED BY THE OFFICE OF:
R.W. Williamson 10,180 11-14-73
R.W. WILLIAMSON R.C.E. 10180 DATE
JOB NO. 72R200 REG. NO.

DATE	BY	DESCRIPTION	APP'D
4/14/74		ADD DRAINAGE CONTROL FILL N'LY SIDE OF BRIDGE AND ADD 24" R.C.P.	DBM 4-8-74
5-7-74	V.M.K.	ADDED WHEELCHAIR RAMP DETAILS ON SHEETS 2, 3 & 4.	J.T.P. 4/22/74

REVISIONS

APPROVED
B. A. Nolan
ASST. PUBLIC WORKS DIR.
R.E. NO. 12802
DATE Feb. 1, 1974

DESIGNED A.T.R. | DRAWN E.J.C.
CHECKED E.G.S. | DATE 1-15-73

IMPROVEMENT PLANS FOR
SANTA BARBARA DRIVE

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

ISSUED DIVISION NO. 505
SHEET 1 OF 4

R-5273-3 (REISUE. 30s)
TRACT
Shl 1 of 4

R-9273-5 (RESUB. 305)

TRACT ——
Sht 2 of 4

PROFILE:
SCALE: HORIZ: 1"=40'
VERT: 1"=4'

PROFILE 'A'
SCALE: 1"=20' HORIZ.
1"=4' VERT.

PROFILE 'B'
SCALE: 1"=20' HORIZ.
1"=4' VERT.

PROFILE 'C'
SCALE: 1"=20' HORIZ.
1"=4' VERT.

STREET CURVE DATA
(A) Δ = 28°04'23" R = 580.00' L = 284.18' T = 145.00'
(B) Δ = 28°04'23" R = 542.00' L = 265.56' T = 135.50'

℄ 36" R.C.P. CURVE DATA
(C) Δ = 28°04'23" R = 574.00' L = 281.24' T = 143.50'

CONSTRUCTION NOTES

1. CONST. 4" A.C. OVER 9" A.B.
2. CONST. CONC. CURB & GUTTER PER STD. 105-L TYPE A.
8. CONSTRUCT 20¢ R.C.R. (750 D).
14. REMOVE EXISTING STREET BARRICADE
16. CONST. CONC. SIDEWALK PER STD. PLAN, 110-L
20. FEATHER AS REQUIRED BY FIELD ENGINEER.
21. REMOVE EXISTING CLEARANCE MARKERS.
23. CONST. STANDARD SURVEY MONUMENT PER STD. PLAN 124-L.
24. CONST. 4" A.C.P. WATER LINE, CLASS 200.
27. CONST. 6" V.C.P. SEWER LATERAL.

SANTA BARBARA DRIVE
PLAN
SCALE: 1"=40'

ELEVATION

SECTION A-A

DETAILS
⚠ WHEELCHAIR RAMP
NOT TO SCALE

SECTION B-B

⚠ WHEELCHAIR RAMP FOR DRIVEWAYS AT STA. 29+08.06 & STA. 33+79.94
SCALE: 1"=5'

NOTE: ALL IMPROVEMENTS TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF NEWPORT BEACH STANDARD SPECIFICATIONS, (ADOPTED 3-10-73)& APPLICABLE STANDARD DRAWINGS. (LATEST REVISION)

BENCH MARK:
O.C.S.M. 3T-08-63
2" I.P. WITH COPPER NAIL, 1' DEEP, EST'LY SIDE OF MACARTHUR BLVD. WHITE PAINTED BARRICADE 2'± SO. MARKED ¼ SEC. BENCH MARK 2.5' WEST ELEV. = 227.050 (1964)

PREPARED BY THE OFFICE OF
WILLIAMSON & SCHMID
CIVIL ENGINEERS
1535 EAST FIRST ST. SANTA ANA, CALIF.
547-3986
B.W. Williamson 11-14-73
B.W. WILLIAMSON R.C.E. 10180 DATE
JOB NO. 72-560 F.B. NO.

DATE	BY	DESCRIPTION	APP'D.
5-7-74	V.M.K.	ADDED WHEELCHAIR RAMP DETAIL	S.T.V.

REVISIONS

APPROVED
O. J. Nolan
ASST. PUBLIC WORKS DIRECTOR
R.E. NO. 12805
DATE Feb. 1, 1974

DESIGNED A.R.R. DRAWN E.J.C.
CHECKED E.G.S. DATE 1-15-73

IMPROVEMENT PLANS FOR
SANTA BARBARA DRIVE

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

RESUBDIVISION NO. 305
SHEET 2 OF 4

LIETZ 1386 ARKWRIGHT 12-66

R-5273-S (RESUB. 305)

TRACT — Sht 2 of 4

PROFILE
SCALE H. 1"=40'
V. 1"= 0'

CONSTRUCTION NOTES CONT.

(23) CONST. WHEELCHAIR RAMP PER DETAIL ON SHEET 2

CONSTRUCTION NOTES

1. CONST. 4" A.C. OVER 9" A.B.
2. CONST. CONCRETE CURB AND GUTTER PER STD. 105-L TYPE A.
3. CONST. CONCRETE CROSS GUTTER PER STD. 109-L.
4. CONST. 5" TO 6" C.F. CURB ONLY
5. CONST. 12" A.C.P. WATER MAIN. (CLASS 200)
6. CONST. 8" VCP SEWER
7. CONST. 48" DIA. SEWER MANHOLE PER STD. 402-L.
8. CONST 36" R.C.P. ('D' LOAD AS SHOWN)
9. CONST. 24" R.C.P. ('D' LOAD AS SHOWN)
10. CONST. 15" R.C.P. ('D' LOAD AS SHOWN)
11. CONST. M.H. #4 PER STD. PLAN Nº 308-L
12. CONST. C.B. CURB INLET 'OL' PER STD PLAN 300-L
13. CONST. C.B. CURB INLET 'OL-A' PER STD. PLAN 305-L
14. REMOVE STREET BARRICADE
15. CONST. CONC. SIDEWALK PER STD. PLAN, 110-L
16. CONST LOCAL DEPRESSION PER STD. PLAN 304-L
17. CONST. CURB INLET TYPE 'DS' PER STD. PLAN 306-L
18. PLACE FIREHYDRANT ASSEMBLY PER STD. PLAN. 501-L
19. PLACE GATE VALVES AS INDICATED
20. FEATHER AS REQUIRED BY FIELD ENGINEER.
21. CONST 8" R.C.P. WATER. (CLASS 200).
22. CONST. STANDARD SURVEY MONUMENT PER STD. PLAN 124-L.

PLAN • SANTA BARBARA DRIVE

SCALE: 1"=40'

NOTE:
ALL IMPROVEMENTS TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF NEWPORT BEACH STD. SPECIFICATIONS ADOPTED 9-10-73, AND APPLICABLE STANDARD DRAWINGS. LATEST REVISION.

BENCH MARK:
O.C.B.M. 37-60-63
2" I.P. WITH COPPER NAIL 1' DEEP ESTLY SIDE OF MACARTHUR BLVD. WHITE PADDLEBOARD 2' ± SO. MARKED 1/4 SECTION BENCH MARK 2.5' WEST. ELEV. 227.060 (1964)

PREPARED BY THE OFFICE OF
WILLIAMSON & SCHMID
CIVIL ENGINEERS
1535 EAST FIRST ST. SANTA ANA, CALIF.
547-3986
B.W. Williamson 12-14-73
B.W. WILLIAMSON R.C.E. 10180 DATE
JOB NO. 72-596 F.B. NO.

DATE	BY	DESCRIPTION	APP'D
5-7-74	V.M.K.	ADDED WHEELCHAIR RAMPS	

REVISIONS

BBM 4-8-74 ATTD 5-22-74

APPROVED
ASST PUBLIC WORKS DIRECTOR
R.E. NO. 12806
DATE Feb. 1, 1974

DESIGNED A.12.12. DRAWN E.J.C.
CHECKED E.G.S. DATE 1-15-74

JOB 72 596

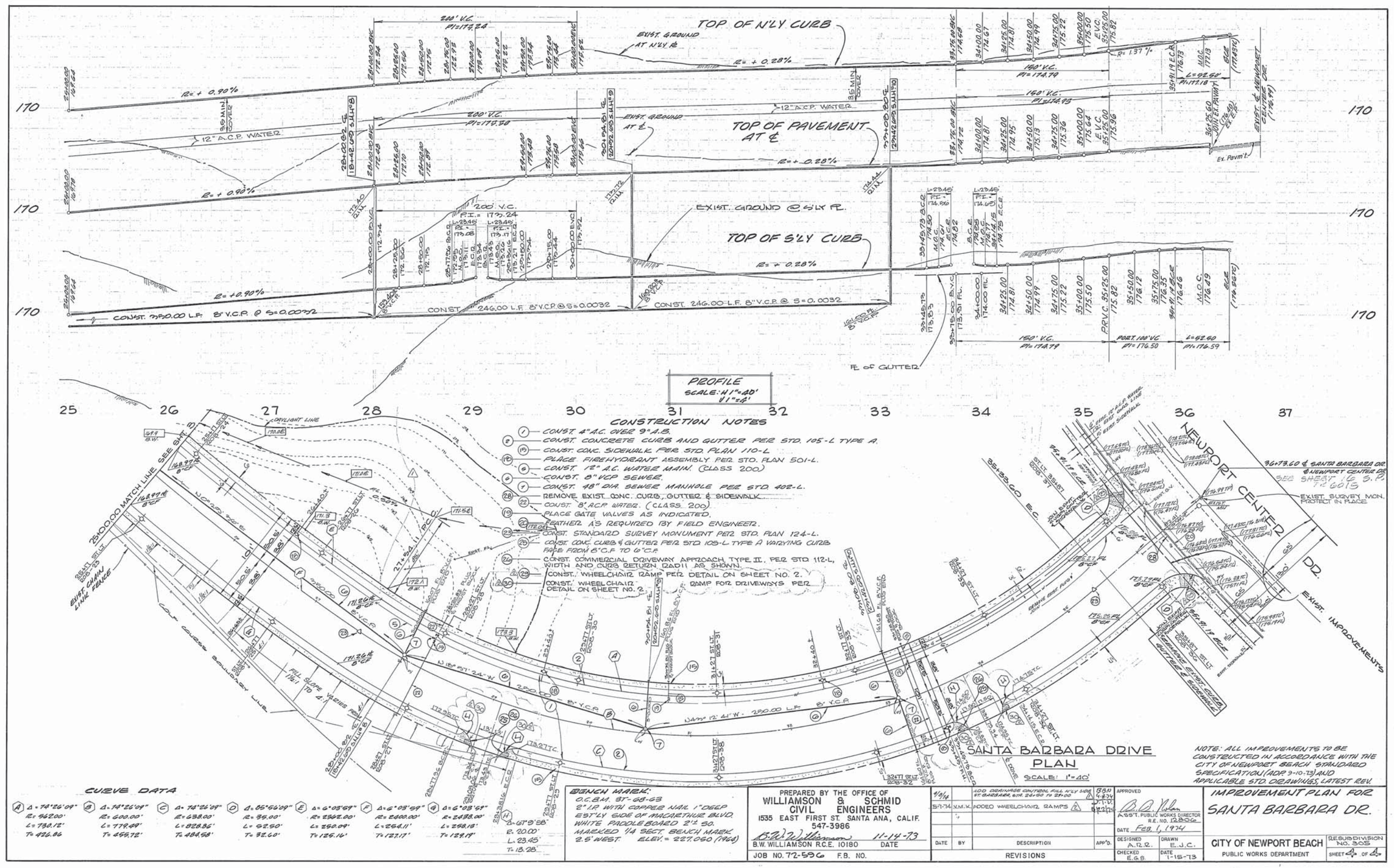
IMPROVEMENT PLAN FOR
SANTA BARBARA DR.

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

SUBDIVISION NO. 305
SHEET 3 OF 4

R-5273-S (RESUB. 305)

TRACT ____ Sht 4 of 4



BENCH MARK:
O.C.B.M. 37-68-G3
2" I.P. WITH COPPER NAIL 1' DEEP
E'ST'LY SIDE OF MACARTHUR BLVD.
WHITE PADDLEBOARD 2'± SO.
MARKED 1/4 SECT. BENCH MARK
2.5' WEST. ELEV. = 227.050 (1964)

JOB NO. 72-596 F.B. NO.

PREPARED BY THE OFFICE OF
WILLIAMSON & SCHMID
CIVIL ENGINEERS
1535 EAST FIRST ST. SANTA ANA, CALIF.
547-3986
B.W. WILLIAMSON R.C.E. 10180 DATE
11-14-73

DATE	BY	DESCRIPTION	APP'D.
1/6/14		ADD DRAINAGE CONTROL FILL N'LY SIDE ST. BARBARA, STA. 24+50 TO 27+00	BSM 4-8-74
5-7-14	V.M.K.	ADDED WHEELCHAIR RAMPS	5-21-74

REVISIONS

APPROVED
A. S. Nolan
ASS'T. PUBLIC WORKS DIRECTOR
DATE Feb. 6, 1974

DESIGNED A.T.R.J. DRAWN E.J.C.
CHECKED E.G.B. DATE 1-15-73

IMPROVEMENT PLAN FOR
SANTA BARBARA DR.

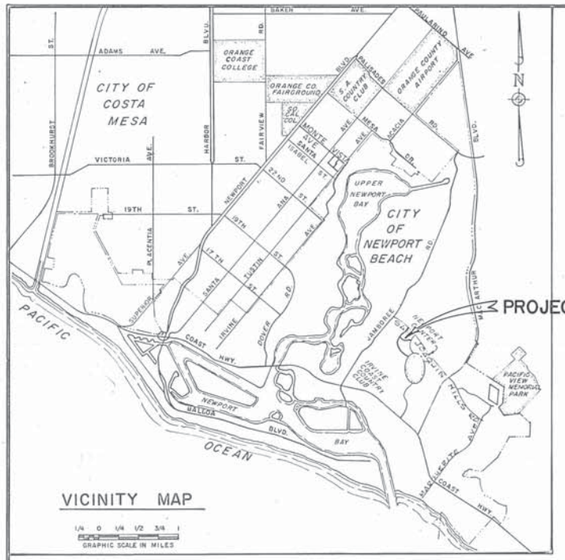
CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

R.E. SUBDIVISION NO. 305
SHEET 4 OF 4

M-11

R-5272-S
SHT. 1 OF 6

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT
IMPROVEMENT PLANS
FOR
SAN CLEMENTE DRIVE
FROM SANTA CRUZ DRIVE TO SANTA BARBARA DRIVE



VICINITY MAP

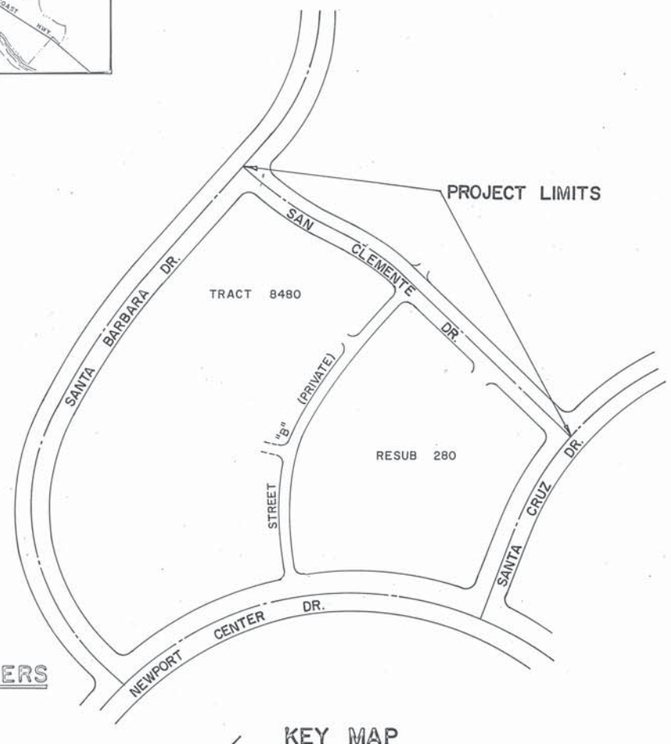
GRAPHIC SCALE IN MILES

SYMBOL LEGEND

- POWER POLE
- MANHOLE
- FIRE HYDRANT
- METER BOX
- VALVE
- POWER POLE ANCHOR
- FENCE
- BLOCK WALL
- TREE
- SHRUBBERY
- ASPHALT PAVEMENT
- CONCRETE
- BUILDING
- CENTER LINE
- SEWER LINE
- WATER LINE
- GAS LINE
- EXISTING CONSTRUCTION
- NEW CONSTRUCTION
- BRICK WALK
- COMMUNITY T.V.

EMERGENCY TELEPHONE NUMBERS

AGENCY	NUMBER
SOUTHERN COUNTIES GAS COMPANY	536-0211
SOUTHERN CALIF. EDISON COMPANY	835-3633
PACIFIC TELEPHONE COMPANY	673-0046
CITY OF NEWPORT BEACH (SEWER & WATER)	673-2110, Ext. 267-69
COUNTY SANITATION DISTRICTS	962-2411, Ext. 38
COMMUNITY CABLEVISION	545-3556



KEY MAP

SCALE: 1" = 200'

SHEET INDEX

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	SAN CLEMENTE DR. STREET IMPROVEMENT PLAN & PROFILE
3.	SAN CLEMENTE DR. SEWER & WATER PLAN & PROFILE
4.	SAN CLEMENTE DR. STORM DRAIN PLAN & PROFILE
5.	DETAILS
6.	SAN CLEMENTE DR. STREET LIGHTING PLAN

GENERAL NOTES

1. THE CONSTRUCTION OF ALL PUBLIC IMPROVEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPROPRIATE STANDARD DRAWINGS OF THE CITY OF NEWPORT BEACH.
2. STATIONING REFERS TO THE CENTERLINES OF STREETS EXCEPT WHERE OTHERWISE NOTED.
3. CURB DATA REFERS TO FACE OF CURB.
4. ALL CONCRETE CURBS, GUTTERS, SIDEWALKS, CROSS GUTTERS AND DRIVEWAYS SHALL BE CONSTRUCTED OF CLASS 564-C-3000 P.C.C.
5. ALL EXPOSED CONCRETE SURFACES SHALL CONFORM IN GRADE, COLOR, AND FINISH TO ALL ADJOINING CURBS AND SIDEWALKS.
6. PAVEMENT SECTIONS SHOWN ARE MINIMUM AND SUBJECT TO REVISION AND APPROVAL OF THE CITY AS REQUIRED BY SOILS TESTS TAKEN AFTER COMPLETION OF THE ROUGH GRADING.
7. ALL UNDERGROUND WORK SHALL BE COMPLETED PRIOR TO PAVING OF STREETS.
8. EXISTING UNDERGROUND UTILITIES ARE SHOWN AS PER AVAILABLE RECORDS; THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION IN THE FIELD.
9. ALL REINFORCED CONCRETE DRAINAGE STRUCTURES SHALL BE CONSTRUCTED OF 564-B-3000 P.C.C.
10. STORM DRAIN PIPE SHALL BE CAST OR SPUN REINF. CONCRETE PIPE. "D" LOADS SHOWN ON R.C.P. STORM DRAIN PROFILES APPLY ONLY TO TRENCH CONDITION BEDDING. (SEE NOTE 11).
11. STORM DRAIN PIPE SHALL BE BEDDED IN ACCORDANCE WITH DETAIL ON SHEET 4.
12. ALL EXPOSED FERROUS METAL PARTS TO BE GALVANIZED PER ASTM A 123 AFTER FABRICATION.
13. ALL WATER MAINS AND LATERALS SHALL BE ASBESTOS CEMENT PIPE, CLASS 200 MINIMUM, UNLESS OTHERWISE NOTED.
14. WATER PIPE LAID ON CURVES WITH RADII BETWEEN 80' AND 185' SHALL USE 6.5' PIPE LENGTHS. CONSTRUCT THRUST BLOCKS PER CITY STD.-509-L. PIPE SHALL NOT BE DEFLECTED MORE THAN 3° PER JOINT. WHEN NECESSARY, SHORT SECTIONS OF PIPE SHALL BE USED TO ACCOMPLISH THE DESIRED DEFLECTION. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS GREATER THAN 5°.
15. FIRE HYDRANTS SHALL BE RICH-VANGUARD NO. 665-A.
16. ALL SEWER LINES SHALL HAVE PLASTIC COMPRESSION JOINTS.
17. V.C.P. STUBS AND THE FIRST JOINT OUT OF ALL MANHOLES TO BE ONE FOOT MAXIMUM MEASURED FROM THE INSIDE FACE OF THE MANHOLE.
18. SEWER AND WATER PIPE SHALL BE BEDDED IN ACCORDANCE WITH DETAIL ON SHEET 3.
19. ~~WROUGHT IRON STEPS IN SEWER MANHOLES WILL BE ALLOWED PROVIDED THAT THE MANHOLE MANUFACTURER CERTIFIES IN WRITING THAT THE STEPS INSTALLED ARE WROUGHT IRON FABRICATED FROM 3/4" DIAMETER ROUND BAR AND CONFORMS TO THE REQUIREMENTS OF ASTM A 207 LATEST REVISION.~~
20. UTILITY AND STORM DRAIN LINE DISTANCES SHOWN IN PROFILE ARE HORIZONTAL

BENCH MARK

ORANGE COUNTY BENCH MARK 3T-68-63 2" I.P. WITH COPPER NAIL 8" DEEP E'LY SIDE OF MACARTHUR BLVD. 1' E'LY OF GUTTER WITH WHITE PADDLEBOARD MARKED 1/4 SECTION B.M. 2.5' W. NEAR 1/4 CORNER OF BLOCK 9293 IRVINE SUBDIVISION.

ELEV. 227.050 (1964) M.S.L.

BASIS OF BEARING

CENTERLINE OF SANTA CRUZ DRIVE FROM STATION 23+27.01 TO STATION 20+01.38 BEING N 9° 10' 26" W.

APPROVALS

CITY OF NEWPORT BEACH

APPROVED Benjamin A. Nolan DATE 11-29-73

ASSISTANT PUBLIC WORKS DIRECTOR
R.C.E. 12806

SHUIRMAN - SIMPSON
CONSULTING CIVIL ENGINEERS
PREPARED UNDER THE SUPERVISION OF

Donald C. Simpson DATE 2-26-73

DONALD C. SIMPSON R.C.E. 10595

TRACT NO. 8480

SHEET 1 OF 6 SHEETS

M-11

R-5272-S
SHT. 2 OF 6

PORTION OF 300'V.C. P.I.=154.32

PORTION OF 300'V.C. P.I.=154.26

PORTION OF 100'V.C.

300'V.C. P.I.=154.32

400'V.C. P.I.=185.36

400'V.C. P.I.=185.30

400'V.C. P.I.=185.36

TOP OF N'LY CURB

TOP OF PVMT. @ ℄

TOP OF S'LY CURB

100'V.C. P.I.=191.11

CONSTRUCTION NOTES

1. CONST. 4" A.C. ON SS-1H SEAL COAT (SEAL COAT TO BE APPLIED AT THE RATE OF 0.10 GAL./SQ.YD.) OVER 8" A.B. W/ S.C.-250 PRIME COAT.
2. CONST. TYPE "A" F.C.G. CURB & GUTTER PER CITY STD.-105-L.
3. CONST. CONC. SIDEWALK PER CITY STD-110-L.
4. CONST. CONC. DRIVEWAY PER DETAILS SHT. 5.
5. CONST. CONC. APRON PER DETAILS ON SHT. 5.
6. CONST. 3" A.C. AND SS-1H SEALCOAT (0.10 GAL. PER SQ./YD.) OVER 6" A.B. W/ SC-250 PRIME COAT.
7. REMOVE & SALVAGE EXIST. PARKWAY TREE. CONTACT CITY DEPT. OF PARKS, BEACH AND RECREATION FOR DISPOSITION.
8. RELOCATE EXIST. LIGHT STD. AS SHOWN ON SHEET 6.
9. REMOVE EXIST. DRIVEWAY AND CONST. NEW IMPROVEMENTS PER DETAIL ON SHT. 5.
10. REMOVE EXIST. CURB & GUTTER, CONC. SIDEWALK & 10' STRIP OF A.C. PVMT. SAW CUT AT JOIN LINES.
11. CONST. SIDEWALK ACCESS RAMP PER DETAILS SHT. 5

SAN CLEMENTE DRIVE

HORIZ. 1"=40'
VERT. 1"=8'

SANTA BARBARA DRIVE (SEE RESUB 305 IMPROVEMENT PLANS)

SANTA CRUZ DRIVE

G+44.86 SAN CLEMENTE 10+66.29 ROAD "B"

9+00 - RD "B"

EXIST. CURB & GUTTER TYPE "A"

EXIST. PAVEMENT 3"A.C./6"A.B.

EXISTING ROAD "B" (PRIVATE)

PACIFIC MUTUAL PROPERTY

NOTE: ⊕ INDICATES THE INSTALLATION OF STANDARD SURVEY MONUMENT PER STD.-124-L.

SCALE 1"=40'

GHURMAN • DIMPSON
CONSULTING CIVIL ENGINEERS
NEWPORT CENTER BUILDING
359 San Miguel Drive
Newport Beach, California 92660
(714) 644-0583
R.C.E. 10595

DATE	BY	DESCRIPTION	APP'D.
5/3/74	F.S.	ADDED "SDWLK. ACCESS RAMP	GSU 5-3-74
REVISIONS			

APPROVED
ASS'T. PUBLIC WORKS DIRECTOR
R.E. NO. 13909
DATE 11-29-73

DESIGNED J.H. DRAWN F.S.
CHECKED D.C.S. DATE 11-28-73

SAN CLEMENTE DRIVE STREET IMPROVEMENT PLAN AND PROFILE

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

TRACT NO. 84.80
SHEET 2 OF 6

R-5272-S

1/71 D'ETERICH-POST 2101B .003

CONSTRUCTION NOTES

1. CONST. 4" A.C. & SS-1H SEAL COAT (SEAL COAT TO BE APPLIED AT THE RATE OF 0.10 GAL./SQ.YD.) OVER 8" A.B. W/ SC-250 PRIME COAT.
2. CONST. TYPE "A" P.C.C. CURB & GUTTER PER CITY STD.-105-L
3. CONST. CONC. SIDEWALK PER CITY STD-110-L.
4. CONST. CONC. DRIVEWAY PER DETAILS SHT. 5.
5. CONST. CONC. APRON PER DETAILS ON SHT. 5.
6. CONST. 3" A.C. AND SS-1H SEALCOAT (0.10 GAL. PER SQ./YD.) OVER 6" A.B. W/ SC-250 PRIME COAT.
7. REMOVE & SALVAGE EXIST. PARKWAY TREE. CONTACT CITY DEPT. OF PARKS, BEACH AND RECREATION FOR DISPOSITION.
8. RELOCATE EXIST. LIGHT STD. AS SHOWN ON SHEET 6.
9. REMOVE EXIST. DRIVEWAY AND CONST. NEW IMPROVEMENTS PER DETAIL ON SHT. 5.
10. REMOVE EXIST. CURB & GUTTER, CONC. SIDEWALK & 10' STRIP OF A.C. PVMT. SAW CUT AT JOIN LINES.
11. CONST. SIDEWALK ACCESS RAMP PER DETAILS SHT. 5

SAN CLEMENTE DRIVE

HORIZ. 1"=40'
VERT. 1"=8'

SCALE 1"=40'

NOTE: ⚠ INDICATES THE INSTALLATION OF STANDARD SURVEY MONUMENT PER STD.-124-L.

⚠ CONSTRUCTION NOTES:

12. CONSTRUCT 4" THICK CONCRETE SIDEWALK PER STD. 180-L (8' WIDE)
13. REMOVE EXIST. CURB & GUTTER AND CONST. COMM. DRIVEWAY APPROACH PER DTL. ON SHT. 5
14. CONSTRUCT SIDEWALK ACCESS RAMP PER DETAIL ON SHEET 5.

⚠ CONSTRUCTION NOTES:

3. CONST. NOTES
15. INSTALL 4"ø SLEEVE UNDER DRIVEWAYS WITH 18" MIN. COVER.

PACIFIC MUTUAL PROPERTY

EXISTING ROAD "B" (PRIVATE)

CHURCHILL • CHAPPELL — CIVIL ENGINEERING
NEWPORT CENTER BUILDING
359 San Miguel Drive
Newport Beach, California 92660
(714) 644-0660
Donald C. Thompson R.C.E. 10395

DATE	BY	DESCRIPTION	APP'D.
5/6/77	C.B.	⚠ ADDED DRIVEWAY @ STA 9+28.18 & IRRIG. LINE SLEEVES UNDER DWYS.	JTD
3/10/77	P.B.	⚠ ADDED SIDEWALK & DRWY. N'LY SIDE ⚠ ADDED CONST. NOTES 12, 13 & 14	JTD
5/3/74	F.S.	⚠ ADDED 6" ONLY. ACCESS RAMP	

REVISIONS

APPROVED
ASS'T. PUBLIC WORKS DIRECTOR
R.E. NO. 12899
DATE 11-29-73

DESIGNED J.H. | DRAWN F.S.
CHECKED D.C.S. | DATE 11-28-73

SAN CLEMENTE DRIVE STREET IMPROVEMENT PLAN AND PROFILE

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

TRACT NO. 8480
SHEET 2A OF 6

1/71 D'ETERICH-POST 2318B .033

M-11

R-2272-3
SHT. 3 OF 6

INVERT OF PIPE = 4.33' BELOW FLOW LINE OF N'LY CURB

TOP OF PVM'T OVER PIPE

FLOW LINE OF N'LY CURB

TOP OF PVM'T.

EXIST. 8" A.C.P.

12" A.C.P

R=1.20%

R=2.05%

94.27'

8.30'

FINISHED SURFACE OVER PIPE

203.33'

270.06'

107.07'

63.00' BY OTHERS

NOTE: SURVEYOR TO SET TOP OF SEWER & STORM DRAIN M.H.'S FLUSH WITH PROP. PVMT. SURFACE. VERIFY TOP OF M.H. ELEV. SHOWN ON PLAN.

PROFILE

SCALES: HORIZ. 1"=40'
VERT. 1"=8'

CONSTRUCTION NOTES

1. CONSTRUCT FIRE HYDRANT ASSEMBLY, STD.-501-L
2. CONSTRUCT 12" GATE VALVE PER STD.-508-L.
3. CONSTRUCT MANHOLE PER STD.-402-L.
4. CONSTRUCT 8" GATE VALVE PER STD.-508-L.
5. CONSTRUCT 2-3" A.C.P. SLEEVES, 30" MIN. COVER, EXTENDING & CAPPED 12" BEYOND CURB OR SIDEWALK AS APPLICABLE.
6. INSTALL STD. 2" WATER SERVICE & METER BOX PER STD.-503-L.

SANTA BARBARA DRIVE (SEE RESUB NO. 905 IMPROVEMENT PLANS)

SANTA CRUZ DRIVE

N79°22'01"W 534.20'

N56°52'01"W 94.27'

N80°37'27"W 60.50'

N79°22'01"W 8.30'

NOTE: SEWER LINE STATIONING SHOWN THUS (0+00) ON PLAN. OTHER STATIONING SHOWN ON PLAN REFERS TO CENTERLINE OF STREET.

PACIFIC MUTUAL PROPERTY

EXISTING ROAD "B" (PRIVATE)

SCALE 1"=40'

PIPE BEDDING DETAILS

NO SCALE

COMPACTED NATIVE BACKFILL — 6" MIN. 8" MAX. — CLEAN SAND 12" — 4" — SEWER

COMPACTED NATIVE BACKFILL — 6" MIN. 8" MAX. — CLEAN SAND 12" — O.D. — WATER

GHURMAN + GIMPOON
CONSULTING CIVIL ENGINEERS
NEWPORT CENTER BUILDING
359 San Miguel Drive
Newport Beach, California 92660
(714) 644-0563
Donald Ghurman R.C.E. 10595

DATE	BY	DESCRIPTION	APP'D.
		REVISIONS	

APPROVED
ASS'T. PUBLIC WORKS DIRECTOR
R.E. NO. 12806
DATE 11-29-73

DESIGNED J.H.
DRAWN G.T.
CHECKED D.C.S.
DATE 11-28-73

SAN CLEMENTE DRIVE SEWER AND WATER PLAN AND PROFILE

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

TRACT NO. 8480
SHEET 3 OF 6

1/71 O'ETERICH-POST 2101B .003

PUBLIC WORKS DEPARTMENT

IMPROVEMENT PLAN FOR

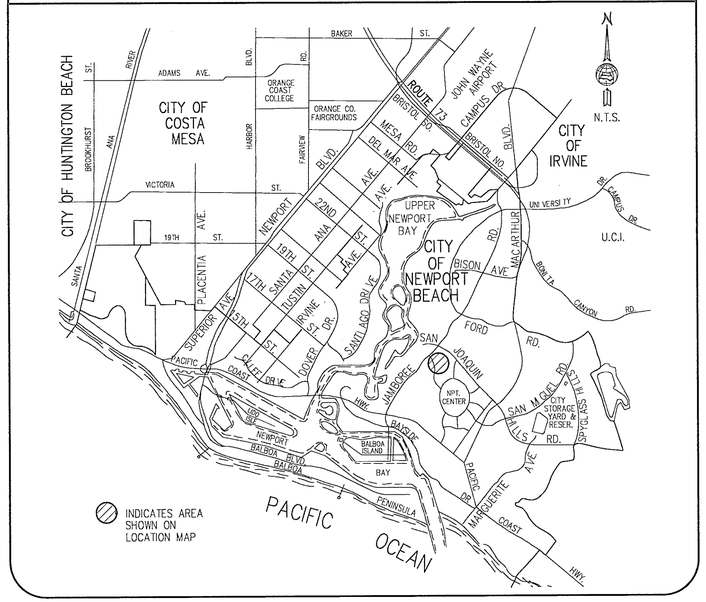
888 SAN CLEMENTE DRIVE

APPROVED: _____ DATE: 1-14-99
PUBLIC WORKS DIRECTOR

APPROVED: _____ DATE: 1-11-99
UTILITIES MANAGER R.C.E. 25533

APPROVED: _____ DATE: 1/12/99
FIRE MARSHAL (FOR PRIVATE UNDERGROUND FIRE SYSTEM)

VICINITY MAP



GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED IN THE CITY'S STANDARD SPECIAL PROVISIONS, OR IN THIS CONTRACT'S SPECIAL PROVISIONS, BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," 1997 EDITION AND SUPPLEMENTS TO DATE.
2. EXISTING UNDERGROUND UTILITIES ARE SHOWN AS PER AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION, AND ELEVATION IN THE FIELD, PRIOR TO BEGINNING OF CONSTRUCTION.
3. STATIONING REFERS TO CENTERLINE OF STREET.
4. EXISTING UNDERGROUND UTILITIES ARE SHOWN AS PER AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION OF THE NEW FACILITIES.
5. ALL EXPOSED CONCRETE SURFACES SHALL CONFORM IN GRADE, COLOR AND FINISH TO ALL ADJOINING CURBS AND WALKS.
6. ALL UNDERGROUND WORK SHALL BE COMPLETED PRIOR TO PAVING OF STREET AND DRIVEWAYS.
7. SEWER, WATER AND STORM DRAIN LINE DISTANCES SHOWN IN PROFILE AND IN ESTIMATED QUANTITIES ARE HORIZONTAL DISTANCES.
8. THE CONTRACTOR SHALL REQUEST INSPECTION FROM THE PUBLIC WORKS DEPARTMENT 48 HOURS IN ADVANCE OF PERFORMING ANY WORK AT (949) 644-3311. THE PUBLIC WORKS DEPARTMENT INSPECTOR SHALL ALSO BE NOTIFIED AFTER PLACEMENT OF FORMS AND PRIOR TO PLACEMENT OF ANY CONCRETE FOR CURB & GUTTER SO THAT THE FORMS CAN BE CHECKED FOR LINE AND GRADE AND COMPARABILITY WITH EXISTING CONSTRUCTION.
9. THE WALLS AND FACE OF ALL EXCAVATIONS GREATER THAN FIVE (5) FEET IN DEPTH SHALL BE EFFECTIVELY GUARDED BY A SHORING SYSTEM, SLOPING OF THE GROUND OR OTHER EQUIVALENT MEANS. TRENCHES OR EXCAVATIONS LESS THAN FIVE (5) FEET IN DEPTH SHALL ALSO BE GUARDED WHEN EXAMINATION INDICATED THAT HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.
10. THE CONTRACTOR(S) SHALL OBTAIN A PERMIT TO PERFORM EXCAVATION OR TRENCH WORK AS DESCRIBED IN No. 9 ABOVE.
11. ALL SEWER PIPES SHALL BE BEDDED IN ACCORD WITH CITY OF NEWPORT BEACH STD-108-L.
12. WATER MAINS SHALL HAVE A MINIMUM OF 30" OF COVER FROM SUBGRADE.
13. ALL CONCRETE SHALL BE 540-C-3250.
14. THE FIRE DEPARTMENT SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ALL LANE CLOSURES.
15. VCP SEWER PIPE MAY BE USED IN LIEU OF PVC BY SPECIAL PERMISSION PIPE SHALL BE MANUFACTURED PER ASTM D-3034 SDR OR ASTM F-789. ALL FITTINGS SHALL BE PREFABRICATED FULL-BODY FITTINGS. PVC SEWER PIPE BEDDING SHALL BE 3/4" CRUSHED ROCK FROM 6" BELOW THE PIPE TO 12" ABOVE THE TOP OF PIPE AND SHALL BE CONSOLIDATED BY JETTING JETTING PRIOR TO COMPLETION OF TRENCH BACKFILL.
16. ALL SEWER LINES TO BE OWNED, OPERATED AND MAINTAINED BY THE CITY OF NEWPORT BEACH SHALL BE VIDEO INSPECTED AFTER CLEANING, AIR TESTING AND MANDRILLING. ALL VIDEO INSPECTION SHALL BE PERFORMED BY THE CITY UTILITIES DIVISION. THE DEVELOPER SHALL PAY THE CURRENT RATE ESTABLISHED BY THE CITY FOR VIDEO INSPECTION. ANY SEWER LINE FOUND TO BE INSTALLED INCORRECTLY, DEFECTIVE, DAMAGED OR OTHERWISE SHALL BE REPAIRED/REPLACED AND REINSPECTED, INCLUDING AIR TEST, MANDRIL AND VIDEO, PRIOR TO ACCEPTANCE.
17. SIX SETS OF SHOP DRAWINGS FOR ALL MATERIALS SHALL BE SUBMITTED TO TH CITY PRIOR TO CONSTRUCTION . NO WORK SHALL BEGIN UNTIL APPROVED SHOP DRAWINGS ARE OBTAINED.

FIRE/SPRINKLER SYSTEM NOTES

1. PRIOR TO INSTALLATION, REQUIRED PERMITS SHALL BE SECURED FROM THE CITY BUILDING DEPARTMENT.
2. INSTALLATION, INSPECTION AND TESTING SHALL CONFORM WITH THE 1994 EDITION OF NFPA STANDARD 13 AND THE 1992 ADDITION OF NFPA STANDARD 24, INCLUDING ANY AMENDMENTS BY THE CITY OF NEWPORT BEACH FIRE DEPT. WHERE THE WATER AUTHORITY REQUIRES BACKFLOW PROTECTION THE FOLLOWING METHODS OR ASSEMBLIES ARE ACCEPTABLE:
   A. AN ABOVE GROUND ASSEMBLY APPROVED BY THE WATER AUTHORITY, PAINTED WHITE, AND WITH THE VALVES LOCKED IN THE OPEN POSITION. VALVES CONTROLLING MORE THAN 100 SPRINKLER HEADS SHALL BE MONITORED TO AN APPROVED LOCATION.
   B. A BELOW GROUND ASSEMBLY APPROVED BY THE WATER AUTHORITY AND LOCATED IN AN APPROVED VAULT. THE LAST VALVE ON THE ASSEMBLY SHALL BE CONTROLLED BY AN APPROVED POST INDICATOR DEVICE. THE POST INDICATOR DEVICE SHALL BE PAINTED WHITE, LOCKED IN THE OPEN POSITION AND IF CONTROLLING MORE THAN 100 SPRINKLER HEADS MONITORED TO AN APPROVED LOCATION.
   C. THE LOCATION OF CONTROL DEVICES SHALL BE APPROVED BY THE CITY FIRE DEPT. AND THE WATER AUTHORITY.
4. APPROVED FIRE DEPARTMENT CONNECTIONS (FDC) SHALL BE LOCATED WITHIN 25' OF A PUBLIC FIRE HYDRANT. THE FDC SHALL BE ORIENTED TO FACE THE FIRE DEPARTMENT ACCESS ROAD. THE FDC SHALL BE PROPERLY SUPPORTED AND SHALL BE PROTECTED FROM MECHANICAL INJURY. THE SIZE OF PIPING AND THE NUMBER OF INLETS SHALL BE APPROVED BY THE FIRE DEPT. FIRE DEPARTMENT CONNECTIONS SHALL BE PAINTED WHITE.
5. PER NEWPORT BEACH FIRE DEPARTMENT STANDARD NO. F-1, REQUIREMENTS FOR IDENTIFICATION SIGNS AT FIRE DEPARTMENT CONNECTIONS, ARE AS FOLLOWS:
   A. SIGNS SHALL BE CONSTRUCTED OF A DURABLE MATERIAL, PREFERABLY METAL.
   B. SIGNS SHALL BE A MINIMUM OF FOUR INCHES HIGH BY EIGHT INCHES WIDE.
   C. LETTERING ON THE SIGN SHALL BE AT LEAST ONE INCH IN HEIGHT ON A CLEARLY CONTRASTING BACKGROUND.
   D. SIGNS ARE TO BE PERMANENTLY MOUNTED ON THE BUILDING ADJACENT TO THE F.D.C. OR ON THE F.D.C. AND MUST BE VISIBLE FROM THE ADJACENT ROADWAY.
   E. ALL SIGNS MUST STATE THE ADDRESS OF THE BUILDING BEING SERVED AND IDENTIFY THE TYPE OF SYSTEM SERVING THE BUILDING. SEE FIRE DEPT. STD. NO. F-1 FOR SIGN DETAILS.
6. EVERY SPRINKLER SYSTEM SHALL HAVE A SEPARATE CONNECTION FROM THE PRIVATE FIRE MAIN.
7. WHERE IT IS IMPRACTICAL TO PROVIDE A POST INDICATOR VALVE, VALVES SHALL BE PERMITTED TO BE PLACED IN VALVE ROOMS ACCESSIBLE FROM EXTERIOR, ON EXTERIOR RISERS OR ON INTERIOR RISERS WITH INDICATING POSTS ARRANGED FOR OUTSIDE OPERATIONS, OR IN PITS WITH PERMISSION OF THE AUTHORITY HAVING JURISDICTION.
8. PRIVATE FIRE HYDRANTS SHALL BE AN APPROVED WET BARREL STYLE WITH A MINIMUM OF ONE 2-1/2" AND ONE 4" OUTLET. ALL OUTLETS SHALL BE PROVIDED WITH NATIONAL STANDARD THREADS. ALL FIRE HYDRANTS SHALL BE INSTALLED ON A 6" RISER. 4" OUTLET(S) SHALL FACE TOWARD FIRE DEPARTMENT ACCESS ROADS. THE LOWEST OPERATING NUT SHALL BE LOCATED A MINIMUM OF 18" ABOVE GRADE AND HYDRANT FLANGE(S) A MINIMUM OF 2" ABOVE GRADE. FIRE HYDRANTS SHALL BE LOCATED A MINIMUM 40' FROM ALL STRUCTURES. A KEYED GATE VALVE SHALL BE PROVIDED FOR EACH HYDRANT IN AN ACCESSIBLE LOCATION (VALVES SHALL NOT BE LOCATED IN PARKING STALLS).
9. LARGE PRIVATE FIRE SERVICE MAIN SYSTEMS SHALL HAVE POST INDICATOR TYPE SECTIONAL CONTROLLING VALVES AT APPROPRIATE POINTS IN ORDER TO PERMIT SECTIONALIZING THE SYSTEM IN THE EVENT OF A BREAK, OR FOR THE MAKING OF REPAIRS OR EXTENSIONS.
10. ALL PIPE SHALL BE APPROVED FOR USE IN "FIRE SERVICE SYSTEMS", CLASS 200 MINIMUM. ALL FERROUS METAL PIPE SHALL BE LINED. ALL FERROUS PIPE AND FITTINGS SHALL BE PROTECTED WITH A LOOSE 8-MIL POLYETHYLENE TUBE. THE ENDS OF THE TUBES SHALL BE SEALED WITH 2" TAPE APPROVED FOR UNDERGROUND USE. ALL BOLTED JOINT ACCESSORIES SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION RETARDING MATERIAL AFTER ASSEMBLY AND PRIOR TO POLY-TUBE INSTALLATION.
11. A MINIMUM OF 36" OF COVER FROM FINISHED GRADE TO TOP OF PIPE SHALL BE PROVIDED ABOVE PIPE. BACKFILL SHALL BE FREE OF ANY DEBRIS TO THE SATISFACTION OF THE CITY INSPECTOR.
12. APPROVED PIPE AND FITTINGS SHALL BE INSTALLED UNDER BUILDING FOOTINGS. ADEQUATE CLEARANCE SHALL BE PROVIDED OVER PIPE AND FITTINGS THAT RUN UNDER FOOTINGS TO PREVENT DAMAGE FROM BUILDING SETTLING. A MINIMUM OF 2" CLEARANCE SHALL BE PROVIDED WHERE PIPE PASSES THROUGH THE FLOOR OR WALL. UNDERGROUND PIPING SERVING FIRE SPRINKLER RISER SHALL TERMINATE WITHIN 18" OF AN EXTERIOR WALL AND 6" ABOVE FINISHED FLOOR.
13. THRUST BLOCKS OR OTHER APPROVED METHOD OF THRUST RESTRAINT SHALL BE PROVIDED WHEREVER PIPE CHANGES DIRECTION. SEE CITY OF N.B. STD-510-L-A FOR DETAILS.

UNDERGROUND FIRE SYSTEM CONTRACTOR:
KANA PIPELINE · 172 E. ORANGETHORPE, PLACENTIA
"A" LIC. # 461987 · CONTACT: DAVE KOURY (714)986-1400

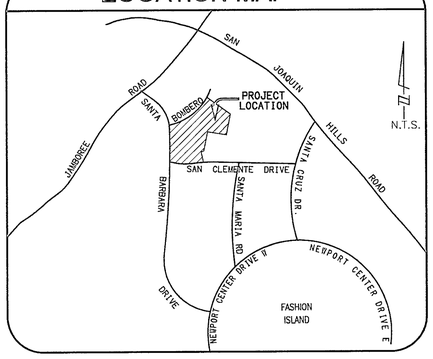
FIELD INSPECTION NOTES AND REQUIREMENTS

1. A FINAL INSPECTION IS REQUIRED. SCHEDULE ALL INSPECTIONS AND TESTS FORTY-EIGHT (48) HOURS IN ADVANCE BY PHONING (949) 644-3107.
2. THE TRENCH SHALL BE EXCAVATED FOR THRUST BLOCKS AND INSPECTED PRIOR TO POUR. ALL CORROSION PROTECTION SHALL BE IN PLACE. CARE SHALL BE TAKEN WHEN FORMING AND POURING THRUST BLOCKS THAT FITTINGS AND JOINTS ARE NOT BURIED IN CONCRETE.
3. A HYDROSTATIC TEST (TWO HUNDRED PSI PRESSURE FOR TWO HOURS OR FIFTY PSI OVER THE MINIMUM STATIC PRESSURE WHEN IT IS OVER ONE HUNDRED AND FIFTY PSI) SHALL BE WITNESSED BY AN INSPECTOR BEFORE BACKFILL AND SOIL COMPACTION. THE TRENCH SHALL BE BACKFILLED BETWEEN JOINTS BEFORE TESTING TO PREVENT MOVEMENT OF PIPE.
4. THE SYSTEM SHALL BE FLUSHED THOROUGHLY BEFORE CONNECTION IS MADE TO EXISTING SYSTEM STUB OUTS. FLOW RATE SHALL BE A MINIMUM OF 10 FT/SEC THROUGH NOT LESS THAN 4 INCH PIPE OR HOSE. APPROVED EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR TO ENSURE SAFETY. THE FLUSH SHALL BE WITNESSED BY AN INSPECTOR.
5. PRIVATE FIRE HYDRANTS, SPRINKLER CONTROL VALVES, DETECTOR CHECK ASSEMBLIES POST INDICATOR VALVES, AND FIRE DEPARTMENT CONNECTIONS SHALL BE PAINTED WITH 2 COATS OF WHITE, RUSTOLEUM #2766 PAINT.
6. ALL CONTROL VALVES SHALL BE PROVIDED WITH PERMANENT SIGNS THAT CLEARLY INDICATE THE BUILDING, SYSTEM AND FUNCTION THE VALVE SERVES.
7. ALL FIRE SPRINKLER SYSTEM CONTROL VALVES (INCLUDING DETECTOR CHECK ASSEMBLY VALVES), SHALL BE SUPERVISED BY A CENTRAL ALARM SYSTEM APPROVED BY THE CITY OF NEWPORT BEACH FIRE DEPT.

EMERGENCY TELEPHONE NUMBERS

AGENCY	NUMBERS
SOUTHERN CALIFORNIA GAS COMPANY	(800) 427-2000
SOUTHERN CALIFORNIA EDISON COMPANY	(714) 895-0221
PACIFIC TELEPHONE COMPANY	611
CITY OF NEWPORT BEACH (SEWER & WATER)	(949) 644-3011
COX COMMUNICATIONS	(949) 716-2344

LOCATION MAP



SHEET INDEX

RECORD DRAWING

CONSTRUCTION NOTES AND QUANTITIES

NO.	DESCRIPTION	QUANTITY	UNIT
	GRADING AND PAVING CONSTRUCTION NOTES		
5	REPLACE SIDEWALK PER CITY OF N.B. STD-180-L	4,303	S.F.
22	REMOVE AND DISPOSE OF EXISTING WALK (1 PANEL MIN.)	4,635	S.F.
23	SAWCUT, REMOVE AND DISPOSE OF EXISTING A.C. PAVEMENT	620	S.F.
25	REMOVE & DISPOSE OF EXIST. CURB & GUTTER AS NEEDED TO CONST. UTILITY CONNECTION	40	L.F.
27	SLURRY BACKFILL AND REPLACE A.C. PER CITY OF N.B. STD-105-L-A	620	S.F.
28	REPLACE 8" CURB & GUTTER PER CITY OF N.B. STD-182-L	40	L.F.
29	SLURRY SEAL & RESTRIPE TO LIMITS SHOWN	3,980	S.F.
	STORM DRAIN CONSTRUCTION NOTES		
30	INSTALL 18" RCP WITH PIPE BEDDING PER CITY OF N.B. STD-106-L	390	L.F.
30A	INSTALL 18" RCP WITH EXTRA 1 1/2" CONC. ADDED TO INVERT, PIPE BEDDING PER CITY OF N.B. STD-106-L	66	L.F.
31	CONSTRUCT CURB ACCESS RAMP PER CITY STD 181-L-A & DETAILS ON SHT. GA	2	EA.
35	CONSTRUCT 21' CURB INLET TYPE OL PER CITY OF N.B. STD-306-L. CONSTRUCT CATCH BASIN MONOLITHICALLY WITH DECORATIVE SIDEWALK. SEE LANDSCAPE PLANS FOR JOINTING, FINISH AND COLOR.	1	EA.
36	CONSTRUCT 3.5' CURB INLET TYPE OS PER CITY OF N.B. STD-306-L. CONSTRUCT CATCH BASIN MONOLITHICALLY WITH DECORATIVE SIDEWALK. SEE LANDSCAPE PLANS FOR JOINTING, FINISH AND COLOR.	3	EA.
37	CONSTRUCT REINFORCED CONCRETE COLLAR PER CITY OF N.B. STD-313-L	3	EA.
38	CONSTRUCT JUNCTION STRUCTURE TYPE 1 PER CITY OF N.B. STD-310-L	2	EA.
39	CONNECTION ASSEMBLY (SEE LOW FLOW PLAN-SHEET C3 OF PRECISE GRADING PLANS)	3	.
41	NOT USED	.	.
50	CONSTRUCT CONCRETE PIPE SLOPE ANCHORS PER CITY OF N.B. STD-314-L	2	EA.
51	INSTALL CONCRETE FILLED MANHOLE COVER, ALHAMBRA FOUNDRY #A-1533	4	EA.
53	CONSTRUCT 4" PVC (SDR 35) STUB (4 L.F.) AND CAP FOR FUTURE TREE SUBDRAIN CONNECTION. SEE LANDSCAPE PLANS FOR CONTINUATION.	1	EA.
54	CONSTRUCT 8" PVC (SDR 35) STUB (4 L.F.) AND CAP FOR FUTURE TREE SUBDRAIN CONNECTION. SEE LANDSCAPE PLANS FOR CONTINUATION.	1	EA.
	WATER CONSTRUCTION NOTES		
60	INSTALL 2 1/2" TYPE "K" COPPER TUBING TO LIMITS SHOWN	57	L.F.
61	INSTALL 2" DOMESTIC WATER SERVICE AND METER PER CITY OF N.B. STD-503-L	2	EA.
62	INSTALL 2" BACKFLOW PREVENTOR PER CITY OF N.B. STD-520-L	2	EA.
63	INSTALL 4" PVC WATER LINE, SDR-14 (CLASS 200) PER CITY OF N.B. STD'S.	11	L.F.
64	INSTALL 8" PVC WATER LINE, SDR-14 (CLASS 200) PER CITY OF N.B. STD'S.	514	L.F.
65	PLUG END FOR FUTURE BUILDING CONNECTION	2	EA.
66	INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF N.B. STD-500-L, WITH RESILIENT WEDGE GATE VALVE	1	EA.
67	REMOVE VALVE AND INSTALL BLIND FLANGE AT CROSS	1	EA.
68	SLURRY FILL ABANDONED PIPE WITH 1 SACK SLURRY	16	L.F.
69	CONSTRUCT DUCTILE IRON BEND, (FITTING TYPE PER PLANS) AND THRUST BLOCK PER CITY OF N.B. STD-510-L-A	5	EA.
70	CONSTRUCT 8"x 4" DUCTILE IRON TEE, MJxMJ WITH RETAINER GLANDS AND THRUST BLOCK PER CITY OF N.B. STD-510-L-A	1	EA.
71	INSTALL 8" POST INDICATOR VALVE ASSEMBLY PER CITY OF N.B. FIRE DEPT. STDS.	2	EA.
72	CONSTRUCT 8"x 8" DUCTILE IRON TEE, MJxMJ WITH RETAINER GLANDS AND THRUST BLOCK PER CITY OF N.B. STD-510-L-A	1	EA.
73	INSTALL 8" DOUBLE CHECK DETECTOR PER CITY OF N.B. STD-517-L	1	EA.
74	INSTALL 6"x 2½" FOUR-WAY FIRE DEPARTMENT CONNECTION PER DETAIL ON SHEET 2	1	EA.
75	REMOVE EXISTING FIRE HYDRANT ASSEMBLY AND GATE VALVE. INSTALL BLIND FLANGE AT TEE. RETURN ABANDONED MATERIALS TO CITY UTILITIES YARD AT 949 W. 16th STREET	1	EA.
76	HOT TAP AND JOIN EXISTING 12" WATER PER CITY OF N.B. STD-507-L	1	EA.
77	CUT & CAP EXIST. 8" WATER STUB AT METER SHUT-OFFS PER CITY OF N.B. STDS.	1	EA.
	SEWER CONSTRUCTION NOTES		
80	CONSTRUCT 8" V.C.P. EXTRA STRENGTH SEWER LINE PER CITY OF N.B. SPECIFICATIONS	169	L.F.
81	CONSTRUCT 48" STANDARD MANHOLE PER CITY OF N.B. STD-401-L	3	EA.
82	CONSTRUCT 6" PVC (SDR 35) SEWER LATERAL PER CITY OF N.B. STD-406-L	27	L.F.
83	CONSTRUCT SEWER CLEANOUT PER CITY OF N.B. STD 406-L	1	EA.
84	CONSTRUCT CITY-SUPPLIED 8" CAST IRON CLEANOUT PER CITY OF N.B. STD-406-L	1	EA.
85	CONSTRUCT 8" V.C.P. TERMINAL CLEANOUT PER CITY OF N.B. STD-400-L	2	EA.
86	INSTALL PVC SEWER CAP FOR FUTURE BUILDING CONNECTION	2	EA.
87	JOIN EXISTING 8" VCP SEWER MAIN	2	EA.
88	REMOVE AND DISPOSE OF EXISTING 8" VCP SEWER MAIN AFTER CONSTRUCTION, INSPECTION AND ACCEPTANCE OF NEW MAIN.	97	L.F.
89	REMOVE AND DISPOSE OF EXISTING SEWER MANHOLE	1	EA.
90	REMOVE AND DISPOSE OF EXISTING SEWER CLEANOUT	1	EA.
91	REMOVE AND DISPOSE OF EXISTING 6" VCP SEWER LATERAL	63	L.F.

NOTE TO CONTRACTOR: QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE INTENDED TO ILLUSTRATE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES INVOLVED.

SYMBOL LEGEND

POWER POLE	TREE		CENTERLINE
MANHOLE	SHRUBBERY		SEWER LINE
FIRE HYDRANT	ASPHALT PAVEMENT		WATER LINE
METER BOX	BRICKWALK		GAS LINE
VALVE	CONCRETE		POWER LINE
POWER POLE ANCHOR	BUILDING		TELEPHONE LINE
MONUMENT	EXISTING CONSTRUCTION		CABLEVISION LINE
FENCE	PROPERTY LINE		SPRINKLER SYSTEM
BLOCKWALL	NEW CONSTRUCTION		STREET LIGHT

BENCHMARK:

O. C. S. 3N-38-70

0.45 MILE ALONG JAMBOREE ROAD, FROM THE INTERSECTION OF THE PACIFIC COAST HIGHWAY, TO THE BEGINNING OF A CURVE GOING NORTHEAST, 18.5 FT. NORTHEAST OF THE CENTERLINE BEGINNING OF CURVE MONUMENT, WHICH IS A BRASS CAP SET IN A CAPPED WELL MONUMENT IN THE CENTER OF THE MEDIAN, 7 FT. NORTHWEST OF THE CENTER OF THE MEDIAN, SET AT THE NORTHEAST CORNER OF A 4 FT. BY 4.5 FT. CONCRETE CATCH BASIN, 0.4 FT. HIGHER THAN THE GUTTER.

1995 ADJ. ELEV. = 48.834

BASIS OF BEARINGS

A PORTION OF THE CENTERLINE OF SAN CLEMENTE DRIVE BEING N81°42'03"W AS SHOWN ON P.M. 82-712, IN BOOK 175, PAGE 23 OF PARCEL MAPS OF THE COUNTY OF ORANGE, CALIFORNIA

SITE AREA= 4.07 ACRES

IMPORTANT NOTICE

SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIGALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIGALERT TOLL FREE 1-800-422-4131 TWO WORKING DAYS BEFORE YOU DIG.

DIGALERT

DIAL TOLL FREE 1-800-227-2600 AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	DATE	REVISIONS	APP.	DATE
1	11-10-99	ADDED OFF-SITE SIDEWALK PLAN TO SET ~ SHEET GA		
2	5-22-00	REVISED QUANTITIES FOR NOTES 5 & 22. ADDED CONST. NOTE 31 ~ SHEET 1		
		AS-BUILT PLANS. REVISED 8" FIRE LINE ALIGNMENT ON SHEET 2. AS-BUILT SIDEWALK ACCESS RAMPS ON SHEET GA.		

CITY OF NEWPORT BEACH

CITY OF NEWPORT BEACH

THIS PLAN IS SIGNED BY THE CITY OF NEWPORT BEACH FOR CONCEPT AND ADHERENCE TO CITY STANDARDS AND REQUIREMENTS ONLY. THE CITY IS NOT RESPONSIBLE FOR DESIGN ASSUMPTIONS AND ACCURACY.

APPROVED _____ PUBLIC WORKS ENGINEER DATE 1/14/99

APPROVED _____ UTILITIES ENGINEER DATE 1/11/99

REGISTERED PROFESSIONAL ENGINEER — DOUGLAS J. JOHNSON — No. 47447 — Exp. 12/31/99 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
THE KEITH COMPANIES
Civil Engineering • Land Surveying • Mapping • Environmental Services • Water Resources • Land Planning
2955 Red Hill Avenue, Costa Mesa, CA 92626, (714)540-0800
PATRICK K. OSBORNE, PROJECT MANAGER
DOUGLAS J. JOHNSON R.C.E. 47447 (EXP. 12/31/99) 12/30/98

DEVELOPER:
THE IRVINE COMPANY
550 NEWPORT CENTER DRIVE
NEWPORT BEACH, CALIFORNIA
(949)720-2200

TITLE SHEET
888 SAN CLEMENTE DRIVE IMPROVEMENT PLAN
PARCELS 1-3 OF P.M. 82-712 AND PARCEL 1 OF N.B.L.L.A. 95-3
CITY OF NEWPORT BEACH PUBLIC WORKS DEPARTMENT
ENCROACHMENT PERMIT NO. XXXXXXX
SHEET 1 OF 6

M-21

NOTE:
SEE SHEET 6 FOR SEWER/WATER CONSTRUCTION TRAFFIC CONTROL

PARKING GARAGE BY OTHERS

NEWPORT BEACH ART MUSEUM

888 SAN CLEMENTE DRIVE

SAN CLEMENTE DRIVE

BOMBERO DRIVE

EXISTING 15' WIDE WATER EASEMENT TO BE MAINTAINED

PROPOSED 7'x10' EASEMENT

EXIST. 15' WATER ESMT. TO BEQUITCLAIMED

PROPOSED 22' WIDE WATER EASEMENT

EXISTING 15' SEWER EASEMENT

EXISTING SEWER EASEMENT TO BE QUITCLAIMED

(124.60) B.O.P. – EXIST. 12" W (D.I.P.)
123.80 T.O.P. – PROPOSED 18" R.C.P.

(65) SEE PARKING STRUCTURE PLANS FOR FIRE LINE CONTINUATION

PROPOSED TREES (TYP)

(69) 22.5° BEND (MJxJ)

(69) 11.25° BEND (MJxMJ)

(69) 90° BEND (MJxMJ)

8" FIRE

EXISTING 8" SEWER TO BE REMOVED. SEE SHEET 3

(65) SEE BUILDING SPRINKLER PLANS FOR CONTINUATION

F.F.=153.00

SEE PLUMBING PLANS FOR CONTINUATION

SEE LANDSCAPE PLANS FOR CONTINUATION

EXIST. 8" W STUB-ABANDON IN PLACE

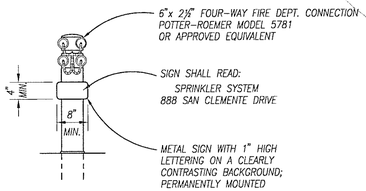
EXISTING PAC TEL VAULT

DW

IRR

PRIVATE | PUBLIC

RECORD DRAWING



FIRE DEPT. CONNECTION
NOT TO SCALE

GRADING AND PAVING CONSTRUCTION NOTES

(5) REPLACE SIDEWALK PER CITY OF N.B. STD-180-L
(22) REMOVE AND DISPOSE OF EXISTING WALK (1 PANEL MIN.)
(23) SAWCUT, REMOVE AND DISPOSE OF EXISTING A.C. PAVEMENT
(25) REMOVE AND DISPOSE OF EXIST. CURB & GUTTER AS NEEDED TO CONSTRUCT UTILITY CONNECTION
(27) SLURRY BACKFILL TRENCH AND REPLACE A.C. PAVEMENT PER CITY OF N.B. STD-105-L-A
(28) REPLACE 8" CURB AND GUTTER PER CITY OF N.B. STD-182-L

WATER CONSTRUCTION NOTES

(60) INSTALL 2" TYPE "K" COPPER TUBING TO LIMITS SHOWN
(61) INSTALL 2" DOMESTIC WATER SERVICE AND METER PER CITY OF N.B. STD-503-L
(62) INSTALL 2" BACKFLOW PREVENTOR PER CITY OF N.B. STD-520-L
(63) INSTALL 4" PVC WATER LINE, SDR-14 (CLASS 200) PER CITY OF N.B. STD'S.
(64) INSTALL 8" PVC WATER LINE, SDR-14 (CLASS 200) PER CITY OF N.B. STD'S.
(65) PLUG END FOR FUTURE BUILDING CONNECTION
(66) INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF N.B. STD-500-L, WITH RESILIENT WEDGE GATE VALVE
(67) REMOVE VALVE AND INSTALL BLIND FLANGE AT CROSS
(68) SLURRY FILL ABANDONED PIPE WITH 1 SACK SLURRY
(69) CONSTRUCT DUCTILE IRON BEND, (FITTING TYPE PER PLANS) AND THRUST BLOCK PER CITY OF N.B. STD-510-L-A
(70) CONSTRUCT 8"x 4" DUCTILE IRON TEE, MJxMJ WITH RETAINER GLANDS AND THRUST BLOCK PER CITY OF N.B. STD-510-L-A
(71) INSTALL 8" POST INDICATOR VALVE ASSEMBLY PER CITY OF N.B. FIRE DEPT. STDS.
(72) CONSTRUCT 8"x 8" DUCTILE IRON TEE, MJxMJ WITH RETAINER GLANDS AND THRUST BLOCK PER CITY OF N.B. STD-510-L-A
(73) INSTALL 8" DOUBLE CHECK DETECTOR PER CITY OF N.B. STD-517-L
(74) INSTALL 6"x 2½" FOUR-WAY FIRE DEPT. CONNECTION PER DETAIL ABOVE
(75) REMOVE EXISTING FIRE HYDRANT ASSEMBLY AND GATE VALVE. INSTALL BLIND FLANGE AT TEE. RETURN ABANDONED MATERIALS TO CITY UTILITIES YARD AT 949 W. 16th STREET.
(76) HOT TAP AND JOIN EXISTING 12" WATER PER CITY OF N.B. STD-507-L
(77) CUT AND CAP EXIST. 8" WATER STUB AT METER SHUT-OFFS PER CITY OF N.B. STDS.

GRAPHIC SCALE
20' 0 10' 20' 40' 80'
(IN FEET)
1 inch = 20' ft.

NOTES TO CONTRACTOR

1. DRY UTILITIES ARE SCHEMATIC AND SHOWN FOR REFERENCE ONLY. SEE UTILITY COMPANY PLANS FOR FINAL DESIGN AND SPECIFICATIONS.

NO.	DATE	REVISIONS	NO.	APP.	DATE
2	5/22/00	AS-BUILT 8" FIRE LINE ADJACENT TO SAN CLEMENTE DRIVE		CITY OF NEWPORT BEACH	

CITY OF NEWPORT BEACH

THIS PLAN IS SIGNED BY THE CITY OF NEWPORT BEACH FOR CONCEPT AND ADHERENCE TO CITY STANDARDS AND REQUIREMENTS ONLY. THE CITY IS NOT RESPONSIBLE FOR DESIGN ASSUMPTIONS AND ACCURACY.

APPROVED _____ PUBLIC WORKS ENGINEER — DATE 1/12/99

APPROVED _____ UTILITIES ENGINEER — DATE 1/11/99

M-22

REGISTERED PROFESSIONAL ENGINEER — DOUGLAS J. JOHNSON — No. 47447 — Exp. 12/31/99 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
THE KEITH COMPANIES
Civil Engineering • Land Surveying • Mapping • Environmental Services • Water Resources • Land Planning
2955 Red Hill Avenue, Costa Mesa, CA 92626, (714)540-0800
12/30/98
DOUGLAS J. JOHNSON R.C.E. 47447 (EXP. 12/31/99)

888 SAN CLEMENTE DRIVE IMPROVEMENT PLAN WATER

PARCELS 1-3 OF P.M. 82-712 AND PARCEL 1 OF N.B.L.L.A. 95-3

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

SHEET 2 OF 6

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REVISION BY NUMBER (STAFF)
REVISION DESCRIPTION (STAFF)

PLAN HOLD CORPORATION
REVISION BY NUMBER
REVISION DESCRIPTION

prw0002.dwg 12-29-98 7:48:57

PARKING GARAGE BY OTHERS

NEWPORT BEACH ART MUSEUM

888 SAN CLEMENTE DRIVE

F.F.=153.00

SANTA BARBARA DRIVE

BOMBERO DRIVE

SAN CLEMENTE DRIVE

(138.50 INV) 6" VCP

(91) 28 LF

(1.68%)

35 LF (91)

(138.50 INV) 6" VCP (90)

133.66 INV 6" PVC (86)

140.92 FS RIM (83)

EXIST. 15' WATER ESMT.

EXISTING 15" SEWER EASEMENT

PROPOSED 15' WIDE SEWER EASEMENT

PROPOSED TREES (TYP)

EXISTING EASEMENT TO BE QUIT-CLAIMED

LINE "S" SEE PROFILE ON SHEET 5

LINE "S"

N65°55'00"E 59.96'

N04°24'30"W 68.15'

N82°54'35"E (S=0.0343)

9+00.00 (29)

155.8 B.O.P. – 8"W
149.0 T.O.P. – 8"S
155.9 B.O.P. – 3"G
148.7 T.O.P. – 8"S
154.1 B.O.P. – 12"W
148.6 T.O.P. – 8"S

(81)(87) 11+88.82 ℄ M.H. #4 RIM=158.00

11+20.67 (81) ℄ M.H. #3 RIM=158.82

(23)(27)

(88) 80 LF

151.1 B.O.P. – 12"W
145.6 T.O.P. – 8"S

(82) (143.88 INV) 8" VCP

(85) RIM=152.2 FG

(89)

20.18' N11°57'34"E

29.99'

50.17'

(88) 17 LF

(82) N75°48'03"W L=22.61' S=0.0200

RIM=155.0 FG (84)

PRIVATE PUBLIC

10+00.00 (80) ℄ EXIST. M.H. #1 (RIM=153.73)

10+20.71 (81)(87) ℄ M.H. #2 RIM=154.00

10+75.00 (29)

145.20' INV. 6" PVC

(86) 145.50 INV 6" PVC

(82) N07°36'30"E L=3.53'

(85) 152.6 FG RIM

PROPOSED TREES (TYP)

PINCO (2-3")

3-4" TEL

NOTE: SEE SHEET 6 FOR SEWER/WATER CONSTRUCTION TRAFFIC CONTROL

GRADING AND PAVING CONSTRUCTION NOTES

(23) (27) SAWCUT, REMOVE AND DISPOSE OF EXISTING A.C. PAVEMENT
SLURRY BACKFILL TRENCH AND REPLACE A.C. PER CITY OF N.B. STD-105-L-A

(29) SLURRY SEAL & RESTRIPE TO LIMITS SHOWN

SEWER CONSTRUCTION NOTES

(80) CONSTRUCT 8" V.C.P. EXTRA STRENGTH SEWER LINE PER CITY OF N.B. SPECIFICATIONS

(81) CONSTRUCT 48" STANDARD MANHOLE PER CITY OF N.B. STD-401-L

(82) CONSTRUCT 6" PVC (SDR 35) SEWER LATERAL PER CITY OF N.B. STD-406-L

(83) CONSTRUCT SEWER CLEANOUT PER CITY OF N.B. STD 406-L

(84) CONSTRUCT CITY-SUPPLIED 8" CAST IRON CLEANOUT ASSEMBLY PER CITY OF N.B. STD-406-L

(85) CONSTRUCT 8" V.C.P. TERMINAL CLEANOUT PER CITY OF N.B. STD-400-L

(86) INSTALL PVC SEWER CAP FOR FUTURE BUILDING CONNECTION

(87) JOIN EXISTING 8" V.C.P. SEWER MAIN

(88) REMOVE AND DISPOSE OF EXISTING 8" V.C.P. SEWER MAIN AFTER CONSTRUCTION, INSPECTION AND ACCEPTANCE OF NEW MAIN.

(89) REMOVE AND DISPOSE OF EXISTING SEWER MANHOLE

(90) REMOVE AND DISPOSE OF EXISTING SEWER CLEANOUT

(91) REMOVE AND DISPOSE OF EXISTING 6" V.C.P. SEWER LATERAL

GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
1 inch = 20' ft.

NOTES TO CONTRACTOR

1. DRY UTILITIES ARE SCHEMATIC AND SHOWN FOR REFERENCE ONLY. SEE UTILITY COMPANY PLANS FOR FINAL DESIGN AND SPECIFICATIONS.

NO.	DATE	REVISIONS	NO.	APP.	DATE
2	5/22/00	AS-BUILT: NO CHANGES			

CITY OF NEWPORT BEACH

CITY OF NEWPORT BEACH

THIS PLAN IS SIGNED BY THE CITY OF NEWPORT BEACH FOR CONCEPT AND ADHERENCE TO CITY STANDARDS AND REQUIREMENTS ONLY. THE CITY IS NOT RESPONSIBLE FOR DESIGN ASSUMPTIONS AND ACCURACY.

APPROVED _____ PUBLIC WORKS ENGINEER — DATE 1/11/99

APPROVED _____ UTILITIES ENGINEER — DATE 1/11/99

REGISTERED PROFESSIONAL ENGINEER DOUGLAS J. JOHNSON No. 47447 Exp. 12/31/99 CIVIL STATE OF CALIFORNIA

PREPARED BY:

THE KEITH COMPANIES

Civil Engineering • Land Surveying ▷ 2955 Red Hill Avenue
Mapping • Environmental Services Costa Mesa, CA 92626
Water Resources • Land Planning (714)540-0800

Douglas J. Johnson 12/30/98

DOUGLAS J. JOHNSON R.C.E. 47447 (EXP. 12/31/99)

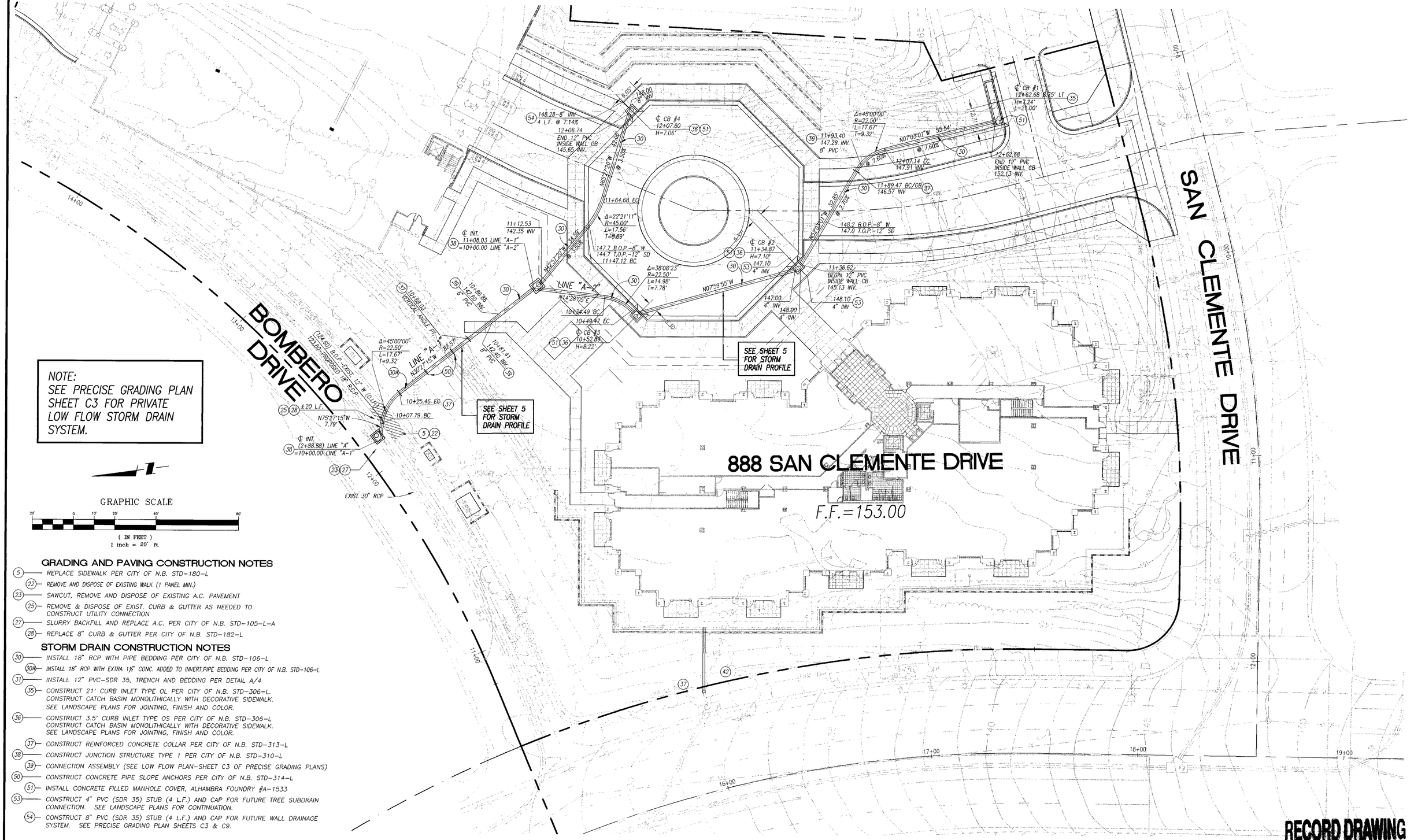
888 SAN CLEMENTE DRIVE IMPROVEMENT PLAN SEWER

PARCELS 1-3 OF P.M. 82-712 AND PARCEL 1 OF N.B.L.L.A. 95-3

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

SHEET 3 OF 6

RECORD DRAWING



GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
1 inch = 20' ft.

GRADING AND PAVING CONSTRUCTION NOTES

(5) REPLACE SIDEWALK PER CITY OF N.B. STD-180-L

(22) REMOVE AND DISPOSE OF EXISTING WALK (1 PANEL MIN.)

(23) SAWCUT, REMOVE AND DISPOSE OF EXISTING A.C. PAVEMENT

(25) REMOVE & DISPOSE OF EXIST. CURB & GUTTER AS NEEDED TO CONSTRUCT UTILITY CONNECTION

(27) SLURRY BACKFILL AND REPLACE A.C. PER CITY OF N.B. STD-105-L-A

(28) REPLACE 8" CURB & GUTTER PER CITY OF N.B. STD-182-L

STORM DRAIN CONSTRUCTION NOTES

(30) INSTALL 18" RCP WITH PIPE BEDDING PER CITY OF N.B. STD-106-L

(30A) INSTALL 18" RCP WITH EXTRA 1½" CONC. ADDED TO INVERT,PIPE BEDDING PER CITY OF N.B. STD-106-L

(31) INSTALL 12" PVC-SDR 35, TRENCH AND BEDDING PER DETAIL A/4

(35) CONSTRUCT 21' CURB INLET TYPE OL PER CITY OF N.B. STD-306-L. CONSTRUCT CATCH BASIN MONOLITHICALLY WITH DECORATIVE SIDEWALK. SEE LANDSCAPE PLANS FOR JOINTING, FINISH AND COLOR.

(36) CONSTRUCT 3.5' CURB INLET TYPE OS PER CITY OF N.B. STD-306-L CONSTRUCT CATCH BASIN MONOLITHICALLY WITH DECORATIVE SIDEWALK. SEE LANDSCAPE PLANS FOR JOINTING, FINISH AND COLOR.

(37) CONSTRUCT REINFORCED CONCRETE COLLAR PER CITY OF N.B. STD-313-L

(38) CONSTRUCT JUNCTION STRUCTURE TYPE 1 PER CITY OF N.B. STD-310-L

(39) CONNECTION ASSEMBLY (SEE LOW FLOW PLAN-SHEET C3 OF PRECISE GRADING PLANS)

(50) CONSTRUCT CONCRETE PIPE SLOPE ANCHORS PER CITY OF N.B. STD-314-L

(51) INSTALL CONCRETE FILLED MANHOLE COVER, ALHAMBRA FOUNDRY #A-1533

(53) CONSTRUCT 4" PVC (SDR 35) STUB (4 L.F.) AND CAP FOR FUTURE TREE SUBDRAIN CONNECTION. SEE LANDSCAPE PLANS FOR CONTINUATION.

(54) CONSTRUCT 8" PVC (SDR 35) STUB (4 L.F.) AND CAP FOR FUTURE WALL DRAINAGE SYSTEM. SEE PRECISE GRADING PLAN SHEETS C3 & C9.

RECORD DRAWING

NO.	DATE	REVISIONS	NO.	APP.	DATE
2	5/22/00	AS-BUILT: NO CHANGES.			

CITY OF NEWPORT BEACH

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APPROVED _____ PUBLIC WORKS ENGINEER — DATE 4/6/99

APPROVED _____ UTILITIES ENGINEER — DATE 1/11/99

REGISTERED PROFESSIONAL ENGINEER DOUGLAS J. JOHNSON No. 47447 Exp. 12/31/99 CIVIL STATE OF CALIFORNIA

PREPARED BY:

THE KEITH COMPANIES

Civil Engineering • Land Surveying • Mapping • Environmental Services • Water Resources • Land Planning

2955 Red Hill Avenue, Costa Mesa, CA 92626, (714)540-0800

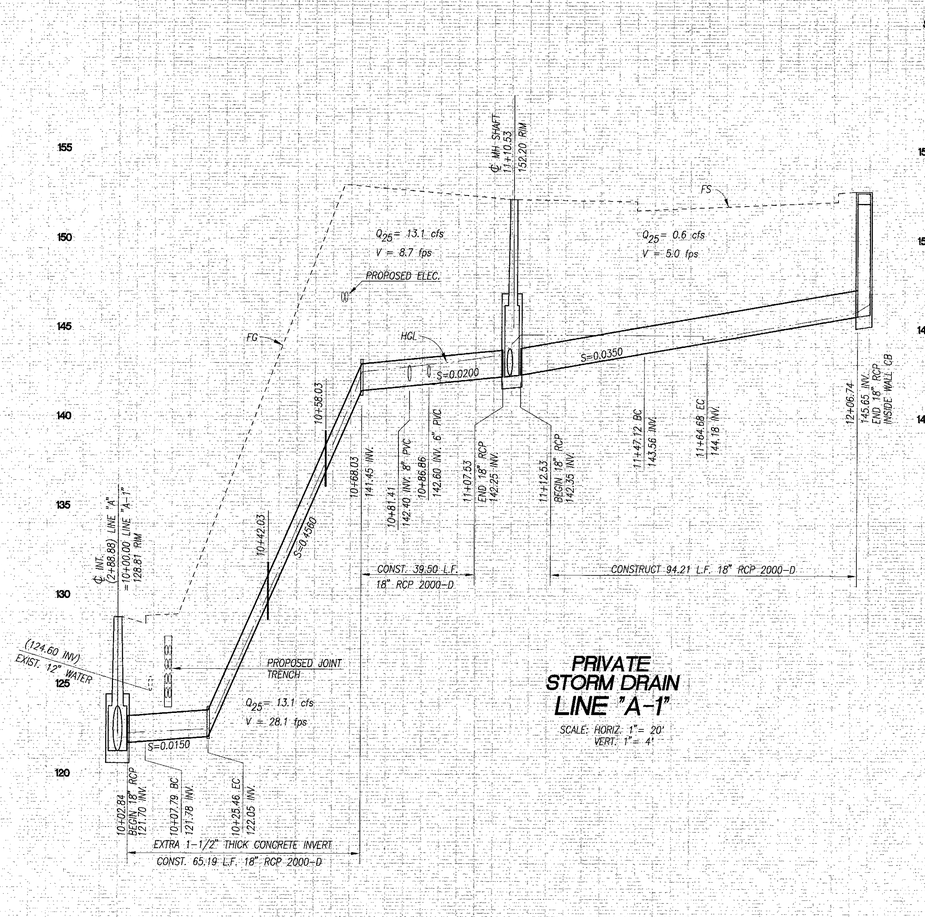
DOUGLAS J. JOHNSON R.C.E. 47447 (EXP. 12/31/99) — 12/30/98

888 SAN CLEMENTE DRIVE
IMPROVEMENT PLAN
PRIVATE STORM DRAIN

PARCELS 1-3 OF P.M. 82-712 AND PARCEL 1 OF N.B.L.L.A. 95-3

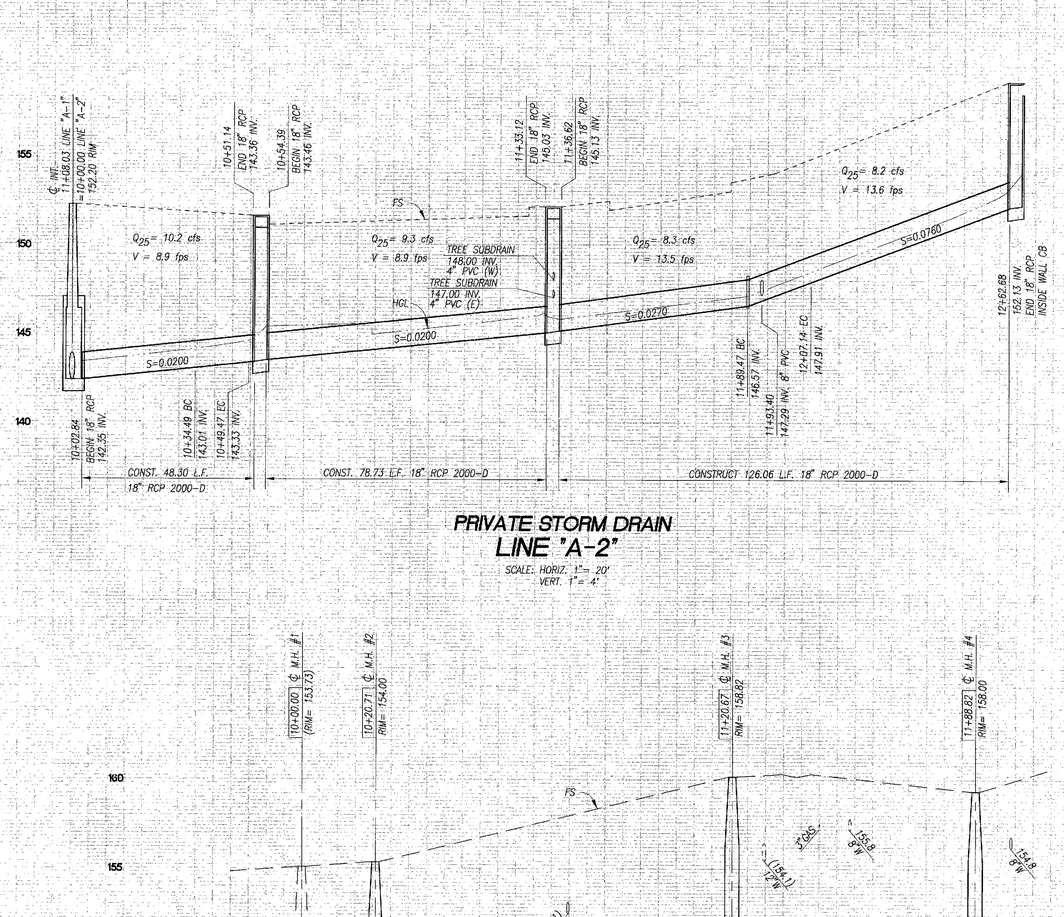
CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

SHEET 4 OF 6



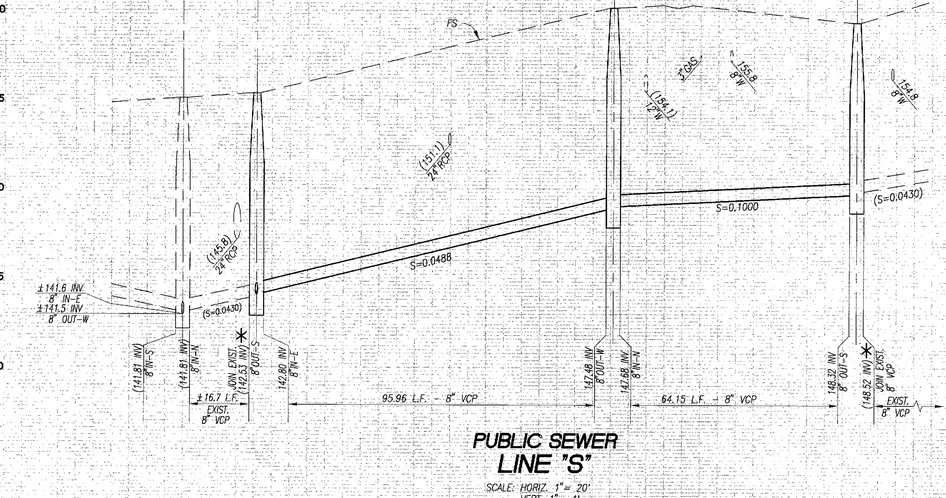
PRIVATE STORM DRAIN LINE "A-1"

SCALE: HORIZ. 1"= 20'
VERT. 1"= 4'



PRIVATE STORM DRAIN LINE "A-2"

SCALE: HORIZ. 1"= 20'
VERT. 1"= 4'



PUBLIC SEWER LINE "S"

SCALE: HORIZ. 1"= 20'
VERT. 1"= 4'

* NOTE:
CONTRACTOR TO VERIFY LOCATION OF EXISTING SEWER POINTS OF CONNECTION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

RECORD DRAWING

PROFILE
HORIZ. 1" = 20'
VERT. 1" = 4'

NO.	DATE	REVISIONS	NO.	APP.	DATE
2	9/22/00	AS-BUILT: NO CHANGES		CITY OF NEWPORT BEACH	

CITY OF NEWPORT BEACH

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APPROVED _____ PUBLIC WORKS ENGINEER DATE 1/12/99

APPROVED _____ UTILITIES ENGINEER DATE 1/11/99

REGISTERED PROFESSIONAL ENGINEER DOUGLAS J. JOHNSON No. 47447 Exp. 12/31/99 CIVIL STATE OF CALIFORNIA

PREPARED BY:
THE KEITH COMPANIES
Civil Engineering • Land Surveying
Mapping • Environmental Services
Water Resources • Land Planning
2955 Red Hill Avenue
Costa Mesa, CA 92626
(714)540-0800

_____ 12/31/98
DOUGLAS J. JOHNSON R.C.E. 47447 (EXP. 12/31/99)

888 SAN CLEMENTE DRIVE IMPROVEMENT PLAN
STORM DRAIN and SEWER PROFILES
PARCELS 1-3 OF P.M. 82-712 AND PARCEL 1 OF N.B.L.L.A. 95-3

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

SHEET 5 OF 6

PLAN-HOLD CORPORATION • IRVINE, CALIFORNIA
RELEASED BY NUMBER 07548
RELEASED FOR AS-BUILT

PLAN-HOLD CORPORATION • IRVINE, CALIFORNIA
MICROFILM NUMBER 07548
RELEASED FOR AS-BUILT

PLAN-HOLD CORPORATION • IRVINE, CALIFORNIA
MICROFILM NUMBER 07548

nam00005.dwg 12-28-98 9:01:25

2nd SUBMITTAL - DECEMBER 21, 1998

5

TRACT NO. 5-C JAMBOREE ROAD TRUNK SEWER, FORCE MAIN AND PUMPING STATION

PLAN

JAMBOREE ROAD

SCALE: 1"=50'

PROFILE

HORIZ: 1"=50'
VERT: 1"=10'

M.H. #15 STA 51+25.00

M.H. #16 DEFL RT. 9° 26' 43" = P.I. STA. 54+87

M.H. #17 STA 57+00.00

ARCH BAY Drive

S.P. 5-7256 - STA 58+50
8" VCP W'ly, 9/12/96

M.H. #18 STA 59+86.46

M.H. #19 STA 63+00.00

MATCH LINE STA 50+00

MATCH LINE STA 65+00

SEE SHEET No 4

250.00' - 18" V.C.P.
0.40%

286.11' - 18" V.C.P.
0.40%

291.83' - 18" V.C.P.
0.40%

286.46' - 18" V.C.P.
0.40%

313.54' - 18" V.C.P.
0.40%

300.00' - 18" V.C.P.
0.40%

331.54' - 18" V.C.P.
0.40%

Approximate Limit of Graded Area

29" x 18" C.M.P.A. DRAIN

118.80 F.L.

8" V.C.P. STUB & PLUG F.L. = 110.95

EXISTING 8" C.I. WATER LINE CAPPED AT END @ 15' WEST OF ℄ OF ROAD - STA 60+20±

20" F.L. (INSIDE VAULT)

15.30'

30" WATER TRANSMISSION LINE EXISTING

S.P. 1108 N.M.H. 8" EAST STA 58+50±

30'-12" V.C.P. STUB & PLUG F.L. = 110.90.

20" ARTERIAL WATER MAIN, EXISTING

PROPOSED PAVED AREA

EXIST. C.L. FENCE

℄ CURVE DATA ℄ JAMBOREE RD.
Δ = 9° 26' 43"
R = 1200'
L = 197.82'
T = 99.13'

53+01.79 B.C.

55+08.55 E.C.

IRVINE COAST COUNTRY CLUB

SANTA BARBARA Drive

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

ORIGINAL PROFILE

STA 58+50 BAYOU 10-4465

106.09 F.L.

106.59

107.73

108.90

110.05

111.30

112.10 F.L.

N.W. 8" V.C.P. STUB & PLUG F.L. = 110.95 @ INLET.

S.E. 12" V.C.P. STUB & PLUG F.L. = 110.90 @ INLET.

B. M. Nº OCS-4D-5-57 ELEV. = 121.259

3/4" REINF. ROD IN CONC., FLUSH WITH GROUND, NEAR 2" I.P. WITNESS, PAINTED WHITE, MRK'D "B.M." ±40' E'LY OF ℄ JAMBOREE ROAD AT Y INTERSECTION OF GRAVEL ROAD.

50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

120 110 100

JAMBOREE ROAD TRUNK SEWER
ORANGE COUNTY CALIFORNIA
FEBRUARY, 1958
D-388

SHEET 5 OF 10

4679

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, PT. OF WAY CHECKED, NOTE BOOK, NO.

PROFILE: PLOTTED, GRADE CHECKED, NOTE BOOK, NO.

CONSTRUCT 1205 LIN. FT. OF 8" FORCE MAIN FROM PUMP STATION TO M.H. #20.
SEE PLANS BY NPT. BEACH FOR FORCE MAIN RELOCATION, 1960

CONTRACT No. 5-24

PLACE 2" PLANT MIXED SURFACING ON COMPACTED BASE. GRADE TO DRAIN FROM PUMP HOUSE. (See "PROT. PLAN" SHEET NO.)

PUMP STATION ABANDONED
See Contract No. 5-28
~~PUMPING STATION SITE~~

B.M. Nº OCS-40-6-57 ELEV.=49.534
O.C.S. B.M. TAG "R.E. 7872", IN CENTER OF W'LY HEADWALL OF CULVERT ± 34' FROM ℄ JAMBOREE RD.

6

SEE SHEETS 8 TO 10 FOR PUMPING STATION AND FORCE MAIN DETAILS.

CONSTRUCT 50'x50' LEVEL BUILDING SITE PAD. F.G.=44.0 ±
SLOPE CUT BANKS @ 2:1

CONSTRUCT 2" PLANT MIXED SHALLOW DRAIN CHANNEL IN APPROXIMATE LOCATION AS SHOWN. CROSS SECTION TO BE SIMILAR TO EXISTING CHANNEL

Existing open concrete drain from road with 2.5' bottom width, 6' top width, and 1' deep

℄ CURVE DATA
℄ JAMBOREE RD.
Δ= 16°10'56"
R= 1200'
L= 338.92'
T= 170.60'

℄ PIPE
Δ= 16°10'56"
R= 1185'
L= 334.68'
T= 168.46'

70+37.47 P.C.
76+06.39 E.C.

437.47' TO ℄ M.H.

CONSTRUCT 205 LIN. FT. 8" V.C.P. STUB & PLUG F.L.= 115.40

PROPOSED 29"x18" C.M.P.A. ±300.00'-18"V.C.P.

SEE SHEET Nº 5

MATCH LINE 65+00

M.H. #20 64+00.00

116.8 ± F.L.

116.7± F.L.

SPS-BOX 10KB 1/60

30.00'-8"V.C.P. STUB & PLUG F.L.= 113.70

EXIST. 8" C.I. WATER LATERAL CAPPED 15' WEST OF ROAD ℄ STA. 68+75

8" WATER OUTLET

PROPOSED PAVED AREA

20" ARTERIAL WATER MAIN, EXISTING.

Approximate Limit of Graded Area

313.11'

EXISTING TOE OF SLOPE

ULTIMATE TOE OF SLOPE

INSTALL 2½" GALV. WATER TO BLDG.

8" C.I. WATER LATERAL WITH 8" GATE & BLIND FLANGE @ 76+95 (EXIST.)

END 10" WATER BEGIN 18" WATER

MATCH LINE 80+00

SEE SHEET Nº 7

FORCE MAIN and PUMP STATION
ABANDONED
SEE See Contract No. 5-28

76+89.50 = ℄ PT. 8" FORCE MAIN.

FOR CHANGES BETWEEN STA. 77+16 and 82+42 SEE CONTRACT NO. 5-41

9-1-92

PLAN
MANHOLE Nº 20
1/2"=1'-0"

18" V.C.P.
8" V.C.P.
PLUG
SHELF
SADDLE
10"
12"
8"
8" FORCE MAIN
FUTURE FORCE MAIN
12"x8"x10"

PLAN
JAMBOREE ROAD
SCALE: 1"=50'

65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

MATCH LINE 65+00
M.H. #20 64+00
PROP. 29"x18" C.M.P.A. ±300.00'-18"V.C.P. 0.40%
112.10 F.L.
112.50
0.40%
111.70 F.L.
68+50

FORCE MAIN INLET F.L.= 112.70
N.W. 8" V.C.P. STUB & PLUG F.L.= 113.40 @ INLET
S.E. 8" V.C.P. STUB & PLUG F.L.= 113.40 @ INLET

FLOW LINE OF 8" FORCE MAIN

Top Elev. of Pipe

PROPOSED ℄ PROFILE

ORIGINAL PROFILE

NOTE: SET TOP OF FORCE MAIN A MINIMUM OF 4' BELOW ORIGINAL PROFILE

PROFILE
HORIZ. 1"=50'
VERT: 1"=10'

PROP. ℄ PROFILE

76+89.50 = ℄ PT. 8" FORCE MAIN

398 ± C.L.E.II

65' 33'± Ultimate Slope

Existing Slope

F.L. 8" FORCE MAIN

PUMP STATION

15" V.C.P. - ABANDONED - SEE CONTRACT No. 5-41

80+00 MATCH LINE

PUMP STA. 4'

M.H. #21 77+16

BL.44.00

8" FORCE MAIN

EXIST. GROUND @ 90'± W. OF ℄ ROAD

M.H. #21 80+45

30.84 INVERT 12" STUB E.W.

261.15 15" V.C.P. @ 0.50%

261.15 15" V.C.P.

32.40 15" V.C.P.

30.84 INVERT 15" E.W.

30.69 INVERT 12" STUB TO PUMP

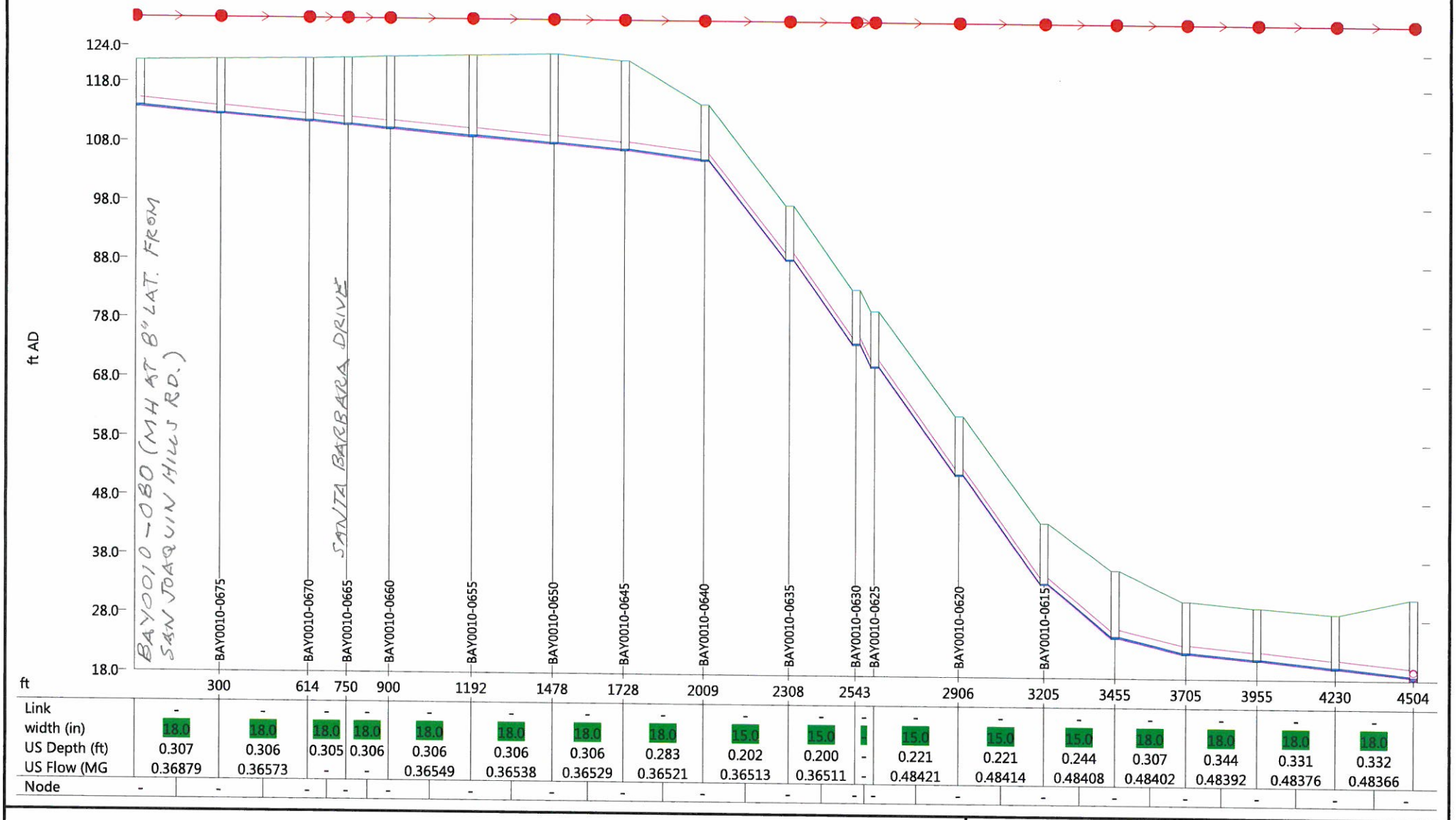
JAMBOREE RD. TRUNK SEWER & FORCE MAIN
ORANGE COUNTY CALIFORNIA
FEBRUARY, 1962

SHEET 6

4679

M-27

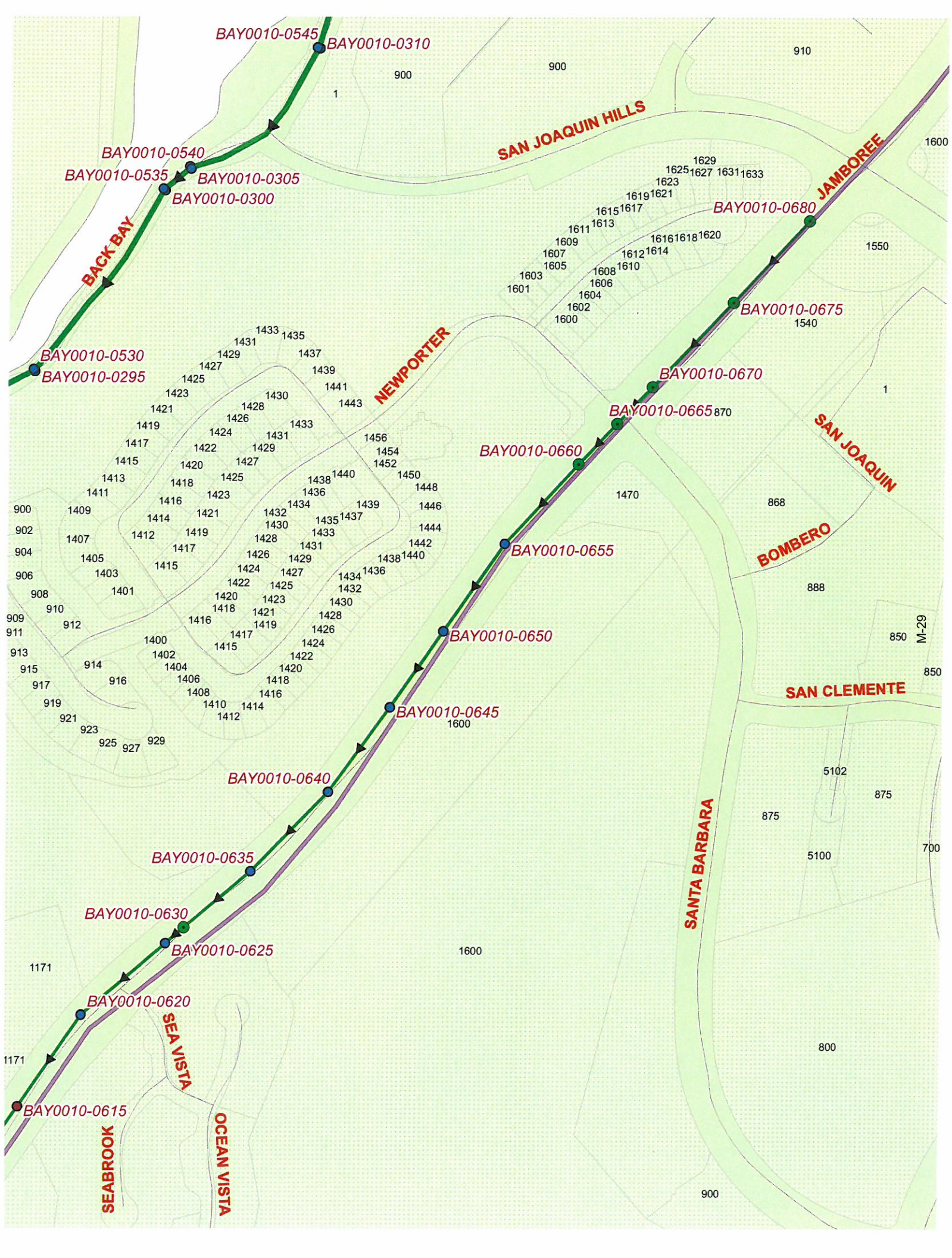
JAMBOREE ROAD TRUNK SEWER, FORCE MAIN AND PUMPING STATION



Long Section for Network - 2030 Network

(PEAK FLOW PROJECTION)

Powered by InfoWorks™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BAY0010-0310
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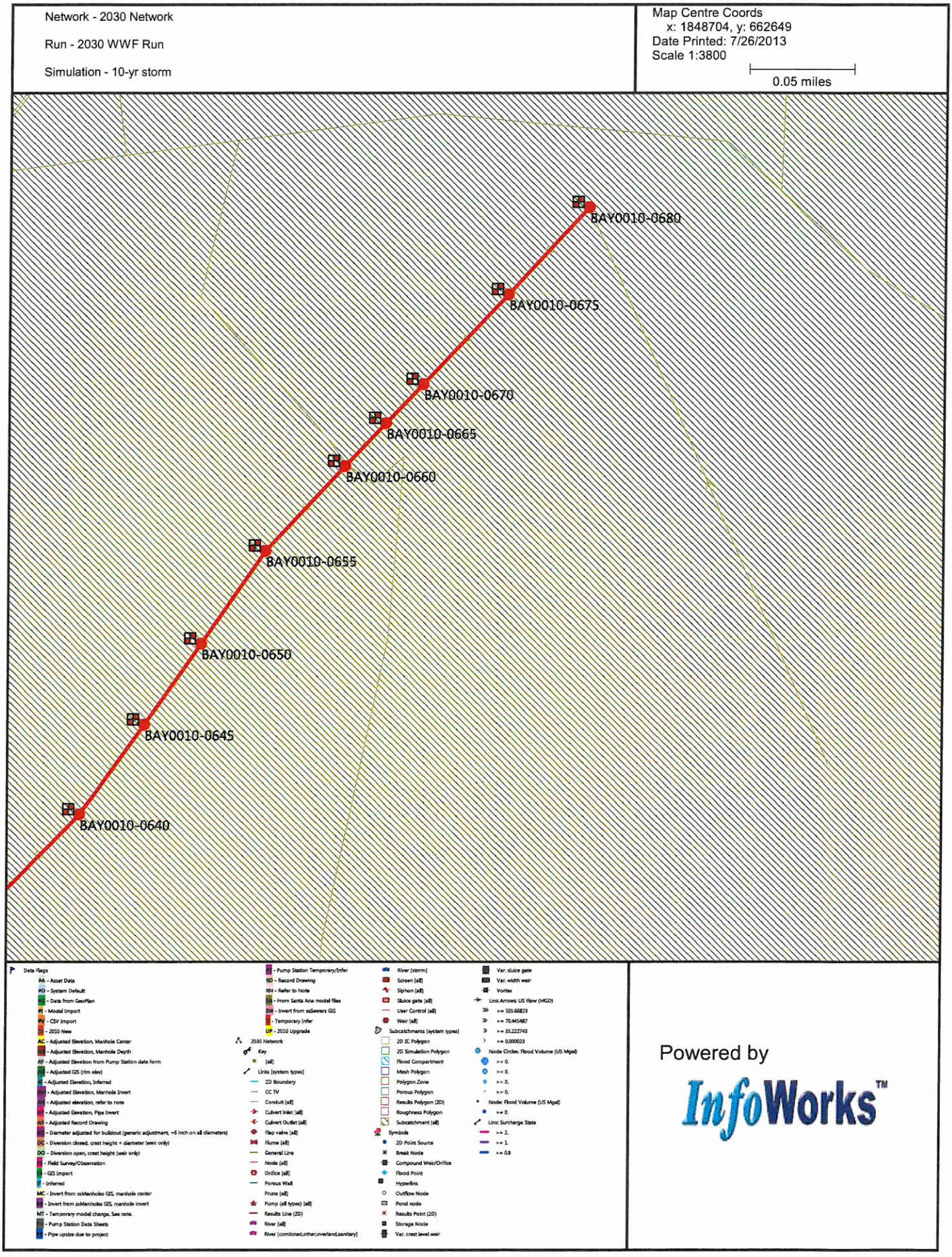
BAY0010-0630
BAY0010-0625
BAY0010-0620
BAY0010-0615
SAN JOAQUIN HILLS
JAMBOREE
BACK BAY
NEWPORTER
SAN JOAQUIN
BOMBERO
SAN CLEMENTE
SANTA BARBARA
SEA VISTA
SEABROOK
OCEAN VISTA
M-29


Network - 2030 Network
Run - 2030 WWF Run
Simulation - 10-yr storm
Map Centre Coords
x: 1848704, y: 662649
Date Printed: 7/26/2013
Scale 1:3800
0.05 miles
BAY0010-0680
BAY0010-0675
BAY0010-0670
BAY0010-0665
BAY0010-0660
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BAY0010-0650
BAY0010-0645
BAY0010-0640
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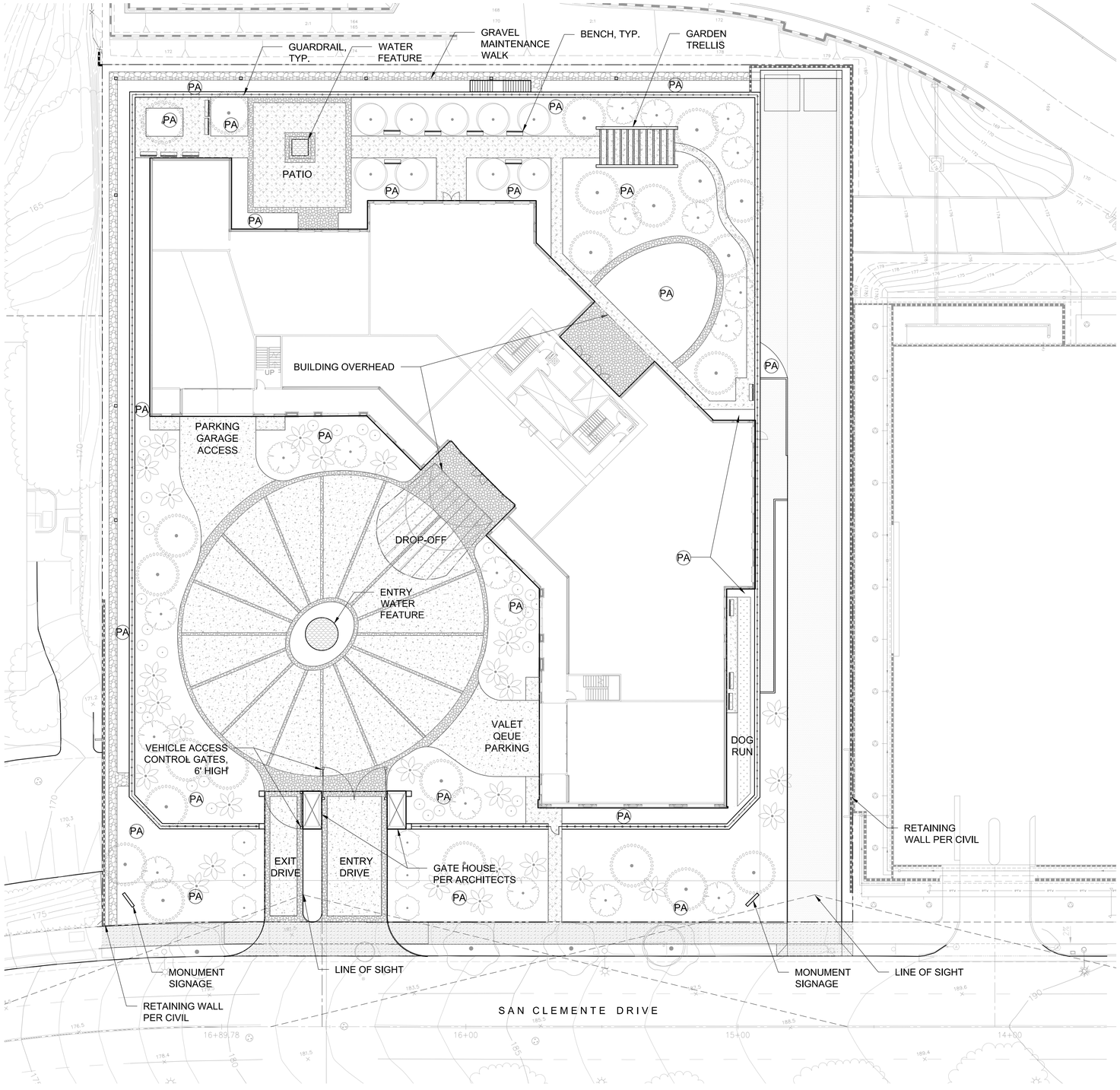
Appendix 3

Conceptual Site Plan



LEGEND

- CONCRETE DRIVEWAY NATURAL GRAY
- INTEGRALLY COLORED DECORATIVE CONCRETE TYPE 1 - VEHICLE RATED
- INTEGRALLY COLORED DECORATIVE CONCRETE TYPE 2 - GARDEN WALK
- STONE ACCENT PAVERS
- NEW CONCRETE SIDEWALK AND DRIVEWAY APRON IN RIGHT OF WAY
- GRAVEL MAINTENANCE PATH, 3/8" CRUSHED GRAVEL
- WATER FEATURE
- SYNTHETIC TURF DOG RUN
- PERIMETER FENCE, 6'-0" HIGH MAX.
- ORNAMENTAL GUARDRAIL, 42" HIGH FENCE
- PERIMETER FENCE 6'-0" HIGH
- GARDEN TRELLIS 16'-0" HIGH, IPE WOOD WITH PLASTER COLUMNS
- MONUMENTAL SIGNAGE (SEE NOTE BELOW)
- PA — PLANTING AREA

NOTES

1. ENTRY MONUMENT SIGNAGE: ALL PROPOSED SIGNAGE SHALL COMPLY WITH CITY STANDARD 110-L AND MUNICIPAL CODE 20.30.130, TYP.
2. REFER TO CIVIL SHEET 2-01 FOR ALL SITE WALL HEIGHTS AND MATERIALS

0' 20' 40' 80' 160' 1" = 20'-0"

N

L1.0

RAMSA
ROBERT A.M. STERN ARCHITECTS

PBCo

OCMA
850 San Clemente Drive
Newport Beach, CA
Note: Conceptual Design Package Subject To Change

HARDSCAPE PLAN - GROUND FLOOR

RELATED

Appendix 4

Sewer Monitoring Report

601 N Parkcenter Drive Suit 209
Santa Ana, CA. 92705
Phone: (714) 542-1004 Fax: (714) 542-1332

September 1, 2015

Fuscoe Engineering
16795 Von Karman, Suite 100
Irvine, California 92606

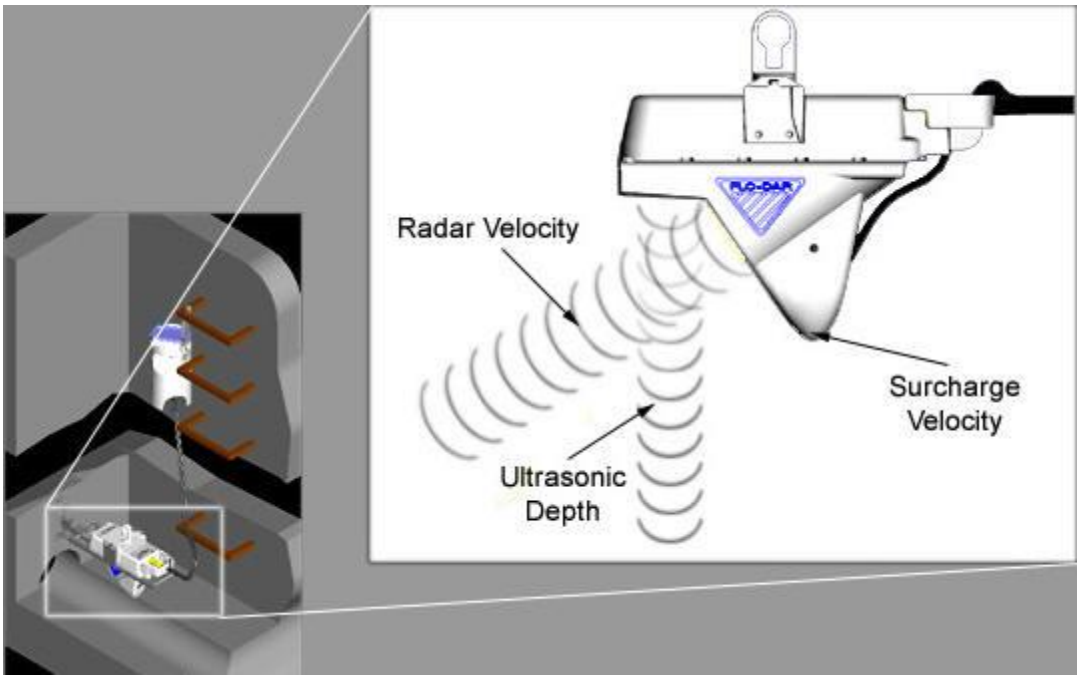
Subject: Temporary Sewer Flow Monitoring

Attention: **Sue Williams, MS, PE, QSD**
Senior Engineer

Hello Sue:

Per your email, the following is our proposal for two sewer flow monitors for a period of two weeks of monitoring. Included in the proposal is full traffic control.

We will use the Marsh-McBirney Flo Dar. Please see below.



The Marsh-McBirney Flo-Dar sensor is now available with an optional surcharge velocity sensor. The surcharge velocity sensor measures flow velocity when the sensor becomes submerged. It is during these "surcharge events" that the main radar-based sensor is unable to measure velocity. The surcharge sensor utilizes Marsh-McBirney's proven electromagnetic sensing technology. With the addition of this option, users will achieve accurate flow monitoring through dry and wet weather flows without the need for routine cleaning or maintenance.

Flo-Dar - Flow Meter for Sewers & Open Channels

The Flo-Dar Family of flow-meters provides a revolutionary approach to open channel and sewer flow monitoring. Flo-Dar combines digital doppler radar velocity sensing technology with ultrasonic pulse echo level sensing to remotely measure open channel flows.

Flo-Dar's unique non-contact measuring technology means trouble-free sewer flow monitoring. It even won the Water Environment Federation's Innovative Technology Award!

Like all Marsh-McBirney products, Flo-Dar sets the standard for ease-of-use, accuracy, and reliability. Flo-Dar accuracy has been independently confirmed by Alden Labs as well as the satisfaction of thousands of Flo-Dar users.

Figure 1: Manhole on Santa Barbara. Traffic control closes center lane.

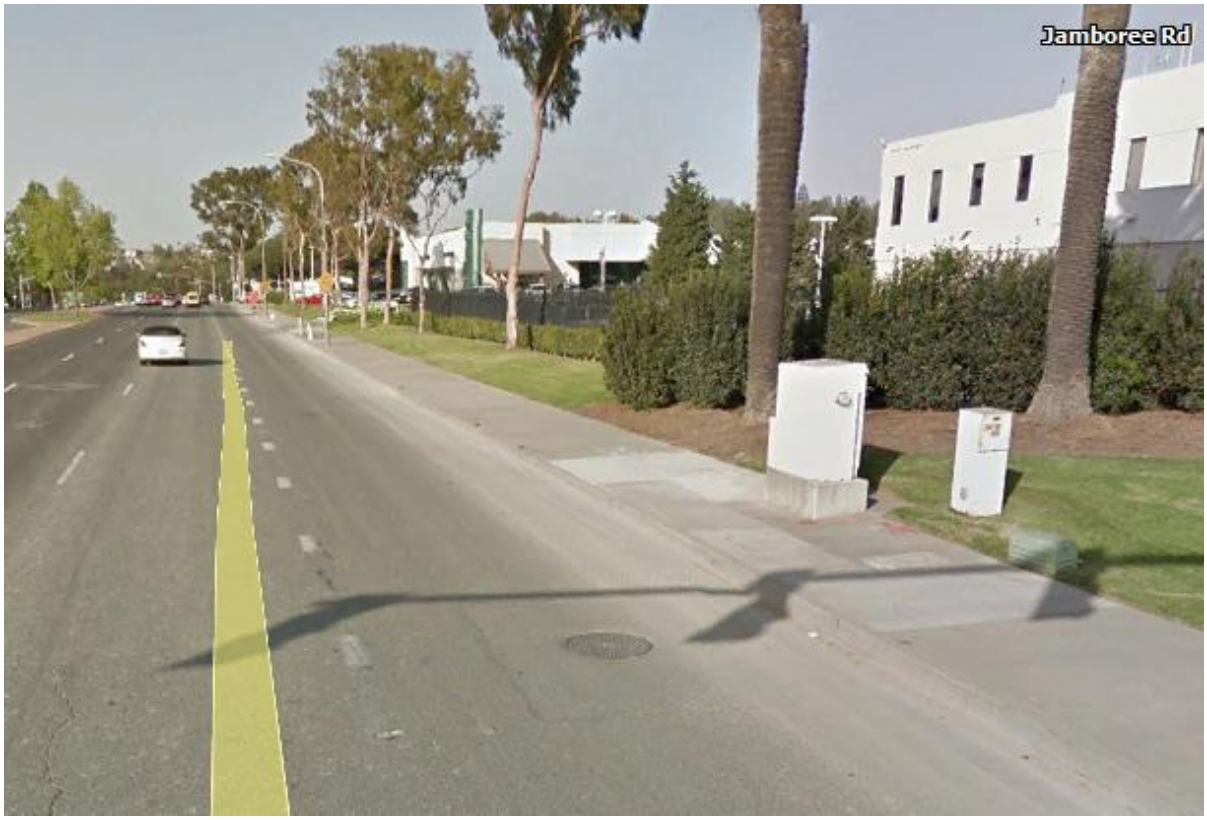


Figure 2: Manhole to be monitored on Jamboree. Right lane closure.

US3 Cost Proposal

Task	Qnty	*Description*	Price	Duration	Extended
Sewer Flow Monitoring < 20'					
Task 1 Temporary Flow Meters (Model 460)					
	2	Wireless Flow Meters	450		$900
	0	Permits (by others)	0		$0
	2	Materials	85		$170
			535		$1,070
Task 2	2	Flow Meter Installation	1,340		$2,680
Task 3	0	Traffic Control Flagger	125		$0
Task 3	2	Removal Meters	540		$1,080
				Total	**$4,830**

We will leave the units in the ground for two-four weeks and provide you with the raw data in an xls file format.

Sincerely,

Mark

Mark Serres
Project Manager

Site Report 10-01-2015

Confidential Proprietary Information

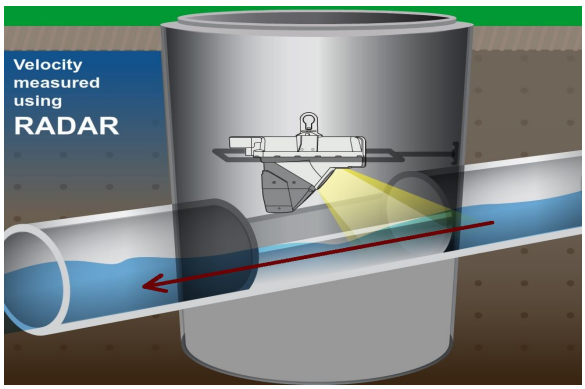
Fuscoe	SE corner of Jamboree Rd & Santa Barbara Dr
Newport Jamboree	

Access:	System Type:	
Manhole in eastbound curb lane	Sanitary [X]	Storm [ ]

Install Date: 9/15/2015

Map

Technology



Traffic Plan

Flow Meter			
Meter Depth:*			
Meter SN:*			
*			
Avg Velocity	Avg Measured Level		Multiplier
0.85 fps	0.75"		1.0
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
*			
Traffic Safety			
Used cones, signs, lights & a flagger.			
Land Use			
Residential	Commercial	Industrial	Trunk
	X		

Manhole Depth	*
Pipe Size	8"
Inner Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	Good VCP
Manhole Material	Concrete
Silt (inches)	0.5
Velocity Profile Data	*
Velocity Profile Taken	
Sensor Offset	15.38"
Sensor Dist. to Crown	7.38"
Flow Direction	Upstream
Flow Heading	West

Meter Site Document

Fuscoe

Newport Jamboree

SE corner of Jamboree Rd & Santa Barbara Dr

Site

Manhole Before Install

Installation Process

Installed

Upstream

Downstream

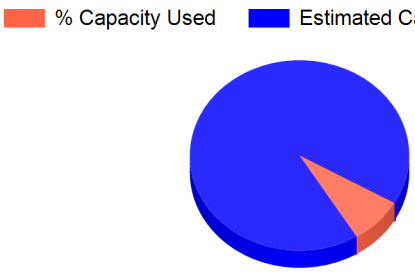
Temporary Flow Study

Fuscoe

Newport Jamboree

Meter Start Date		From	9/15/2015 12:00:00 AM
Meter Stop Date		To	9/29/2015 12:00:00 AM
Velocity (fps)		Level (in)	Flow (mgd)
Average	0.863	0.670	0.008
Maximum	2.570	1.730	0.030
Minimum	0.000	0.390	0.000
Pipe Size		8.000	
Estimated Capacity (mgd)			
Capacity Used			
Sensor Type		Hach - Flodar	

Estimated Capacity Usage



Utility Systems, Science and Software

6190 Fairmount Ave. Suite E
San Diego, CA 92021

601 N. Parkcenter Drive Suite 209
Santa Ana, CA 92705

Site Report 10-01-2015

Confidential Proprietary Information

Fuscoe 22419 Santa Barbara Dr

Newport Santa Barbara

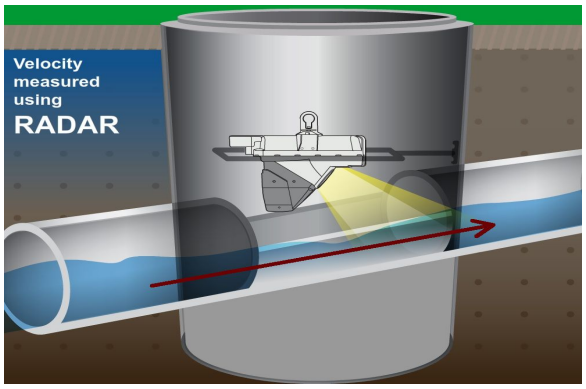
Access:
Manhole in center northbound lane

System Type:
Sanitary [X] Storm [ ]

Install Date: 9/15/2015

Map

Technology



Traffic Plan

Flow Meter			
Meter Depth:*			
Meter SN:*			
*			
Avg Velocity	Avg Measured Level		Multiplier
3.45 fps	1.0"		1.0
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
*			
Traffic Safety			
Used cones, signs, lights & a flagger.			
Land Use			
Residential	Commercial	Industrial	Trunk
	X		

Manhole Depth	*
Pipe Size	8"
Inner Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	OK
Manhole Material	*
Silt (inches)	0
Velocity Profile Data	*
Velocity Profile Taken	
Sensor Offset	16.18"
Sensor Dist. to Crown	8.18"
Flow Direction	Downstream
Flow Heading	North

Meter Site Document

Fuscoe

Newport Santa Barbara

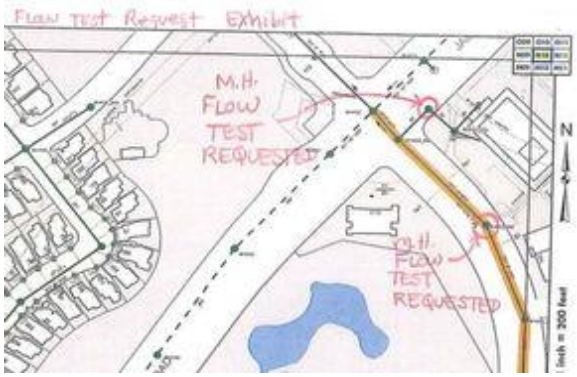
22419 Santa Barbara Dr

Site

Manhole Before Install

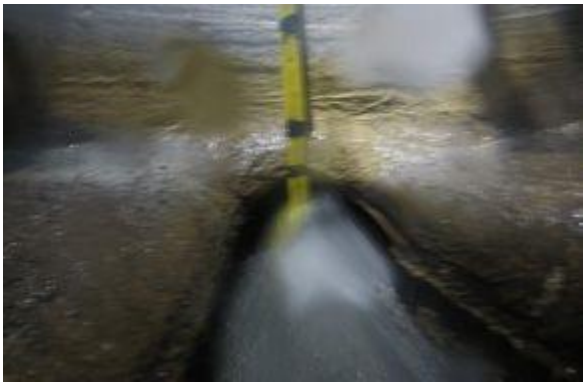
Installation Process

Sewer Map



Upstream

Downstream



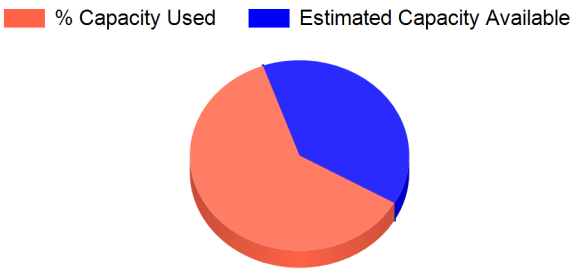
Temporary Flow Study

Fuscoe

Newport Santa Barbara

Meter Start Date		From	9/15/2015 12:00:00 AM
Meter Stop Date		To	9/29/2015 12:00:00 AM
Velocity (fps)		Level (in)	Flow (mgd)
Average	3.321	0.959	0.055
Maximum	4.990	2.160	0.234
Minimum	1.730	0.460	0.009
Pipe Size		8.000	
Estimated Capacity (mgd)			
Capacity Used			
Sensor Type		Hach - Flodar	

Estimated Capacity Usage

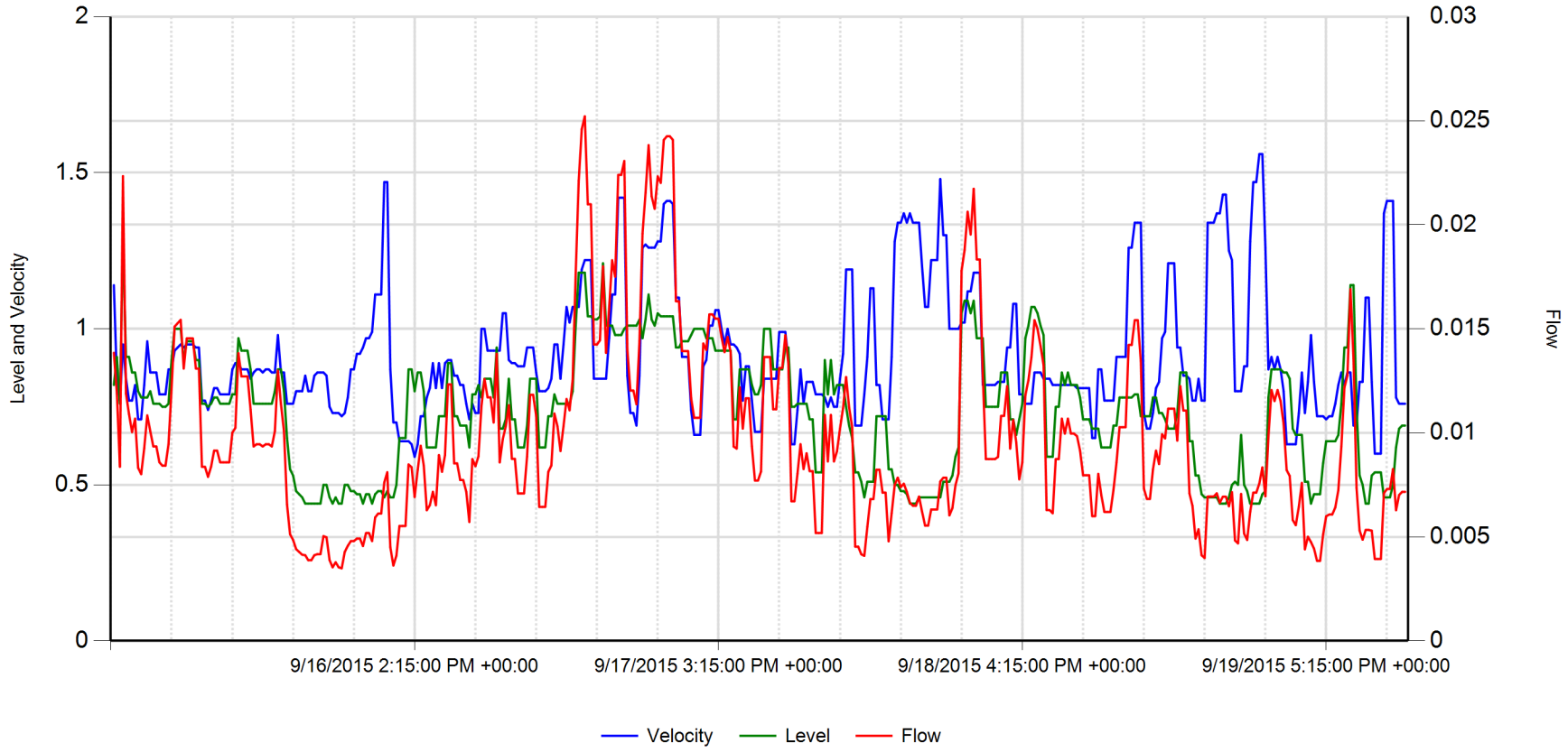


Utility Systems, Science and Software

6190 Fairmount Ave. Suite E
San Diego, CA 92021

601 N. Parkcenter Drive Suite 209
Santa Ana, CA 92705

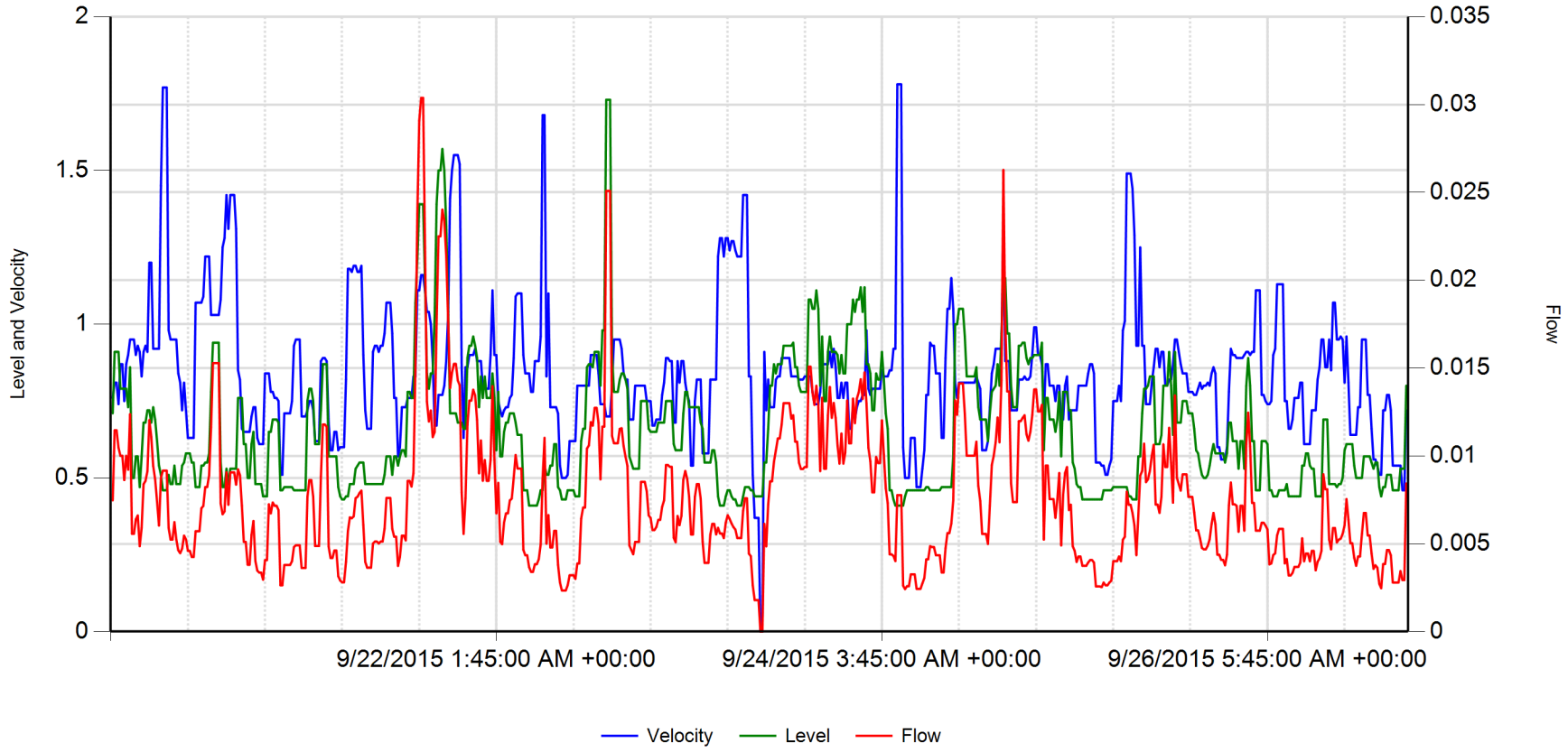
Newport Jamboree



	Velocity (fps)	Level (in)	Flow (mgd)		
Average	0.922	0.738	0.010	**RainFall**	Inches
Maximum	1.560	1.290	0.025		
Minimum	0.590	0.440	0.003		

10/1/2015 4:08:13 PM

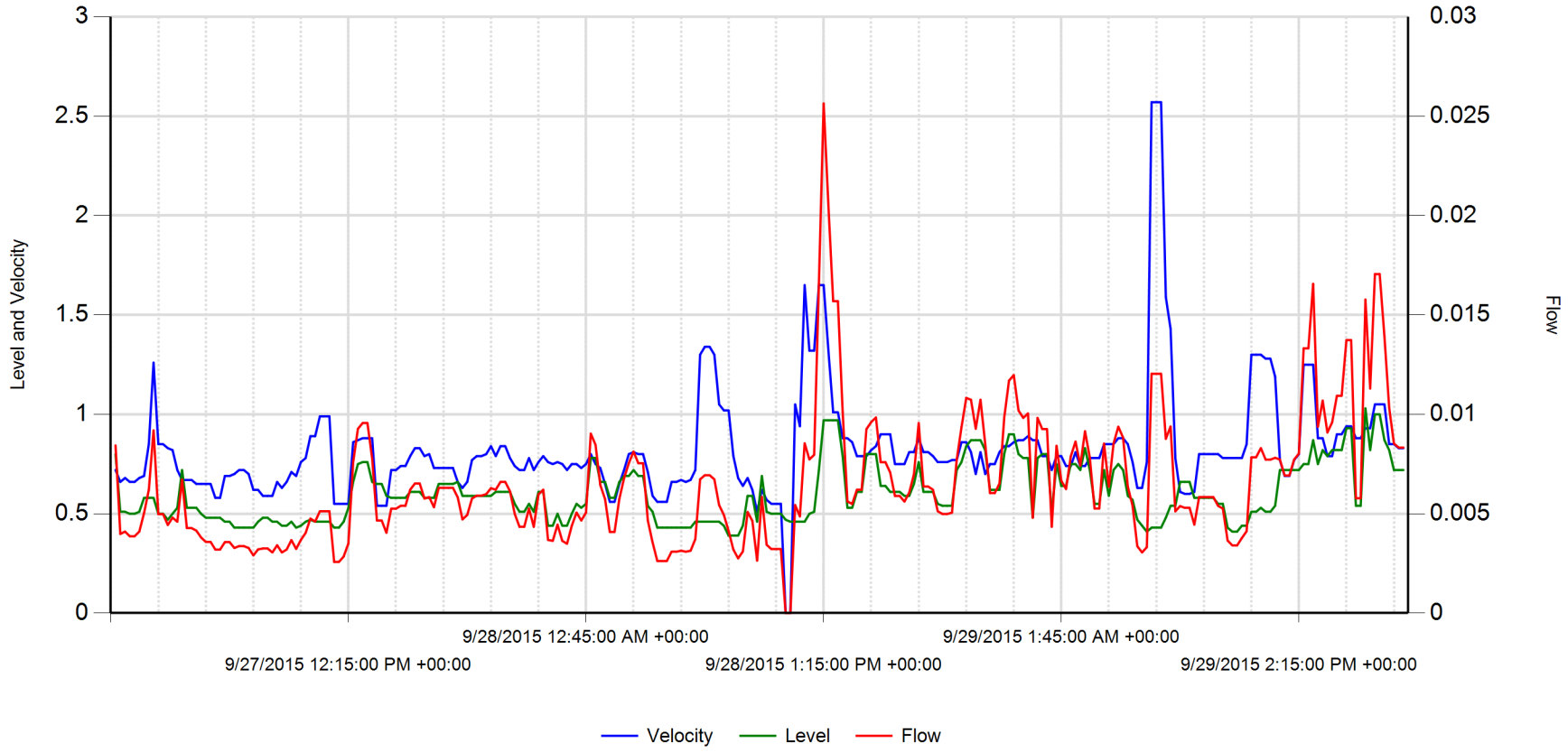
Newport Jamboree



	Velocity (fps)	Level (in)	Flow (mgd)		
Average	0.845	0.656	0.008	**RainFall**	Inches
Maximum	1.780	1.730	0.030		
Minimum	0.000	0.410	0.000		

10/1/2015 4:08:13 PM

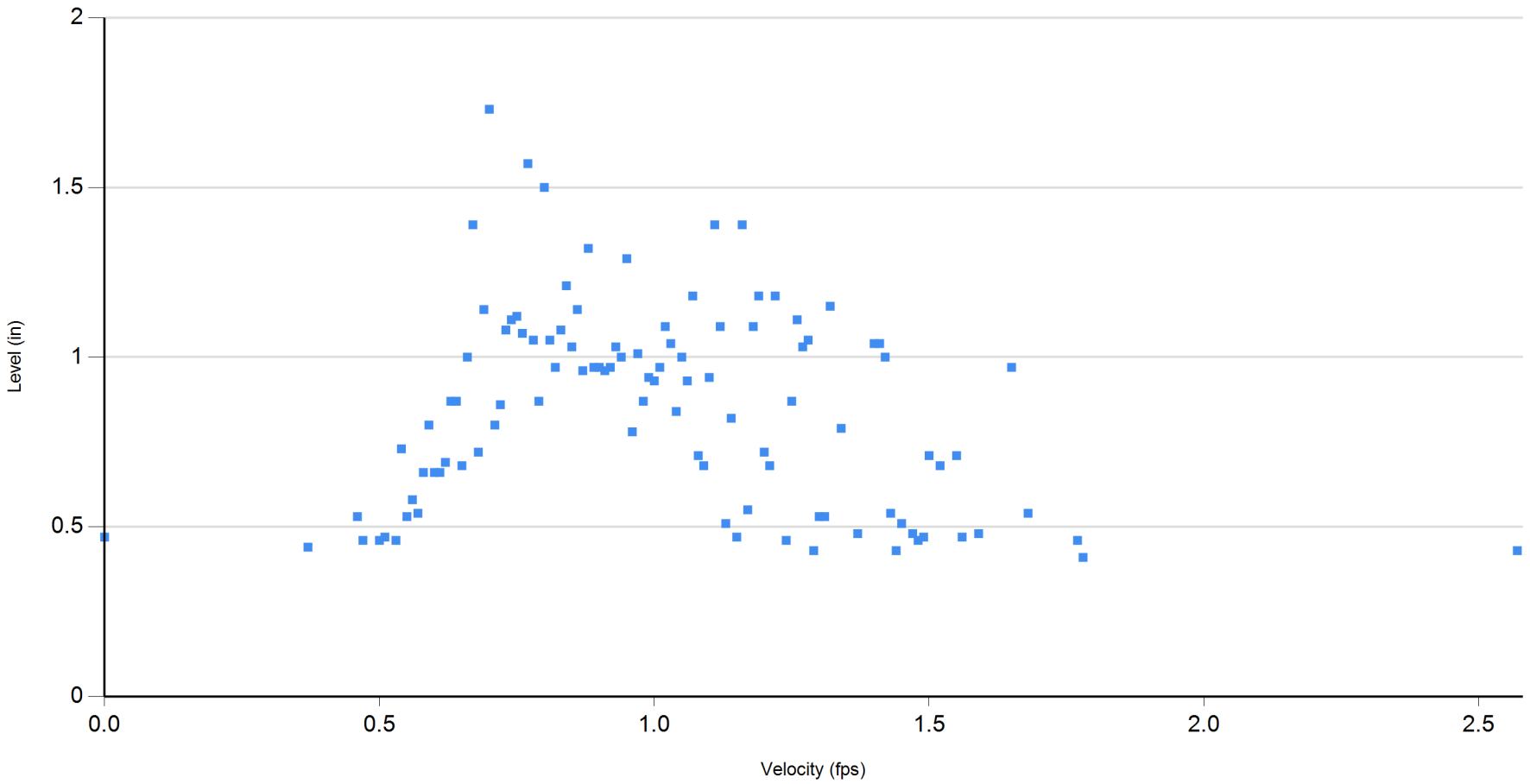
Newport Jamboree



	Velocity (fps)	Level (in)	Flow (mgd)		
Average	0.825	0.600	0.007	**RainFall**	Inches
Maximum	2.570	1.030	0.026		
Minimum	0.000	0.390	0.000		

10/1/2015 4:08:13 PM

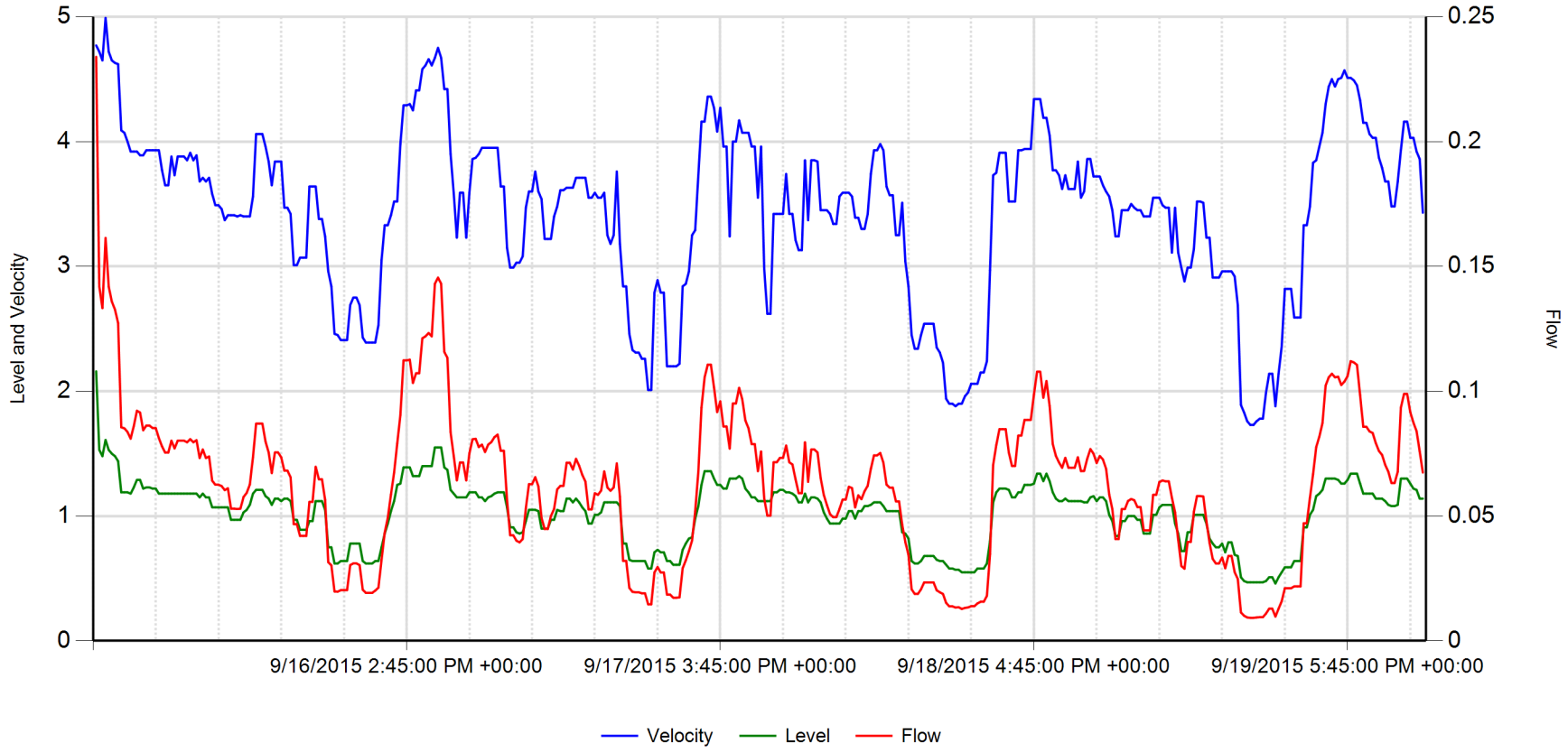
Newport Jamboree



9/15/2015 thru 9/29/2015

10/1/2015 4:08:13 PM

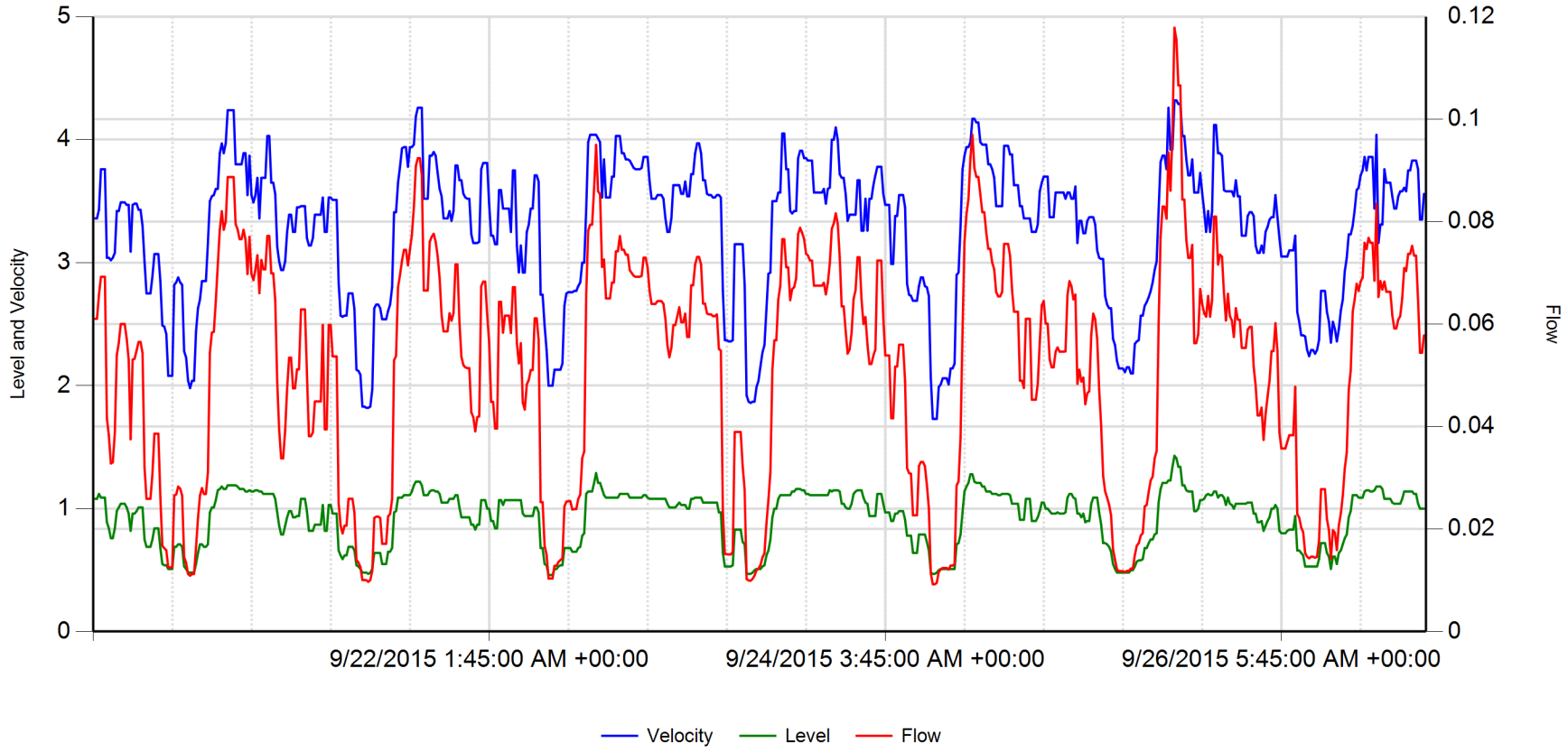
Newport Santa Barbara



	Velocity (fps)	Level (in)	Flow (mgd)		
Average	3.426	1.022	0.062	**RainFall**	Inches
Maximum	4.990	2.160	0.234		
Minimum	1.730	0.460	0.009		

10/1/2015 4:12:11 PM

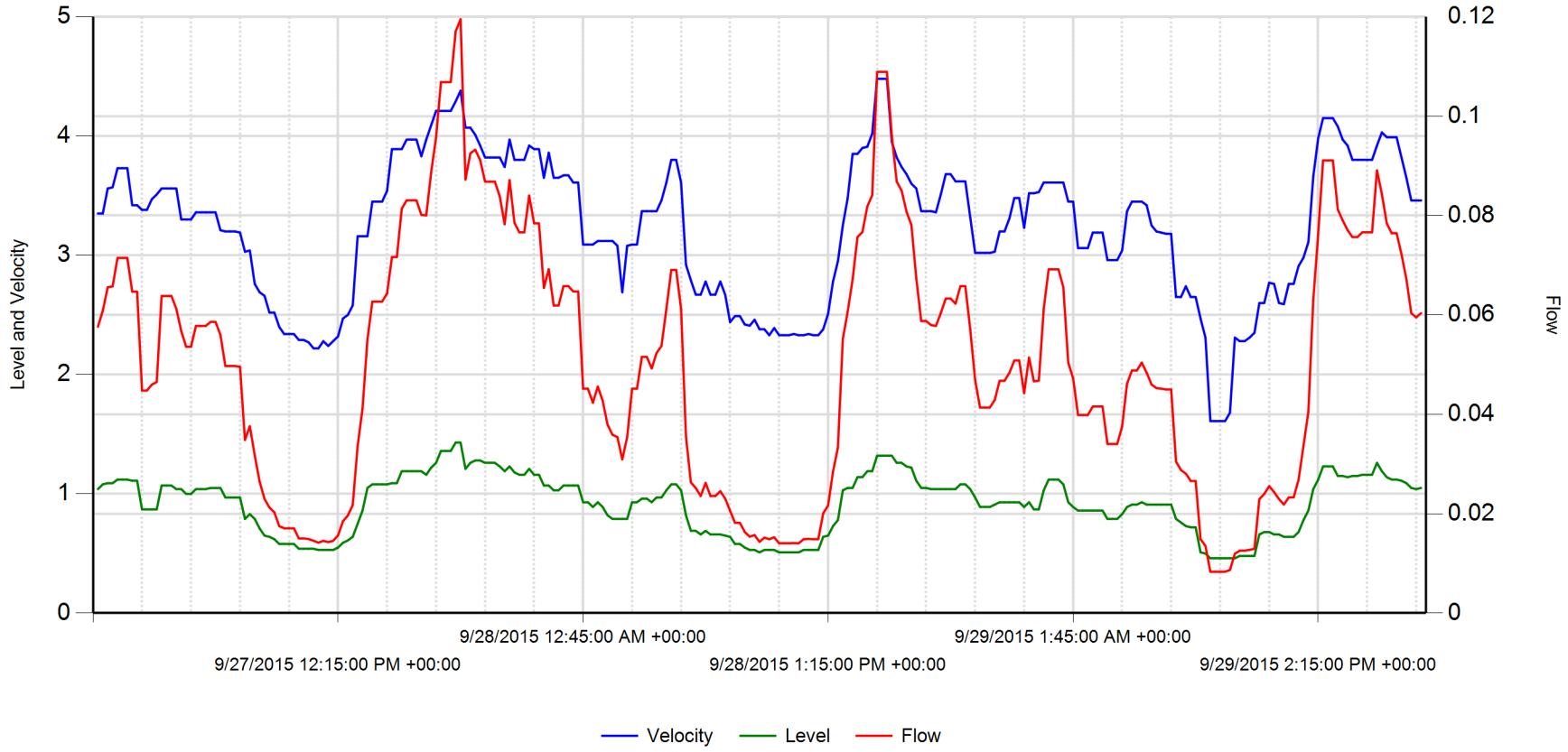
Newport Santa Barbara



	Velocity (fps)	Level (in)	Flow (mgd)		
Average	3.272	0.929	0.051	**RainFall**	Inches
Maximum	4.320	1.430	0.118		
Minimum	1.730	0.460	0.009		

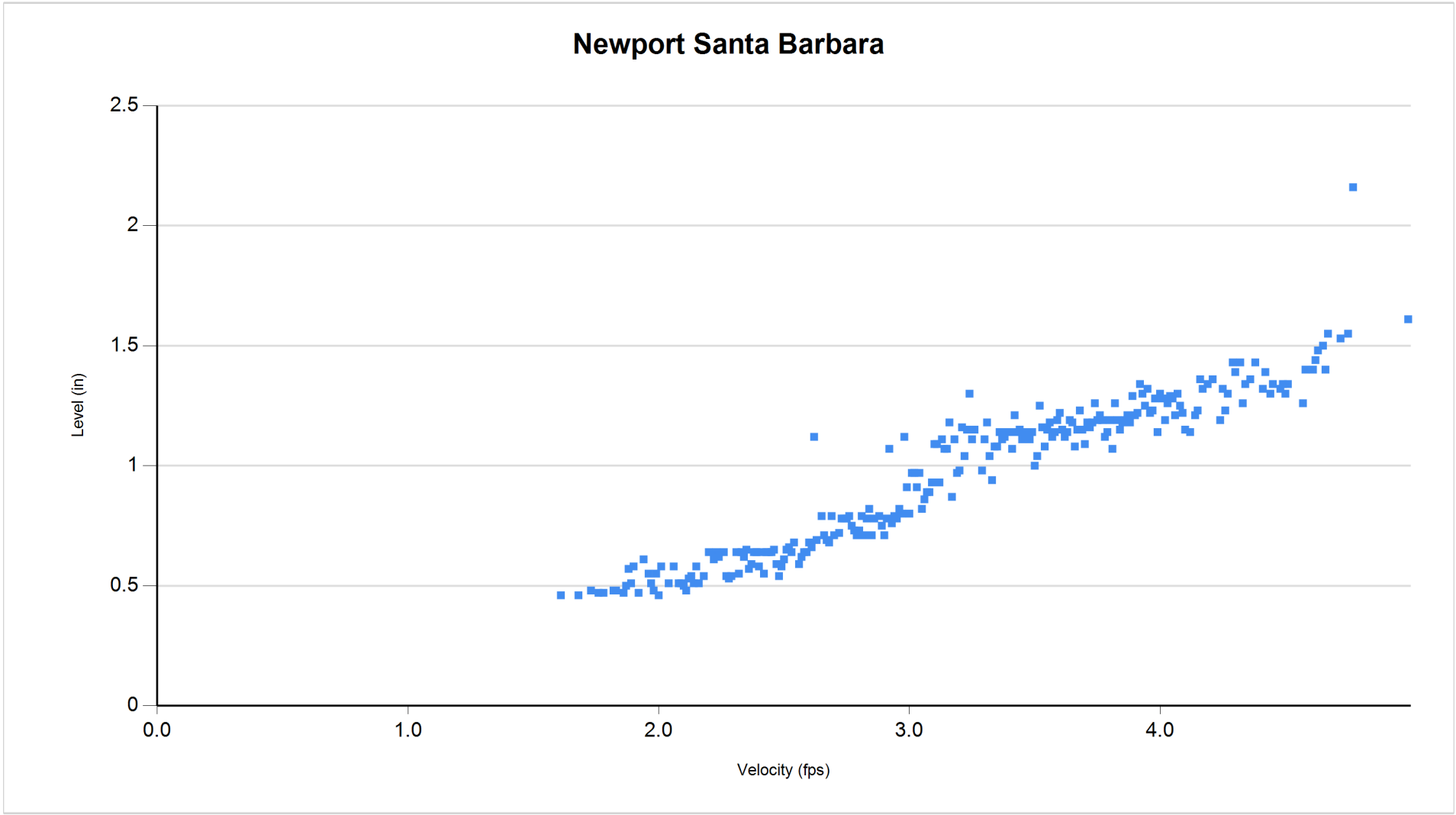
10/1/2015 4:12:11 PM

Newport Santa Barbara



	Velocity (fps)	Level (in)	Flow (mgd)		
Average	3.232	0.917	0.051	**RainFall**	Inches
Maximum	4.480	1.430	0.120		
Minimum	1.610	0.460	0.008		

10/1/2015 4:12:11 PM



9/15/2015 thru 9/29/2015

10/1/2015 4:12:11 PM

Utility Systems Science and Software

Report Date: 10/01/2015
Customer: Fuscoe
Group: Newport Beach
SiteID: 507

Raw Data for Newport Jamboree Site: 09/15/2015 thru 09/29/2015

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/29/2015 12:45	0.72	0.83	0.01	5.79	
09/29/2015 12:30	0.72	0.83	0.01	5.79	
09/29/2015 12:15	0.72	0.85	0.01	5.92	
09/29/2015 12:00	0.82	0.85	0.01	7.17	
09/29/2015 11:45	0.87	1.05	0.01	9.66	
09/29/2015 11:30	1.00	1.05	0.02	11.84	
09/29/2015 11:15	1.00	1.05	0.02	11.84	
09/29/2015 11:00	0.82	0.93	0.01	7.85	
09/29/2015 10:45	1.03	0.93	0.02	10.95	
09/29/2015 10:30	0.54	0.88	0.01	4.01	
09/29/2015 10:15	0.54	0.88	0.01	4.01	
09/29/2015 10:00	0.93	0.94	0.01	9.54	
09/29/2015 09:45	0.93	0.94	0.01	9.54	
09/29/2015 09:30	0.82	0.90	0.01	7.59	
09/29/2015 09:15	0.82	0.90	0.01	7.59	
09/29/2015 09:00	0.82	0.79	0.01	6.67	
09/29/2015 08:45	0.79	0.79	0.01	6.31	
09/29/2015 08:30	0.82	0.88	0.01	7.42	
09/29/2015 08:15	0.75	0.88	0.01	6.51	
09/29/2015 08:00	0.87	1.25	0.02	11.50	
09/29/2015 07:45	0.75	1.25	0.01	9.25	
09/29/2015 07:30	0.75	1.25	0.01	9.25	
09/29/2015 07:15	0.72	0.80	0.01	5.58	
09/29/2015 07:00	0.72	0.77	0.01	5.37	
09/29/2015 06:45	0.72	0.69	0.01	4.81	
09/29/2015 06:30	0.72	0.69	0.01	4.81	
09/29/2015 06:15	0.72	0.77	0.01	5.37	
09/29/2015 06:00	0.54	1.19	0.01	5.43	
09/29/2015 05:45	0.51	1.28	0.01	5.36	
09/29/2015 05:30	0.51	1.28	0.01	5.36	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/29/2015 05:15	0.53	1.30	0.01	5.77	
09/29/2015 05:00	0.51	1.30	0.01	5.45	
09/29/2015 04:45	0.51	1.30	0.01	5.45	
09/29/2015 04:30	0.44	0.85	0.00	2.86	
09/29/2015 04:15	0.44	0.78	0.00	2.63	
09/29/2015 04:00	0.41	0.78	0.00	2.36	
09/29/2015 03:45	0.41	0.78	0.00	2.36	
09/29/2015 03:30	0.43	0.78	0.00	2.54	
09/29/2015 03:15	0.55	0.78	0.01	3.65	
09/29/2015 03:00	0.55	0.80	0.01	3.75	
09/29/2015 02:45	0.58	0.80	0.01	4.05	
09/29/2015 02:30	0.58	0.80	0.01	4.05	
09/29/2015 02:15	0.58	0.80	0.01	4.05	
09/29/2015 02:00	0.58	0.80	0.01	4.05	
09/29/2015 01:45	0.58	0.61	0.00	3.09	
09/29/2015 01:30	0.66	0.60	0.01	3.68	
09/29/2015 01:15	0.66	0.60	0.01	3.68	
09/29/2015 01:00	0.66	0.61	0.01	3.74	
09/29/2015 00:45	0.54	0.78	0.01	3.56	
09/29/2015 00:30	0.54	1.43	0.01	6.52	
09/29/2015 00:15	0.48	1.59	0.01	6.09	
09/29/2015 00:00	0.43	2.57	0.01	8.36	
09/28/2015 23:45	0.43	2.57	0.01	8.36	
09/28/2015 23:30	0.43	2.57	0.01	8.36	
09/28/2015 23:15	0.41	0.76	0.00	2.30	
09/28/2015 23:00	0.44	0.63	0.00	2.12	
09/28/2015 22:45	0.47	0.63	0.00	2.34	
09/28/2015 22:30	0.57	0.76	0.01	3.75	
09/28/2015 22:15	0.59	0.85	0.01	4.42	
09/28/2015 22:00	0.72	0.88	0.01	6.13	
09/28/2015 21:45	0.75	0.88	0.01	6.51	
09/28/2015 21:30	0.72	0.85	0.01	5.92	
09/28/2015 21:15	0.59	0.85	0.01	4.42	
09/28/2015 21:00	0.72	0.85	0.01	5.92	
09/28/2015 20:45	0.55	0.78	0.01	3.65	
09/28/2015 20:30	0.55	0.78	0.01	3.65	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/28/2015 20:15	0.72	0.78	0.01	5.44	
09/28/2015 20:00	0.83	0.74	0.01	6.36	
09/28/2015 19:45	0.72	0.74	0.01	5.16	
09/28/2015 19:30	0.75	0.81	0.01	5.99	
09/28/2015 19:15	0.75	0.74	0.01	5.48	
09/28/2015 19:00	0.64	0.74	0.01	4.34	
09/28/2015 18:45	0.64	0.79	0.01	4.63	
09/28/2015 18:30	0.75	0.79	0.01	5.85	
09/28/2015 18:15	0.51	0.72	0.00	3.02	
09/28/2015 18:00	0.80	0.79	0.01	6.43	
09/28/2015 17:45	0.80	0.79	0.01	6.43	
09/28/2015 17:30	0.78	0.87	0.01	6.82	
09/28/2015 17:15	0.48	0.87	0.00	3.33	
09/28/2015 17:00	0.78	0.89	0.01	6.98	
09/28/2015 16:45	0.78	0.87	0.01	6.82	
09/28/2015 16:30	0.80	0.87	0.01	7.08	
09/28/2015 16:15	0.90	0.86	0.01	8.32	
09/28/2015 16:00	0.90	0.84	0.01	8.12	
09/28/2015 15:45	0.80	0.84	0.01	6.84	
09/28/2015 15:30	0.62	0.81	0.01	4.53	
09/28/2015 15:15	0.62	0.75	0.01	4.19	
09/28/2015 15:00	0.62	0.75	0.01	4.19	
09/28/2015 14:45	0.82	0.70	0.01	5.91	
09/28/2015 14:30	0.87	0.81	0.01	7.45	
09/28/2015 14:15	0.87	0.70	0.01	6.44	
09/28/2015 14:00	0.87	0.81	0.01	7.45	
09/28/2015 13:45	0.84	0.86	0.01	7.52	
09/28/2015 13:30	0.76	0.86	0.01	6.49	
09/28/2015 13:15	0.72	0.77	0.01	5.37	
09/28/2015 13:00	0.54	0.77	0.01	3.51	
09/28/2015 12:45	0.54	0.76	0.00	3.47	
09/28/2015 12:30	0.54	0.76	0.00	3.47	
09/28/2015 12:15	0.55	0.76	0.01	3.56	
09/28/2015 12:00	0.61	0.79	0.01	4.31	
09/28/2015 11:45	0.61	0.81	0.01	4.42	
09/28/2015 11:30	0.61	0.81	0.01	4.42	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/28/2015 11:15	0.76	0.88	0.01	6.64	
09/28/2015 11:00	0.65	0.81	0.01	4.86	
09/28/2015 10:45	0.59	0.81	0.01	4.21	
09/28/2015 10:30	0.59	0.75	0.01	3.90	
09/28/2015 10:15	0.61	0.75	0.01	4.09	
09/28/2015 10:00	0.61	0.75	0.01	4.09	
09/28/2015 09:45	0.61	0.90	0.01	4.91	
09/28/2015 09:30	0.64	0.90	0.01	5.27	
09/28/2015 09:15	0.64	0.90	0.01	5.27	
09/28/2015 09:00	0.80	0.84	0.01	6.84	
09/28/2015 08:45	0.80	0.82	0.01	6.67	
09/28/2015 08:30	0.80	0.79	0.01	6.43	
09/28/2015 08:15	0.61	0.79	0.01	4.31	
09/28/2015 08:00	0.61	0.79	0.01	4.31	
09/28/2015 07:45	0.53	0.86	0.01	3.81	
09/28/2015 07:30	0.53	0.88	0.01	3.90	
09/28/2015 07:15	0.79	0.88	0.01	7.03	
09/28/2015 07:00	0.97	1.01	0.02	10.90	
09/28/2015 06:45	0.97	1.01	0.02	10.90	
09/28/2015 06:30	0.97	1.32	0.02	14.24	
09/28/2015 06:15	0.97	1.65	0.03	17.80	
09/28/2015 06:00	0.72	1.65	0.02	11.50	
09/28/2015 05:45	0.51	1.32	0.01	5.53	
09/28/2015 05:30	0.50	1.32	0.01	5.37	
09/28/2015 05:15	0.46	1.65	0.01	5.93	
09/28/2015 05:00	0.46	0.94	0.00	3.38	
09/28/2015 04:45	0.46	1.05	0.01	3.78	
09/28/2015 04:30	0.46	0.00	0.00	0.00	
09/28/2015 04:15	0.47	0.00	0.00	0.00	
09/28/2015 04:00	0.50	0.55	0.00	2.24	
09/28/2015 03:45	0.50	0.55	0.00	2.24	
09/28/2015 03:30	0.50	0.55	0.00	2.24	
09/28/2015 03:15	0.51	0.57	0.00	2.39	
09/28/2015 03:00	0.69	0.62	0.01	4.06	
09/28/2015 02:45	0.46	0.51	0.00	1.83	
09/28/2015 02:30	0.59	0.62	0.00	3.22	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/28/2015 02:15	0.59	0.68	0.01	3.53	
09/28/2015 02:00	0.44	0.64	0.00	2.15	
09/28/2015 01:45	0.39	0.68	0.00	1.91	
09/28/2015 01:30	0.39	0.79	0.00	2.22	
09/28/2015 01:15	0.39	1.02	0.00	2.87	
09/28/2015 01:00	0.44	1.02	0.00	3.43	
09/28/2015 00:45	0.46	1.05	0.01	3.78	
09/28/2015 00:30	0.46	1.30	0.01	4.67	
09/28/2015 00:15	0.46	1.34	0.01	4.82	
09/28/2015 00:00	0.46	1.34	0.01	4.82	
09/27/2015 23:45	0.46	1.30	0.01	4.67	
09/27/2015 23:30	0.46	0.72	0.00	2.59	
09/27/2015 23:15	0.43	0.67	0.00	2.18	
09/27/2015 23:00	0.43	0.66	0.00	2.15	
09/27/2015 22:45	0.43	0.67	0.00	2.18	
09/27/2015 22:30	0.43	0.66	0.00	2.15	
09/27/2015 22:15	0.43	0.66	0.00	2.15	
09/27/2015 22:00	0.43	0.56	0.00	1.82	
09/27/2015 21:45	0.43	0.56	0.00	1.82	
09/27/2015 21:30	0.43	0.56	0.00	1.82	
09/27/2015 21:15	0.51	0.59	0.00	2.47	
09/27/2015 21:00	0.54	0.71	0.00	3.24	
09/27/2015 20:45	0.69	0.80	0.01	5.24	
09/27/2015 20:30	0.69	0.80	0.01	5.24	
09/27/2015 20:15	0.72	0.81	0.01	5.65	
09/27/2015 20:00	0.69	0.80	0.01	5.24	
09/27/2015 19:45	0.69	0.72	0.01	4.71	
09/27/2015 19:30	0.66	0.65	0.01	3.99	
09/27/2015 19:15	0.58	0.56	0.00	2.84	
09/27/2015 19:00	0.58	0.56	0.00	2.84	
09/27/2015 18:45	0.66	0.65	0.01	3.99	
09/27/2015 18:30	0.66	0.73	0.01	4.48	
09/27/2015 18:15	0.78	0.75	0.01	5.88	
09/27/2015 18:00	0.78	0.80	0.01	6.27	
09/27/2015 17:45	0.55	0.75	0.01	3.51	
09/27/2015 17:30	0.53	0.73	0.00	3.24	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/27/2015 17:15	0.55	0.75	0.01	3.51	
09/27/2015 17:00	0.50	0.75	0.00	3.05	
09/27/2015 16:45	0.44	0.72	0.00	2.42	
09/27/2015 16:30	0.44	0.75	0.00	2.52	
09/27/2015 16:15	0.50	0.76	0.00	3.09	
09/27/2015 16:00	0.44	0.75	0.00	2.52	
09/27/2015 15:45	0.44	0.76	0.00	2.56	
09/27/2015 15:30	0.61	0.79	0.01	4.31	
09/27/2015 15:15	0.61	0.76	0.01	4.15	
09/27/2015 15:00	0.51	0.72	0.00	3.02	
09/27/2015 14:45	0.55	0.78	0.01	3.65	
09/27/2015 14:30	0.51	0.72	0.00	3.02	
09/27/2015 14:15	0.51	0.72	0.00	3.02	
09/27/2015 14:00	0.55	0.74	0.00	3.47	
09/27/2015 13:45	0.61	0.78	0.01	4.26	
09/27/2015 13:30	0.61	0.84	0.01	4.59	
09/27/2015 13:15	0.61	0.84	0.01	4.59	
09/27/2015 13:00	0.61	0.79	0.01	4.31	
09/27/2015 12:45	0.59	0.84	0.01	4.37	
09/27/2015 12:30	0.59	0.80	0.01	4.16	
09/27/2015 12:15	0.59	0.79	0.01	4.11	
09/27/2015 12:00	0.59	0.79	0.01	4.11	
09/27/2015 11:45	0.59	0.77	0.01	4.00	
09/27/2015 11:30	0.59	0.66	0.00	3.43	
09/27/2015 11:15	0.59	0.63	0.00	3.27	
09/27/2015 11:00	0.66	0.66	0.01	4.05	
09/27/2015 10:45	0.65	0.73	0.01	4.38	
09/27/2015 10:30	0.65	0.73	0.01	4.38	
09/27/2015 10:15	0.65	0.73	0.01	4.38	
09/27/2015 10:00	0.65	0.73	0.01	4.38	
09/27/2015 09:45	0.58	0.73	0.01	3.70	
09/27/2015 09:30	0.58	0.80	0.01	4.05	
09/27/2015 09:15	0.58	0.79	0.01	4.00	
09/27/2015 09:00	0.61	0.83	0.01	4.53	
09/27/2015 08:45	0.61	0.83	0.01	4.53	
09/27/2015 08:30	0.61	0.79	0.01	4.31	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/27/2015 08:15	0.58	0.74	0.01	3.75	
09/27/2015 08:00	0.58	0.74	0.01	3.75	
09/27/2015 07:45	0.58	0.72	0.01	3.65	
09/27/2015 07:30	0.58	0.72	0.01	3.65	
09/27/2015 07:15	0.59	0.54	0.00	2.81	
09/27/2015 07:00	0.65	0.54	0.00	3.24	
09/27/2015 06:45	0.65	0.54	0.00	3.24	
09/27/2015 06:30	0.66	0.88	0.01	5.40	
09/27/2015 06:15	0.76	0.88	0.01	6.64	
09/27/2015 06:00	0.76	0.88	0.01	6.64	
09/27/2015 05:45	0.75	0.87	0.01	6.44	
09/27/2015 05:30	0.66	0.86	0.01	5.27	
09/27/2015 05:15	0.53	0.55	0.00	2.44	
09/27/2015 05:00	0.46	0.55	0.00	1.98	
09/27/2015 04:45	0.43	0.55	0.00	1.79	
09/27/2015 04:30	0.43	0.55	0.00	1.79	
09/27/2015 04:15	0.46	0.99	0.01	3.56	
09/27/2015 04:00	0.46	0.99	0.01	3.56	
09/27/2015 03:45	0.46	0.99	0.01	3.56	
09/27/2015 03:30	0.46	0.89	0.00	3.20	
09/27/2015 03:15	0.47	0.89	0.00	3.30	
09/27/2015 03:00	0.46	0.78	0.00	2.80	
09/27/2015 02:45	0.44	0.76	0.00	2.56	
09/27/2015 02:30	0.43	0.69	0.00	2.25	
09/27/2015 02:15	0.46	0.71	0.00	2.55	
09/27/2015 02:00	0.44	0.66	0.00	2.22	
09/27/2015 01:45	0.44	0.63	0.00	2.12	
09/27/2015 01:30	0.46	0.66	0.00	2.37	
09/27/2015 01:15	0.46	0.59	0.00	2.12	
09/27/2015 01:00	0.48	0.59	0.00	2.26	
09/27/2015 00:45	0.48	0.59	0.00	2.26	
09/27/2015 00:30	0.46	0.62	0.00	2.23	
09/27/2015 00:15	0.43	0.62	0.00	2.02	
09/27/2015 00:00	0.43	0.70	0.00	2.28	
09/26/2015 23:45	0.43	0.72	0.00	2.34	
09/26/2015 23:30	0.43	0.72	0.00	2.34	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/26/2015 23:15	0.43	0.70	0.00	2.28	
09/26/2015 23:00	0.46	0.69	0.00	2.48	
09/26/2015 22:45	0.46	0.69	0.00	2.48	
09/26/2015 22:30	0.48	0.58	0.00	2.22	
09/26/2015 22:15	0.48	0.58	0.00	2.22	
09/26/2015 22:00	0.48	0.65	0.00	2.49	
09/26/2015 21:45	0.48	0.65	0.00	2.49	
09/26/2015 21:30	0.50	0.65	0.00	2.64	
09/26/2015 21:15	0.53	0.65	0.00	2.88	
09/26/2015 21:00	0.53	0.67	0.00	2.97	
09/26/2015 20:45	0.53	0.67	0.00	2.97	
09/26/2015 20:30	0.72	0.67	0.01	4.67	
09/26/2015 20:15	0.53	0.72	0.00	3.19	
09/26/2015 20:00	0.50	0.82	0.00	3.34	
09/26/2015 19:45	0.47	0.83	0.00	3.08	
09/26/2015 19:30	0.50	0.85	0.00	3.46	
09/26/2015 19:15	0.50	0.85	0.00	3.46	
09/26/2015 19:00	0.58	1.26	0.01	6.38	
09/26/2015 18:45	0.58	0.85	0.01	4.31	
09/26/2015 18:30	0.58	0.69	0.01	3.50	
09/26/2015 18:15	0.51	0.68	0.00	2.85	
09/26/2015 18:00	0.50	0.66	0.00	2.69	
09/26/2015 17:45	0.50	0.66	0.00	2.69	
09/26/2015 17:30	0.51	0.68	0.00	2.85	
09/26/2015 17:15	0.51	0.66	0.00	2.77	
09/26/2015 17:00	0.80	0.72	0.01	5.86	
09/26/2015 16:45	0.80	0.72	0.01	5.86	
09/26/2015 16:30	0.53	0.46	0.00	2.04	
09/26/2015 16:15	0.53	0.46	0.00	2.04	
09/26/2015 16:00	0.53	0.54	0.00	2.39	
09/26/2015 15:45	0.46	0.54	0.00	1.94	
09/26/2015 15:30	0.46	0.54	0.00	1.94	
09/26/2015 15:15	0.46	0.54	0.00	1.94	
09/26/2015 15:00	0.46	0.54	0.00	1.94	
09/26/2015 14:45	0.51	0.72	0.00	3.02	
09/26/2015 14:30	0.51	0.77	0.00	3.23	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/26/2015 14:15	0.51	0.77	0.00	3.23	
09/26/2015 14:00	0.47	0.72	0.00	2.67	
09/26/2015 13:45	0.47	0.72	0.00	2.67	
09/26/2015 13:30	0.44	0.51	0.00	1.72	
09/26/2015 13:15	0.47	0.51	0.00	1.89	
09/26/2015 13:00	0.55	0.54	0.00	2.53	
09/26/2015 12:45	0.55	0.56	0.00	2.62	
09/26/2015 12:30	0.53	0.56	0.00	2.48	
09/26/2015 12:15	0.55	0.66	0.00	3.09	
09/26/2015 12:00	0.57	0.77	0.01	3.80	
09/26/2015 11:45	0.57	0.77	0.01	3.80	
09/26/2015 11:30	0.57	0.95	0.01	4.69	
09/26/2015 11:15	0.57	0.95	0.01	4.69	
09/26/2015 11:00	0.50	0.95	0.01	3.87	
09/26/2015 10:45	0.50	0.73	0.00	2.97	
09/26/2015 10:30	0.50	0.73	0.00	2.97	
09/26/2015 10:15	0.50	0.64	0.00	2.60	
09/26/2015 10:00	0.54	0.64	0.00	2.92	
09/26/2015 09:45	0.61	0.64	0.01	3.49	
09/26/2015 09:30	0.61	0.64	0.01	3.49	
09/26/2015 09:15	0.61	0.81	0.01	4.42	
09/26/2015 09:00	0.61	0.96	0.01	5.24	
09/26/2015 08:45	0.59	0.81	0.01	4.21	
09/26/2015 08:30	0.50	0.95	0.01	3.87	
09/26/2015 08:15	0.48	0.96	0.01	3.68	
09/26/2015 08:00	0.48	0.95	0.01	3.64	
09/26/2015 07:45	0.47	0.95	0.01	3.53	
09/26/2015 07:30	0.48	1.07	0.01	4.10	
09/26/2015 07:15	0.48	1.07	0.01	4.10	
09/26/2015 07:00	0.48	0.85	0.00	3.26	
09/26/2015 06:45	0.48	0.95	0.01	3.64	
09/26/2015 06:30	0.69	0.86	0.01	5.63	
09/26/2015 06:15	0.69	0.86	0.01	5.63	
09/26/2015 06:00	0.69	0.95	0.01	6.22	
09/26/2015 05:45	0.44	0.95	0.00	3.20	
09/26/2015 05:30	0.44	0.86	0.00	2.90	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/26/2015 05:15	0.44	0.82	0.00	2.76	
09/26/2015 05:00	0.44	0.72	0.00	2.42	
09/26/2015 04:45	0.53	0.72	0.00	3.19	
09/26/2015 04:30	0.53	0.72	0.00	3.19	
09/26/2015 04:15	0.54	0.61	0.00	2.78	
09/26/2015 04:00	0.58	0.61	0.00	3.09	
09/26/2015 03:45	0.58	0.61	0.00	3.09	
09/26/2015 03:30	0.54	0.61	0.00	2.78	
09/26/2015 03:15	0.54	0.81	0.01	3.69	
09/26/2015 03:00	0.44	0.81	0.00	2.73	
09/26/2015 02:45	0.44	0.76	0.00	2.56	
09/26/2015 02:30	0.44	0.76	0.00	2.56	
09/26/2015 02:15	0.44	0.76	0.00	2.56	
09/26/2015 02:00	0.44	0.69	0.00	2.32	
09/26/2015 01:45	0.44	0.66	0.00	2.22	
09/26/2015 01:30	0.44	0.66	0.00	2.22	
09/26/2015 01:15	0.48	0.75	0.00	2.87	
09/26/2015 01:00	0.46	0.75	0.00	2.70	
09/26/2015 00:45	0.46	1.13	0.01	4.06	
09/26/2015 00:30	0.46	1.13	0.01	4.06	
09/26/2015 00:15	0.46	1.13	0.01	4.06	
09/26/2015 00:00	0.44	1.13	0.01	3.80	
09/25/2015 23:45	0.44	0.92	0.00	3.10	
09/25/2015 23:30	0.44	0.90	0.00	3.03	
09/25/2015 23:15	0.46	0.75	0.00	2.70	
09/25/2015 23:00	0.46	0.74	0.00	2.66	
09/25/2015 22:45	0.61	0.74	0.01	4.04	
09/25/2015 22:30	0.62	0.75	0.01	4.19	
09/25/2015 22:15	0.62	0.77	0.01	4.31	
09/25/2015 22:00	0.62	0.77	0.01	4.31	
09/25/2015 21:45	0.46	1.11	0.01	3.99	
09/25/2015 21:30	0.46	1.11	0.01	3.99	
09/25/2015 21:15	0.46	1.11	0.01	3.99	
09/25/2015 21:00	0.62	0.91	0.01	5.09	
09/25/2015 20:45	0.62	0.91	0.01	5.09	
09/25/2015 20:30	0.80	0.90	0.01	7.32	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/25/2015 20:15	0.89	0.91	0.01	8.66	
09/25/2015 20:00	0.80	0.91	0.01	7.40	
09/25/2015 19:45	0.53	0.90	0.01	3.99	
09/25/2015 19:30	0.62	0.89	0.01	4.98	
09/25/2015 19:15	0.62	0.89	0.01	4.98	
09/25/2015 19:00	0.53	0.89	0.01	3.95	
09/25/2015 18:45	0.62	0.89	0.01	4.98	
09/25/2015 18:30	0.62	0.90	0.01	5.03	
09/25/2015 18:15	0.62	0.90	0.01	5.03	
09/25/2015 18:00	0.68	0.92	0.01	5.89	
09/25/2015 17:45	0.68	0.78	0.01	5.00	
09/25/2015 17:30	0.58	0.60	0.00	3.04	
09/25/2015 17:15	0.55	0.56	0.00	2.62	
09/25/2015 17:00	0.58	0.56	0.00	2.84	
09/25/2015 16:45	0.58	0.56	0.00	2.84	
09/25/2015 16:30	0.58	0.60	0.00	3.04	
09/25/2015 16:15	0.58	0.60	0.00	3.04	
09/25/2015 16:00	0.58	0.84	0.01	4.26	
09/25/2015 15:45	0.61	0.86	0.01	4.69	
09/25/2015 15:30	0.58	0.84	0.01	4.26	
09/25/2015 15:15	0.54	0.80	0.01	3.65	
09/25/2015 15:00	0.51	0.81	0.00	3.39	
09/25/2015 14:45	0.50	0.80	0.00	3.25	
09/25/2015 14:30	0.50	0.80	0.00	3.25	
09/25/2015 14:15	0.51	0.79	0.00	3.31	
09/25/2015 14:00	0.54	0.81	0.01	3.69	
09/25/2015 13:45	0.58	0.79	0.01	4.00	
09/25/2015 13:30	0.59	0.77	0.01	4.00	
09/25/2015 13:15	0.66	0.77	0.01	4.72	
09/25/2015 13:00	0.71	0.78	0.01	5.33	
09/25/2015 12:45	0.71	0.78	0.01	5.33	
09/25/2015 12:30	0.71	0.78	0.01	5.33	
09/25/2015 12:15	0.75	0.84	0.01	6.22	
09/25/2015 12:00	0.75	0.84	0.01	6.22	
09/25/2015 11:45	0.75	0.84	0.01	6.22	
09/25/2015 11:30	0.68	0.87	0.01	5.57	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/25/2015 11:15	0.68	0.91	0.01	5.83	
09/25/2015 11:00	0.68	0.95	0.01	6.09	
09/25/2015 10:45	0.91	0.95	0.01	9.34	
09/25/2015 10:30	0.64	0.87	0.01	5.10	
09/25/2015 10:15	0.80	0.82	0.01	6.67	
09/25/2015 10:00	0.91	0.82	0.01	8.06	
09/25/2015 09:45	0.80	0.80	0.01	6.51	
09/25/2015 09:30	0.80	0.80	0.01	6.51	
09/25/2015 09:15	0.80	0.91	0.01	7.40	
09/25/2015 09:00	0.64	0.91	0.01	5.33	
09/25/2015 08:45	0.61	0.86	0.01	4.69	
09/25/2015 08:30	0.61	0.92	0.01	5.02	
09/25/2015 08:15	0.61	0.92	0.01	5.02	
09/25/2015 08:00	0.83	0.86	0.01	7.39	
09/25/2015 07:45	0.83	0.81	0.01	6.96	
09/25/2015 07:30	0.83	0.74	0.01	6.36	
09/25/2015 07:15	0.80	0.74	0.01	6.02	
09/25/2015 07:00	0.79	0.74	0.01	5.91	
09/25/2015 06:45	0.79	0.93	0.01	7.43	
09/25/2015 06:30	0.71	0.93	0.01	6.35	
09/25/2015 06:15	0.57	1.25	0.01	6.17	
09/25/2015 06:00	0.57	0.93	0.01	4.59	
09/25/2015 05:45	0.43	0.93	0.00	3.03	
09/25/2015 05:30	0.43	1.29	0.01	4.20	
09/25/2015 05:15	0.43	1.44	0.01	4.69	
09/25/2015 05:00	0.44	1.49	0.01	5.02	
09/25/2015 04:45	0.44	1.49	0.01	5.02	
09/25/2015 04:30	0.47	1.49	0.01	5.53	
09/25/2015 04:15	0.47	1.01	0.01	3.75	
09/25/2015 04:00	0.47	0.98	0.01	3.64	
09/25/2015 03:45	0.47	0.75	0.00	2.78	
09/25/2015 03:30	0.47	0.80	0.00	2.97	
09/25/2015 03:15	0.47	0.75	0.00	2.78	
09/25/2015 03:00	0.47	0.75	0.00	2.78	
09/25/2015 02:45	0.47	0.75	0.00	2.78	
09/25/2015 02:30	0.46	0.56	0.00	2.01	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/25/2015 02:15	0.46	0.54	0.00	1.94	
09/25/2015 02:00	0.46	0.51	0.00	1.83	
09/25/2015 01:45	0.46	0.51	0.00	1.83	
09/25/2015 01:30	0.46	0.54	0.00	1.94	
09/25/2015 01:15	0.43	0.54	0.00	1.76	
09/25/2015 01:00	0.43	0.55	0.00	1.79	
09/25/2015 00:45	0.43	0.55	0.00	1.79	
09/25/2015 00:30	0.43	0.55	0.00	1.79	
09/25/2015 00:15	0.43	0.84	0.00	2.73	
09/25/2015 00:00	0.43	0.87	0.00	2.83	
09/24/2015 23:45	0.43	0.87	0.00	2.83	
09/24/2015 23:30	0.43	0.84	0.00	2.73	
09/24/2015 23:15	0.43	0.80	0.00	2.60	
09/24/2015 23:00	0.43	0.80	0.00	2.60	
09/24/2015 22:45	0.43	0.80	0.00	2.60	
09/24/2015 22:30	0.47	0.80	0.00	2.97	
09/24/2015 22:15	0.47	0.80	0.00	2.97	
09/24/2015 22:00	0.48	0.72	0.00	2.76	
09/24/2015 21:45	0.53	0.72	0.00	3.19	
09/24/2015 21:30	0.55	0.72	0.00	3.37	
09/24/2015 21:15	0.72	0.72	0.01	5.02	
09/24/2015 21:00	0.72	0.69	0.01	4.81	
09/24/2015 20:45	0.78	0.83	0.01	6.51	
09/24/2015 20:30	0.78	0.80	0.01	6.27	
09/24/2015 20:15	0.78	0.69	0.01	5.41	
09/24/2015 20:00	0.57	0.69	0.00	3.41	
09/24/2015 19:45	0.78	0.80	0.01	6.27	
09/24/2015 19:30	0.69	0.80	0.01	5.24	
09/24/2015 19:15	0.65	0.75	0.01	4.50	
09/24/2015 19:00	0.69	0.80	0.01	5.24	
09/24/2015 18:45	0.69	0.80	0.01	5.24	
09/24/2015 18:30	0.69	0.80	0.01	5.24	
09/24/2015 18:15	0.76	0.87	0.01	6.57	
09/24/2015 18:00	0.76	0.87	0.01	6.57	
09/24/2015 17:45	0.59	0.70	0.01	3.64	
09/24/2015 17:30	0.94	0.87	0.01	8.97	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/24/2015 17:15	0.90	0.90	0.01	8.70	
09/24/2015 17:00	0.90	0.90	0.01	8.70	
09/24/2015 16:45	0.90	0.99	0.01	9.57	
09/24/2015 16:30	0.90	0.99	0.01	9.57	
09/24/2015 16:15	0.89	0.90	0.01	8.56	
09/24/2015 16:00	0.89	0.83	0.01	7.90	
09/24/2015 15:45	0.87	0.82	0.01	7.55	
09/24/2015 15:30	0.89	0.82	0.01	7.80	
09/24/2015 15:15	0.94	0.83	0.01	8.55	
09/24/2015 15:00	0.94	0.82	0.01	8.45	
09/24/2015 14:45	0.93	0.82	0.01	8.32	
09/24/2015 14:30	0.93	0.82	0.01	8.32	
09/24/2015 14:15	0.73	0.72	0.01	5.12	
09/24/2015 14:00	0.73	0.72	0.01	5.12	
09/24/2015 13:45	0.73	0.72	0.01	5.12	
09/24/2015 13:30	0.80	0.72	0.01	5.86	
09/24/2015 13:15	0.97	0.88	0.01	9.49	
09/24/2015 13:00	0.97	0.88	0.01	9.49	
09/24/2015 12:45	1.15	0.88	0.02	12.17	
09/24/2015 12:30	1.15	1.32	0.03	18.25	
09/24/2015 12:15	0.97	0.92	0.01	9.93	
09/24/2015 12:00	0.80	0.92	0.01	7.49	
09/24/2015 11:45	0.87	0.92	0.01	8.47	
09/24/2015 11:30	0.80	0.92	0.01	7.49	
09/24/2015 11:15	0.79	0.87	0.01	6.95	
09/24/2015 11:00	0.78	0.84	0.01	6.59	
09/24/2015 10:45	0.71	0.73	0.01	4.98	
09/24/2015 10:30	0.62	0.62	0.00	3.47	
09/24/2015 10:15	0.69	0.59	0.01	3.86	
09/24/2015 10:00	0.69	0.59	0.01	3.86	
09/24/2015 09:45	0.69	0.59	0.01	3.86	
09/24/2015 09:30	0.69	0.79	0.01	5.17	
09/24/2015 09:15	0.73	0.81	0.01	5.76	
09/24/2015 09:00	0.86	0.83	0.01	7.51	
09/24/2015 08:45	0.83	0.81	0.01	6.96	
09/24/2015 08:30	0.83	0.81	0.01	6.96	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/24/2015 08:15	0.83	0.81	0.01	6.96	
09/24/2015 08:00	0.83	0.81	0.01	6.96	
09/24/2015 07:45	0.83	0.81	0.01	6.96	
09/24/2015 07:30	0.96	0.81	0.01	8.61	
09/24/2015 07:15	1.05	0.81	0.01	9.81	
09/24/2015 07:00	1.05	0.81	0.01	9.81	
09/24/2015 06:45	1.05	0.81	0.01	9.81	
09/24/2015 06:30	1.00	0.76	0.01	8.57	
09/24/2015 06:15	1.00	0.81	0.01	9.14	
09/24/2015 06:00	0.57	1.05	0.01	5.19	
09/24/2015 05:45	0.47	1.15	0.01	4.27	
09/24/2015 05:30	0.47	1.05	0.01	3.90	
09/24/2015 05:15	0.47	1.05	0.01	3.90	
09/24/2015 05:00	0.47	0.89	0.00	3.30	
09/24/2015 04:45	0.47	0.63	0.00	2.34	
09/24/2015 04:30	0.47	0.63	0.00	2.34	
09/24/2015 04:15	0.46	0.84	0.00	3.02	
09/24/2015 04:00	0.46	0.84	0.00	3.02	
09/24/2015 03:45	0.46	0.84	0.00	3.02	
09/24/2015 03:30	0.46	0.93	0.00	3.34	
09/24/2015 03:15	0.46	0.93	0.00	3.34	
09/24/2015 03:00	0.46	0.94	0.00	3.38	
09/24/2015 02:45	0.47	0.77	0.00	2.86	
09/24/2015 02:30	0.47	0.77	0.00	2.86	
09/24/2015 02:15	0.46	0.59	0.00	2.12	
09/24/2015 02:00	0.46	0.53	0.00	1.91	
09/24/2015 01:45	0.46	0.47	0.00	1.69	
09/24/2015 01:30	0.46	0.47	0.00	1.69	
09/24/2015 01:15	0.46	0.47	0.00	1.69	
09/24/2015 01:00	0.46	0.63	0.00	2.27	
09/24/2015 00:45	0.46	0.63	0.00	2.27	
09/24/2015 00:30	0.46	0.63	0.00	2.27	
09/24/2015 00:15	0.46	0.50	0.00	1.80	
09/24/2015 00:00	0.46	0.50	0.00	1.80	
09/23/2015 23:45	0.44	0.50	0.00	1.68	
09/23/2015 23:30	0.41	0.60	0.00	1.82	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/23/2015 23:15	0.41	1.78	0.01	5.40	
09/23/2015 23:00	0.41	1.78	0.01	5.40	
09/23/2015 22:45	0.41	1.78	0.01	5.40	
09/23/2015 22:30	0.41	0.92	0.00	2.79	
09/23/2015 22:15	0.43	0.92	0.00	2.99	
09/23/2015 22:00	0.46	0.85	0.00	3.06	
09/23/2015 21:45	0.46	0.85	0.00	3.06	
09/23/2015 21:30	0.66	0.83	0.01	5.09	
09/23/2015 21:15	0.71	0.83	0.01	5.67	
09/23/2015 21:00	0.82	0.83	0.01	7.00	
09/23/2015 20:45	0.91	0.85	0.01	8.35	
09/23/2015 20:30	0.82	0.79	0.01	6.67	
09/23/2015 20:15	0.82	0.79	0.01	6.67	
09/23/2015 20:00	0.84	0.79	0.01	6.91	
09/23/2015 19:45	0.72	0.79	0.01	5.51	
09/23/2015 19:30	0.72	0.79	0.01	5.51	
09/23/2015 19:15	0.84	0.77	0.01	6.73	
09/23/2015 19:00	0.87	0.79	0.01	7.27	
09/23/2015 18:45	0.87	0.98	0.01	9.02	
09/23/2015 18:30	1.12	0.77	0.01	10.24	
09/23/2015 18:15	1.04	0.77	0.01	9.20	
09/23/2015 18:00	1.12	0.75	0.01	9.98	
09/23/2015 17:45	1.08	0.75	0.01	9.46	
09/23/2015 17:30	1.08	0.73	0.01	9.21	
09/23/2015 17:15	1.04	0.69	0.01	8.24	
09/23/2015 17:00	1.08	0.73	0.01	9.21	
09/23/2015 16:45	1.00	0.66	0.01	7.45	
09/23/2015 16:30	1.00	0.66	0.01	7.45	
09/23/2015 16:15	1.00	0.81	0.01	9.14	
09/23/2015 16:00	0.84	0.81	0.01	7.08	
09/23/2015 15:45	0.84	0.76	0.01	6.64	
09/23/2015 15:30	0.90	0.81	0.01	7.83	
09/23/2015 15:15	0.84	0.76	0.01	6.64	
09/23/2015 15:00	0.90	0.76	0.01	7.35	
09/23/2015 14:45	0.91	0.86	0.01	8.45	
09/23/2015 14:30	0.91	0.92	0.01	9.04	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/23/2015 14:15	0.91	0.86	0.01	8.45	
09/23/2015 14:00	0.96	0.91	0.01	9.67	
09/23/2015 13:45	0.91	0.87	0.01	8.55	
09/23/2015 13:30	0.75	0.87	0.01	6.44	
09/23/2015 13:15	0.75	0.87	0.01	6.44	
09/23/2015 13:00	0.96	0.87	0.01	9.25	
09/23/2015 12:45	0.80	0.78	0.01	6.35	
09/23/2015 12:30	1.05	0.74	0.01	8.96	
09/23/2015 12:15	1.11	0.74	0.01	9.72	
09/23/2015 12:00	1.05	0.74	0.01	8.96	
09/23/2015 11:45	1.05	0.78	0.01	9.45	
09/23/2015 11:30	1.08	0.83	0.02	10.47	
09/23/2015 11:15	1.08	0.83	0.02	10.47	
09/23/2015 11:00	0.78	0.83	0.01	6.51	
09/23/2015 10:45	0.78	0.83	0.01	6.51	
09/23/2015 10:30	0.78	0.82	0.01	6.43	
09/23/2015 10:15	0.78	0.82	0.01	6.43	
09/23/2015 10:00	0.80	0.82	0.01	6.67	
09/23/2015 09:45	0.86	0.83	0.01	7.51	
09/23/2015 09:30	0.86	0.83	0.01	7.51	
09/23/2015 09:15	0.94	0.83	0.01	8.55	
09/23/2015 09:00	0.93	0.83	0.01	8.42	
09/23/2015 08:45	0.93	0.89	0.01	9.03	
09/23/2015 08:30	0.93	0.89	0.01	9.03	
09/23/2015 08:15	0.93	0.89	0.01	9.03	
09/23/2015 08:00	0.93	0.89	0.01	9.03	
09/23/2015 07:45	0.87	0.89	0.01	8.19	
09/23/2015 07:30	0.87	0.83	0.01	7.64	
09/23/2015 07:15	0.87	0.83	0.01	7.64	
09/23/2015 07:00	0.84	0.82	0.01	7.17	
09/23/2015 06:45	0.87	0.73	0.01	6.72	
09/23/2015 06:30	0.80	0.73	0.01	5.94	
09/23/2015 06:15	0.80	0.73	0.01	5.94	
09/23/2015 06:00	0.66	0.82	0.01	5.03	
09/23/2015 05:45	0.55	0.72	0.00	3.37	
09/23/2015 05:30	0.55	0.91	0.01	4.26	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/23/2015 05:15	0.44	0.00	0.00	0.00	
09/23/2015 05:00	0.44	0.00	0.00	0.00	
09/23/2015 04:45	0.44	0.37	0.00	1.25	
09/23/2015 04:30	0.44	0.37	0.00	1.25	
09/23/2015 04:15	0.44	0.37	0.00	1.25	
09/23/2015 04:00	0.46	0.51	0.00	1.83	
09/23/2015 03:45	0.46	0.83	0.00	2.98	
09/23/2015 03:30	0.47	0.83	0.00	3.08	
09/23/2015 03:15	0.47	1.42	0.01	5.27	
09/23/2015 03:00	0.47	1.42	0.01	5.27	
09/23/2015 02:45	0.44	1.42	0.01	4.78	
09/23/2015 02:30	0.41	1.22	0.01	3.70	
09/23/2015 02:15	0.41	1.22	0.01	3.70	
09/23/2015 02:00	0.41	1.22	0.01	3.70	
09/23/2015 01:45	0.43	1.24	0.01	4.03	
09/23/2015 01:30	0.43	1.27	0.01	4.13	
09/23/2015 01:15	0.44	1.27	0.01	4.28	
09/23/2015 01:00	0.46	1.24	0.01	4.46	
09/23/2015 00:45	0.46	1.28	0.01	4.60	
09/23/2015 00:30	0.44	1.28	0.01	4.31	
09/23/2015 00:15	0.41	1.22	0.01	3.70	
09/23/2015 00:00	0.41	1.28	0.01	3.88	
09/22/2015 23:45	0.41	1.28	0.01	3.88	
09/22/2015 23:30	0.44	1.22	0.01	4.11	
09/22/2015 23:15	0.55	0.82	0.01	3.84	
09/22/2015 23:00	0.59	0.82	0.01	4.26	
09/22/2015 22:45	0.59	0.82	0.01	4.26	
09/22/2015 22:30	0.55	0.82	0.01	3.84	
09/22/2015 22:15	0.55	0.58	0.00	2.72	
09/22/2015 22:00	0.55	0.58	0.00	2.72	
09/22/2015 21:45	0.55	0.58	0.00	2.72	
09/22/2015 21:30	0.66	0.58	0.01	3.56	
09/22/2015 21:15	0.68	0.82	0.01	5.25	
09/22/2015 21:00	0.73	0.82	0.01	5.83	
09/22/2015 20:45	0.73	0.82	0.01	5.83	
09/22/2015 20:30	0.73	0.75	0.01	5.33	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/22/2015 20:15	0.73	0.54	0.01	3.84	
09/22/2015 20:00	0.73	0.54	0.01	3.84	
09/22/2015 19:45	0.73	0.75	0.01	5.33	
09/22/2015 19:30	0.78	0.77	0.01	6.04	
09/22/2015 19:15	0.78	0.81	0.01	6.35	
09/22/2015 19:00	0.71	0.88	0.01	6.01	
09/22/2015 18:45	0.59	0.88	0.01	4.57	
09/22/2015 18:30	0.59	0.81	0.01	4.21	
09/22/2015 18:15	0.59	0.88	0.01	4.57	
09/22/2015 18:00	0.59	0.68	0.01	3.53	
09/22/2015 17:45	0.61	0.68	0.01	3.71	
09/22/2015 17:30	0.75	0.88	0.01	6.51	
09/22/2015 17:15	0.75	0.88	0.01	6.51	
09/22/2015 17:00	0.75	0.89	0.01	6.59	
09/22/2015 16:45	0.75	0.89	0.01	6.59	
09/22/2015 16:30	0.68	0.81	0.01	5.19	
09/22/2015 16:15	0.68	0.77	0.01	4.93	
09/22/2015 16:00	0.68	0.69	0.01	4.42	
09/22/2015 15:45	0.68	0.69	0.01	4.42	
09/22/2015 15:30	0.65	0.69	0.01	4.14	
09/22/2015 15:15	0.65	0.67	0.01	4.02	
09/22/2015 15:00	0.65	0.67	0.01	4.02	
09/22/2015 14:45	0.65	0.75	0.01	4.50	
09/22/2015 14:30	0.66	0.75	0.01	4.60	
09/22/2015 14:15	0.75	0.75	0.01	5.55	
09/22/2015 14:00	0.75	0.80	0.01	5.92	
09/22/2015 13:45	0.75	0.80	0.01	5.92	
09/22/2015 13:30	0.75	0.80	0.01	5.92	
09/22/2015 13:15	0.53	0.80	0.01	3.55	
09/22/2015 13:00	0.53	0.80	0.01	3.55	
09/22/2015 12:45	0.53	0.80	0.01	3.55	
09/22/2015 12:30	0.53	0.69	0.00	3.06	
09/22/2015 12:15	0.55	0.69	0.00	3.23	
09/22/2015 12:00	0.57	0.69	0.00	3.41	
09/22/2015 11:45	0.79	0.82	0.01	6.55	
09/22/2015 11:30	0.82	0.82	0.01	6.92	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/22/2015 11:15	0.84	0.84	0.01	7.34	
09/22/2015 11:00	0.84	0.92	0.01	8.04	
09/22/2015 10:45	0.82	0.95	0.01	8.02	
09/22/2015 10:30	0.78	0.95	0.01	7.45	
09/22/2015 10:15	0.78	0.95	0.01	7.45	
09/22/2015 10:00	0.78	0.95	0.01	7.45	
09/22/2015 09:45	0.90	0.80	0.01	7.74	
09/22/2015 09:30	1.73	0.70	0.03	17.42	
09/22/2015 09:15	1.73	0.70	0.03	17.42	
09/22/2015 09:00	1.73	0.70	0.03	17.42	
09/22/2015 08:45	0.98	0.74	0.01	8.10	
09/22/2015 08:30	0.98	0.74	0.01	8.10	
09/22/2015 08:15	0.80	0.74	0.01	6.02	
09/22/2015 08:00	0.91	0.84	0.01	8.26	
09/22/2015 07:45	0.91	0.90	0.01	8.85	
09/22/2015 07:30	0.91	0.90	0.01	8.85	
09/22/2015 07:15	0.86	0.90	0.01	8.14	
09/22/2015 07:00	0.87	0.90	0.01	8.28	
09/22/2015 06:45	0.87	0.80	0.01	7.36	
09/22/2015 06:30	0.86	0.80	0.01	7.24	
09/22/2015 06:15	0.66	0.80	0.01	4.91	
09/22/2015 06:00	0.66	0.80	0.01	4.91	
09/22/2015 05:45	0.62	0.80	0.01	4.47	
09/22/2015 05:30	0.44	0.80	0.00	2.69	
09/22/2015 05:15	0.44	0.80	0.00	2.69	
09/22/2015 05:00	0.44	0.62	0.00	2.09	
09/22/2015 04:45	0.46	0.62	0.00	2.23	
09/22/2015 04:30	0.46	0.62	0.00	2.23	
09/22/2015 04:15	0.46	0.62	0.00	2.23	
09/22/2015 04:00	0.46	0.51	0.00	1.83	
09/22/2015 03:45	0.43	0.50	0.00	1.63	
09/22/2015 03:30	0.43	0.50	0.00	1.63	
09/22/2015 03:15	0.43	0.50	0.00	1.63	
09/22/2015 03:00	0.46	0.54	0.00	1.94	
09/22/2015 02:45	0.47	0.71	0.00	2.64	
09/22/2015 02:30	0.61	0.73	0.01	3.99	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/22/2015 02:15	0.61	0.73	0.01	3.99	
09/22/2015 02:00	0.54	0.73	0.00	3.33	
09/22/2015 01:45	0.54	0.73	0.00	3.33	
09/22/2015 01:30	0.51	1.10	0.01	4.61	
09/22/2015 01:15	0.51	0.83	0.01	3.48	
09/22/2015 01:00	0.54	1.68	0.01	7.66	
09/22/2015 00:45	0.46	1.68	0.01	6.04	
09/22/2015 00:30	0.46	0.96	0.00	3.45	
09/22/2015 00:15	0.43	0.88	0.00	2.86	
09/22/2015 00:00	0.41	0.88	0.00	2.67	
09/21/2015 23:45	0.41	0.88	0.00	2.67	
09/21/2015 23:30	0.41	0.78	0.00	2.36	
09/21/2015 23:15	0.41	0.78	0.00	2.36	
09/21/2015 23:00	0.41	0.84	0.00	2.55	
09/21/2015 22:45	0.46	0.84	0.00	3.02	
09/21/2015 22:30	0.46	0.84	0.00	3.02	
09/21/2015 22:15	0.46	0.90	0.00	3.24	
09/21/2015 22:00	0.64	1.10	0.01	6.45	
09/21/2015 21:45	0.64	1.10	0.01	6.45	
09/21/2015 21:30	0.64	1.10	0.01	6.45	
09/21/2015 21:15	0.68	1.09	0.01	6.98	
09/21/2015 21:00	0.71	0.89	0.01	6.08	
09/21/2015 20:45	0.71	0.77	0.01	5.26	
09/21/2015 20:30	0.71	0.76	0.01	5.19	
09/21/2015 20:15	0.68	0.73	0.01	4.68	
09/21/2015 20:00	0.68	0.73	0.01	4.68	
09/21/2015 19:45	0.65	0.72	0.01	4.32	
09/21/2015 19:30	0.57	0.70	0.00	3.46	
09/21/2015 19:15	0.57	0.72	0.01	3.56	
09/21/2015 19:00	0.78	0.75	0.01	5.88	
09/21/2015 18:45	0.59	0.90	0.01	4.68	
09/21/2015 18:30	0.76	0.90	0.01	6.79	
09/21/2015 18:15	0.84	1.11	0.01	9.70	
09/21/2015 18:00	0.76	0.90	0.01	6.79	
09/21/2015 17:45	0.76	0.79	0.01	5.96	
09/21/2015 17:30	0.76	0.79	0.01	5.96	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/21/2015 17:15	0.83	0.79	0.01	6.79	
09/21/2015 17:00	0.76	0.79	0.01	5.96	
09/21/2015 16:45	0.83	0.88	0.01	7.56	
09/21/2015 16:30	0.73	0.88	0.01	6.26	
09/21/2015 16:15	0.89	0.88	0.01	8.37	
09/21/2015 16:00	0.93	0.92	0.01	9.33	
09/21/2015 15:45	0.96	0.90	0.01	9.56	
09/21/2015 15:30	0.93	0.90	0.01	9.13	
09/21/2015 15:15	0.93	0.90	0.01	9.13	
09/21/2015 15:00	0.89	0.86	0.01	8.18	
09/21/2015 14:45	0.66	0.86	0.01	5.27	
09/21/2015 14:30	0.66	0.63	0.01	3.86	
09/21/2015 14:15	0.68	0.86	0.01	5.51	
09/21/2015 14:00	0.68	1.52	0.01	9.74	
09/21/2015 13:45	0.68	1.55	0.01	9.93	
09/21/2015 13:30	0.71	1.55	0.02	10.58	
09/21/2015 13:15	0.71	1.55	0.02	10.58	
09/21/2015 13:00	0.71	1.50	0.01	10.24	
09/21/2015 12:45	0.71	1.41	0.01	9.63	
09/21/2015 12:30	1.04	1.03	0.02	12.30	
09/21/2015 12:15	1.32	0.88	0.02	14.86	
09/21/2015 12:00	1.50	0.80	0.02	16.24	
09/21/2015 11:45	1.57	0.77	0.02	16.68	
09/21/2015 11:30	1.50	0.77	0.02	15.63	
09/21/2015 11:15	1.50	0.77	0.02	15.63	
09/21/2015 11:00	1.39	0.67	0.02	12.19	
09/21/2015 10:45	1.03	0.67	0.01	7.89	
09/21/2015 10:30	0.84	0.88	0.01	7.69	
09/21/2015 10:15	0.84	1.00	0.01	8.74	
09/21/2015 10:00	0.79	1.04	0.01	8.31	
09/21/2015 09:45	0.84	1.04	0.01	9.09	
09/21/2015 09:30	1.14	1.11	0.02	15.15	
09/21/2015 09:15	1.39	1.16	0.03	21.10	
09/21/2015 09:00	1.39	1.16	0.03	21.10	
09/21/2015 08:45	1.39	1.11	0.03	20.19	
09/21/2015 08:30	1.21	1.11	0.02	16.52	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/21/2015 08:15	1.07	0.83	0.01	10.33	
09/21/2015 08:00	0.76	0.83	0.01	6.26	
09/21/2015 07:45	0.76	0.76	0.01	5.74	
09/21/2015 07:30	0.78	0.76	0.01	5.96	
09/21/2015 07:15	0.78	0.76	0.01	5.96	
09/21/2015 07:00	0.57	0.73	0.01	3.61	
09/21/2015 06:45	0.59	0.73	0.01	3.79	
09/21/2015 06:30	0.59	0.73	0.01	3.79	
09/21/2015 06:15	0.57	0.60	0.00	2.96	
09/21/2015 06:00	0.54	0.57	0.00	2.60	
09/21/2015 05:45	0.57	0.76	0.01	3.75	
09/21/2015 05:30	0.57	0.76	0.01	3.75	
09/21/2015 05:15	0.51	0.97	0.01	4.06	
09/21/2015 05:00	0.57	1.07	0.01	5.28	
09/21/2015 04:45	0.57	1.07	0.01	5.28	
09/21/2015 04:30	0.57	1.07	0.01	5.28	
09/21/2015 04:15	0.51	0.97	0.01	4.06	
09/21/2015 04:00	0.48	0.93	0.01	3.56	
09/21/2015 03:45	0.48	0.93	0.01	3.56	
09/21/2015 03:30	0.48	0.91	0.01	3.49	
09/21/2015 03:15	0.48	0.93	0.01	3.56	
09/21/2015 03:00	0.48	0.93	0.01	3.56	
09/21/2015 02:45	0.48	0.91	0.01	3.49	
09/21/2015 02:30	0.48	0.66	0.00	2.53	
09/21/2015 02:15	0.48	0.66	0.00	2.53	
09/21/2015 02:00	0.48	0.66	0.00	2.53	
09/21/2015 01:45	0.48	0.72	0.00	2.76	
09/21/2015 01:30	0.55	0.90	0.01	4.22	
09/21/2015 01:15	0.55	1.19	0.01	5.57	
09/21/2015 01:00	0.55	1.17	0.01	5.48	
09/21/2015 00:45	0.54	1.17	0.01	5.33	
09/21/2015 00:30	0.53	1.19	0.01	5.28	
09/21/2015 00:15	0.48	1.19	0.01	4.56	
09/21/2015 00:00	0.48	1.17	0.01	4.48	
09/20/2015 23:45	0.48	1.18	0.01	4.52	
09/20/2015 23:30	0.44	1.18	0.01	3.97	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/20/2015 23:15	0.44	0.82	0.00	2.76	
09/20/2015 23:00	0.43	0.60	0.00	1.95	
09/20/2015 22:45	0.43	0.60	0.00	1.95	
09/20/2015 22:30	0.44	0.60	0.00	2.02	
09/20/2015 22:15	0.47	0.59	0.00	2.19	
09/20/2015 22:00	0.57	0.65	0.00	3.21	
09/20/2015 21:45	0.57	0.65	0.00	3.21	
09/20/2015 21:30	0.57	0.59	0.00	2.91	
09/20/2015 21:15	0.57	0.59	0.00	2.91	
09/20/2015 21:00	0.57	0.68	0.00	3.36	
09/20/2015 20:45	0.87	0.88	0.01	8.10	
09/20/2015 20:30	0.87	0.89	0.01	8.19	
09/20/2015 20:15	0.87	0.89	0.01	8.19	
09/20/2015 20:00	0.72	0.88	0.01	6.13	
09/20/2015 19:45	0.61	0.62	0.00	3.38	
09/20/2015 19:30	0.61	0.62	0.00	3.38	
09/20/2015 19:15	0.61	0.62	0.00	3.38	
09/20/2015 19:00	0.75	0.72	0.01	5.33	
09/20/2015 18:45	0.79	0.75	0.01	5.99	
09/20/2015 18:30	0.79	0.75	0.01	5.99	
09/20/2015 18:15	0.75	0.72	0.01	5.33	
09/20/2015 18:00	0.46	0.70	0.00	2.52	
09/20/2015 17:45	0.46	0.70	0.00	2.52	
09/20/2015 17:30	0.46	0.70	0.00	2.52	
09/20/2015 17:15	0.46	0.95	0.00	3.42	
09/20/2015 17:00	0.46	0.95	0.00	3.42	
09/20/2015 16:45	0.46	0.95	0.00	3.42	
09/20/2015 16:30	0.46	0.93	0.00	3.34	
09/20/2015 16:15	0.47	0.75	0.00	2.78	
09/20/2015 16:00	0.47	0.71	0.00	2.64	
09/20/2015 15:45	0.47	0.71	0.00	2.64	
09/20/2015 15:30	0.47	0.71	0.00	2.64	
09/20/2015 15:15	0.47	0.71	0.00	2.64	
09/20/2015 15:00	0.46	0.51	0.00	1.83	
09/20/2015 14:45	0.46	0.51	0.00	1.83	
09/20/2015 14:30	0.68	0.75	0.01	4.81	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/20/2015 14:15	0.69	0.76	0.01	4.98	
09/20/2015 14:00	0.69	0.76	0.01	4.98	
09/20/2015 13:45	0.69	0.78	0.01	5.11	
09/20/2015 13:30	0.65	0.78	0.01	4.68	
09/20/2015 13:15	0.65	0.84	0.01	5.04	
09/20/2015 13:00	0.44	0.84	0.00	2.83	
09/20/2015 12:45	0.44	0.84	0.00	2.83	
09/20/2015 12:30	0.44	0.61	0.00	2.05	
09/20/2015 12:15	0.48	0.61	0.00	2.34	
09/20/2015 12:00	0.48	0.61	0.00	2.34	
09/20/2015 11:45	0.48	0.63	0.00	2.41	
09/20/2015 11:30	0.48	0.73	0.00	2.80	
09/20/2015 11:15	0.65	0.73	0.01	4.38	
09/20/2015 11:00	0.61	0.70	0.01	3.82	
09/20/2015 10:45	0.50	0.65	0.00	2.64	
09/20/2015 10:30	0.50	0.65	0.00	2.64	
09/20/2015 10:15	0.61	0.65	0.01	3.55	
09/20/2015 10:00	0.61	0.65	0.01	3.55	
09/20/2015 09:45	0.76	0.66	0.01	4.98	
09/20/2015 09:30	0.76	0.82	0.01	6.19	
09/20/2015 09:15	0.76	0.85	0.01	6.41	
09/20/2015 09:00	0.53	1.31	0.01	5.81	
09/20/2015 08:45	0.53	1.42	0.01	6.30	
09/20/2015 08:30	0.53	1.42	0.01	6.30	
09/20/2015 08:15	0.53	1.42	0.01	6.30	
09/20/2015 08:00	0.48	1.31	0.01	5.02	
09/20/2015 07:45	0.53	1.42	0.01	6.30	
09/20/2015 07:30	0.47	1.28	0.01	4.75	
09/20/2015 07:15	0.47	1.25	0.01	4.64	
09/20/2015 07:00	0.55	1.08	0.01	5.06	
09/20/2015 06:45	0.94	1.03	0.02	10.61	
09/20/2015 06:30	0.94	1.03	0.02	10.61	
09/20/2015 06:15	0.94	1.03	0.02	10.61	
09/20/2015 06:00	0.94	1.03	0.02	10.61	
09/20/2015 05:45	0.78	1.03	0.01	8.08	
09/20/2015 05:30	0.58	1.22	0.01	6.18	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/20/2015 05:15	0.55	1.22	0.01	5.72	
09/20/2015 05:00	0.55	1.22	0.01	5.72	
09/20/2015 04:45	0.54	1.09	0.01	4.97	
09/20/2015 04:30	0.54	1.07	0.01	4.88	
09/20/2015 04:15	0.47	1.07	0.01	3.97	
09/20/2015 04:00	0.47	1.07	0.01	3.97	
09/20/2015 03:45	0.47	1.07	0.01	3.97	
09/20/2015 03:30	0.55	0.63	0.00	2.95	
09/20/2015 03:15	0.55	0.63	0.00	2.95	
09/20/2015 03:00	0.58	0.63	0.00	3.19	
09/20/2015 02:45	0.58	0.63	0.00	3.19	
09/20/2015 02:30	0.58	0.72	0.01	3.65	
09/20/2015 02:15	0.55	0.81	0.01	3.79	
09/20/2015 02:00	0.54	0.72	0.00	3.28	
09/20/2015 01:45	0.48	0.81	0.00	3.10	
09/20/2015 01:30	0.48	0.84	0.00	3.22	
09/20/2015 01:15	0.48	0.95	0.01	3.64	
09/20/2015 01:00	0.54	0.95	0.01	4.33	
09/20/2015 00:45	0.48	0.95	0.01	3.64	
09/20/2015 00:30	0.48	0.95	0.01	3.64	
09/20/2015 00:15	0.51	0.98	0.01	4.11	
09/20/2015 00:00	0.46	1.77	0.01	6.36	
09/19/2015 23:45	0.46	1.77	0.01	6.36	
09/19/2015 23:30	0.46	1.77	0.01	6.36	
09/19/2015 23:15	0.51	1.45	0.01	6.08	
09/19/2015 23:00	0.54	0.92	0.01	4.19	
09/19/2015 22:45	0.62	0.92	0.01	5.14	
09/19/2015 22:30	0.69	0.92	0.01	6.02	
09/19/2015 22:15	0.73	0.92	0.01	6.54	
09/19/2015 22:00	0.68	1.20	0.01	7.69	
09/19/2015 21:45	0.72	1.20	0.01	8.36	
09/19/2015 21:30	0.72	0.91	0.01	6.34	
09/19/2015 21:15	0.68	0.93	0.01	5.96	
09/19/2015 21:00	0.68	0.91	0.01	5.83	
09/19/2015 20:45	0.57	0.83	0.01	4.10	
09/19/2015 20:30	0.47	0.91	0.00	3.38	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/19/2015 20:15	0.57	0.93	0.01	4.59	
09/19/2015 20:00	0.57	0.90	0.01	4.44	
09/19/2015 19:45	0.50	0.95	0.01	3.87	
09/19/2015 19:30	0.50	0.95	0.01	3.87	
09/19/2015 19:15	0.86	0.95	0.01	8.60	
09/19/2015 19:00	0.73	0.90	0.01	6.40	
09/19/2015 18:45	0.79	0.87	0.01	6.95	
09/19/2015 18:30	0.79	0.75	0.01	5.99	
09/19/2015 18:15	0.79	0.87	0.01	6.95	
09/19/2015 18:00	0.79	0.87	0.01	6.95	
09/19/2015 17:45	0.91	0.74	0.01	7.27	
09/19/2015 17:30	0.91	0.81	0.01	7.96	
09/19/2015 17:15	0.91	0.81	0.01	7.96	
09/19/2015 17:00	0.71	0.76	0.01	5.19	
09/19/2015 16:45	0.69	0.76	0.01	4.98	
09/19/2015 16:30	0.69	0.76	0.01	4.98	
09/19/2015 16:15	0.68	0.76	0.01	4.87	
09/19/2015 16:00	0.62	0.78	0.01	4.36	
09/19/2015 15:45	0.50	1.41	0.01	5.74	
09/19/2015 15:30	0.46	1.41	0.01	5.07	
09/19/2015 15:15	0.46	1.41	0.01	5.07	
09/19/2015 15:00	0.46	1.37	0.01	4.93	
09/19/2015 14:45	0.54	0.60	0.00	2.74	
09/19/2015 14:30	0.54	0.60	0.00	2.74	
09/19/2015 14:15	0.54	0.60	0.00	2.74	
09/19/2015 14:00	0.53	0.83	0.01	3.68	
09/19/2015 13:45	0.44	1.10	0.01	3.70	
09/19/2015 13:30	0.44	1.10	0.01	3.70	
09/19/2015 13:15	0.50	0.83	0.00	3.38	
09/19/2015 13:00	0.53	0.83	0.01	3.68	
09/19/2015 12:45	0.75	0.69	0.01	5.11	
09/19/2015 12:30	1.14	0.69	0.01	9.42	
09/19/2015 12:15	1.14	0.86	0.02	11.74	
09/19/2015 12:00	0.94	0.86	0.01	8.86	
09/19/2015 11:45	0.94	0.82	0.01	8.45	
09/19/2015 11:30	0.76	0.86	0.01	6.49	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/19/2015 11:15	0.66	0.82	0.01	5.03	
09/19/2015 11:00	0.64	0.76	0.01	4.45	
09/19/2015 10:45	0.64	0.72	0.01	4.22	
09/19/2015 10:30	0.64	0.72	0.01	4.22	
09/19/2015 10:15	0.64	0.71	0.01	4.16	
09/19/2015 10:00	0.57	0.72	0.01	3.56	
09/19/2015 09:45	0.47	0.72	0.00	2.67	
09/19/2015 09:30	0.47	0.72	0.00	2.67	
09/19/2015 09:15	0.47	0.83	0.00	3.08	
09/19/2015 09:00	0.44	0.98	0.00	3.30	
09/19/2015 08:45	0.51	0.83	0.01	3.48	
09/19/2015 08:30	0.51	0.73	0.00	3.06	
09/19/2015 08:15	0.66	0.86	0.01	5.27	
09/19/2015 08:00	0.66	0.73	0.01	4.48	
09/19/2015 07:45	0.66	0.63	0.01	3.86	
09/19/2015 07:30	0.68	0.63	0.01	4.04	
09/19/2015 07:15	0.84	0.63	0.01	5.51	
09/19/2015 07:00	0.86	0.63	0.01	5.70	
09/19/2015 06:45	0.86	0.80	0.01	7.24	
09/19/2015 06:30	0.87	0.87	0.01	8.01	
09/19/2015 06:15	0.87	0.91	0.01	8.37	
09/19/2015 06:00	0.87	0.87	0.01	8.01	
09/19/2015 05:45	0.87	0.91	0.01	8.37	
09/19/2015 05:30	0.78	0.87	0.01	6.82	
09/19/2015 05:15	0.48	1.26	0.01	4.83	
09/19/2015 05:00	0.47	1.56	0.01	5.79	
09/19/2015 04:45	0.44	1.56	0.01	5.25	
09/19/2015 04:30	0.44	1.47	0.01	4.95	
09/19/2015 04:15	0.44	1.47	0.01	4.95	
09/19/2015 04:00	0.44	1.28	0.01	4.31	
09/19/2015 03:45	0.48	0.88	0.00	3.37	
09/19/2015 03:30	0.50	0.88	0.01	3.58	
09/19/2015 03:15	0.66	0.80	0.01	4.91	
09/19/2015 03:00	0.50	0.80	0.00	3.25	
09/19/2015 02:45	0.51	0.80	0.00	3.35	
09/19/2015 02:30	0.50	1.22	0.01	4.96	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/19/2015 02:15	0.46	1.25	0.01	4.49	
09/19/2015 02:00	0.44	1.43	0.01	4.81	
09/19/2015 01:45	0.44	1.43	0.01	4.81	
09/19/2015 01:30	0.44	1.37	0.01	4.61	
09/19/2015 01:15	0.46	1.37	0.01	4.93	
09/19/2015 01:00	0.46	1.34	0.01	4.82	
09/19/2015 00:45	0.46	1.34	0.01	4.82	
09/19/2015 00:30	0.46	1.34	0.01	4.82	
09/19/2015 00:15	0.46	0.77	0.00	2.77	
09/19/2015 00:00	0.47	0.77	0.00	2.86	
09/18/2015 23:45	0.53	0.84	0.01	3.73	
09/18/2015 23:30	0.53	0.77	0.00	3.42	
09/18/2015 23:15	0.64	0.77	0.01	4.51	
09/18/2015 23:00	0.64	0.84	0.01	4.92	
09/18/2015 22:45	0.86	0.85	0.01	7.69	
09/18/2015 22:30	0.86	0.85	0.01	7.69	
09/18/2015 22:15	0.86	0.94	0.01	8.50	
09/18/2015 22:00	0.73	0.94	0.01	6.69	
09/18/2015 21:45	0.68	1.21	0.01	7.75	
09/18/2015 21:30	0.68	1.21	0.01	7.75	
09/18/2015 21:15	0.68	1.21	0.01	7.75	
09/18/2015 21:00	0.71	0.99	0.01	6.76	
09/18/2015 20:45	0.73	0.97	0.01	6.90	
09/18/2015 20:30	0.73	0.83	0.01	5.90	
09/18/2015 20:15	0.78	0.81	0.01	6.35	
09/18/2015 20:00	0.78	0.73	0.01	5.72	
09/18/2015 19:45	0.72	0.68	0.01	4.74	
09/18/2015 19:30	0.72	0.68	0.01	4.74	
09/18/2015 19:15	0.72	0.73	0.01	5.09	
09/18/2015 19:00	0.72	1.34	0.01	9.34	
09/18/2015 18:45	0.79	1.34	0.02	10.70	
09/18/2015 18:30	0.79	1.34	0.02	10.70	
09/18/2015 18:15	0.78	1.26	0.01	9.88	
09/18/2015 18:00	0.78	1.26	0.01	9.88	
09/18/2015 17:45	0.78	0.91	0.01	7.13	
09/18/2015 17:30	0.78	0.91	0.01	7.13	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/18/2015 17:15	0.78	0.91	0.01	7.13	
09/18/2015 17:00	0.69	0.91	0.01	5.96	
09/18/2015 16:45	0.69	0.77	0.01	5.04	
09/18/2015 16:30	0.62	0.77	0.01	4.31	
09/18/2015 16:15	0.62	0.77	0.01	4.31	
09/18/2015 16:00	0.62	0.77	0.01	4.31	
09/18/2015 15:45	0.62	0.87	0.01	4.86	
09/18/2015 15:30	0.68	0.87	0.01	5.57	
09/18/2015 15:15	0.68	0.65	0.01	4.16	
09/18/2015 15:00	0.68	0.65	0.01	4.16	
09/18/2015 14:45	0.71	0.81	0.01	5.53	
09/18/2015 14:30	0.71	0.81	0.01	5.53	
09/18/2015 14:15	0.71	0.81	0.01	5.53	
09/18/2015 14:00	0.78	0.81	0.01	6.35	
09/18/2015 13:45	0.82	0.81	0.01	6.83	
09/18/2015 13:30	0.82	0.82	0.01	6.92	
09/18/2015 13:15	0.82	0.82	0.01	6.92	
09/18/2015 13:00	0.86	0.82	0.01	7.42	
09/18/2015 12:45	0.82	0.82	0.01	6.92	
09/18/2015 12:30	0.86	0.82	0.01	7.42	
09/18/2015 12:15	0.75	0.82	0.01	6.07	
09/18/2015 12:00	0.75	0.82	0.01	6.07	
09/18/2015 11:45	0.59	0.82	0.01	4.26	
09/18/2015 11:30	0.59	0.84	0.01	4.37	
09/18/2015 11:15	0.59	0.84	0.01	4.37	
09/18/2015 11:00	0.98	0.84	0.01	9.20	
09/18/2015 10:45	1.01	0.86	0.01	9.84	
09/18/2015 10:30	1.05	0.86	0.01	10.42	
09/18/2015 10:15	1.07	0.86	0.02	10.71	
09/18/2015 10:00	1.07	0.76	0.01	9.46	
09/18/2015 09:45	1.01	0.76	0.01	8.70	
09/18/2015 09:30	0.97	0.76	0.01	8.20	
09/18/2015 09:15	0.76	0.79	0.01	5.96	
09/18/2015 09:00	0.71	0.79	0.01	5.39	
09/18/2015 08:45	0.66	1.08	0.01	6.62	
09/18/2015 08:30	0.71	1.08	0.01	7.37	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/18/2015 08:15	0.71	0.94	0.01	6.42	
09/18/2015 08:00	0.86	0.94	0.01	8.50	
09/18/2015 07:45	0.86	0.83	0.01	7.51	
09/18/2015 07:30	0.86	0.83	0.01	7.51	
09/18/2015 07:15	0.75	0.83	0.01	6.14	
09/18/2015 07:00	0.75	0.82	0.01	6.07	
09/18/2015 06:45	0.75	0.82	0.01	6.07	
09/18/2015 06:30	0.75	0.82	0.01	6.07	
09/18/2015 06:15	0.75	0.82	0.01	6.07	
09/18/2015 06:00	0.97	0.82	0.01	8.85	
09/18/2015 05:45	0.97	1.18	0.02	12.73	
09/18/2015 05:30	0.97	1.18	0.02	12.73	
09/18/2015 05:15	1.09	1.18	0.02	15.09	
09/18/2015 05:00	1.05	1.12	0.02	13.57	
09/18/2015 04:45	1.09	1.12	0.02	14.32	
09/18/2015 04:30	1.09	1.02	0.02	13.05	
09/18/2015 04:15	1.05	1.02	0.02	12.35	
09/18/2015 04:00	0.62	1.00	0.01	5.59	
09/18/2015 03:45	0.59	1.00	0.01	5.20	
09/18/2015 03:30	0.53	1.00	0.01	4.44	
09/18/2015 03:15	0.51	1.00	0.01	4.19	
09/18/2015 03:00	0.51	1.30	0.01	5.45	
09/18/2015 02:45	0.51	1.30	0.01	5.45	
09/18/2015 02:30	0.46	1.48	0.01	5.32	
09/18/2015 02:15	0.46	1.22	0.01	4.39	
09/18/2015 02:00	0.46	1.22	0.01	4.39	
09/18/2015 01:45	0.46	1.22	0.01	4.39	
09/18/2015 01:30	0.46	1.07	0.01	3.85	
09/18/2015 01:15	0.46	1.07	0.01	3.85	
09/18/2015 01:00	0.46	1.20	0.01	4.32	
09/18/2015 00:45	0.46	1.34	0.01	4.82	
09/18/2015 00:30	0.44	1.34	0.01	4.51	
09/18/2015 00:15	0.44	1.34	0.01	4.51	
09/18/2015 00:00	0.44	1.37	0.01	4.61	
09/17/2015 23:45	0.47	1.34	0.01	4.97	
09/17/2015 23:30	0.48	1.37	0.01	5.25	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/17/2015 23:15	0.48	1.34	0.01	5.13	
09/17/2015 23:00	0.50	1.34	0.01	5.45	
09/17/2015 22:45	0.50	1.28	0.01	5.21	
09/17/2015 22:30	0.55	0.91	0.01	4.26	
09/17/2015 22:15	0.55	0.71	0.00	3.33	
09/17/2015 22:00	0.72	0.71	0.01	4.95	
09/17/2015 21:45	0.72	0.71	0.01	4.95	
09/17/2015 21:30	0.72	0.82	0.01	5.72	
09/17/2015 21:15	0.72	0.82	0.01	5.72	
09/17/2015 21:00	0.51	1.13	0.01	4.73	
09/17/2015 20:45	0.51	1.13	0.01	4.73	
09/17/2015 20:30	0.51	0.91	0.01	3.81	
09/17/2015 20:15	0.46	0.79	0.00	2.84	
09/17/2015 20:00	0.51	0.69	0.00	2.89	
09/17/2015 19:45	0.54	0.69	0.00	3.15	
09/17/2015 19:30	0.54	0.69	0.00	3.15	
09/17/2015 19:15	0.65	1.19	0.01	7.13	
09/17/2015 19:00	0.69	1.19	0.01	7.79	
09/17/2015 18:45	0.75	1.19	0.01	8.81	
09/17/2015 18:30	0.82	0.92	0.01	7.76	
09/17/2015 18:15	0.82	0.84	0.01	7.09	
09/17/2015 18:00	0.82	0.75	0.01	6.33	
09/17/2015 17:45	0.79	0.75	0.01	5.99	
09/17/2015 17:30	0.90	0.78	0.01	7.54	
09/17/2015 17:15	0.79	0.75	0.01	5.99	
09/17/2015 17:00	0.90	0.78	0.01	7.54	
09/17/2015 16:45	0.54	0.79	0.01	3.60	
09/17/2015 16:30	0.54	0.79	0.01	3.60	
09/17/2015 16:15	0.54	0.79	0.01	3.60	
09/17/2015 16:00	0.71	0.83	0.01	5.67	
09/17/2015 15:45	0.71	0.83	0.01	5.67	
09/17/2015 15:30	0.76	0.83	0.01	6.26	
09/17/2015 15:15	0.76	0.76	0.01	5.74	
09/17/2015 15:00	0.76	0.87	0.01	6.57	
09/17/2015 14:45	0.76	0.74	0.01	5.58	
09/17/2015 14:30	0.75	0.63	0.01	4.66	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/17/2015 14:15	0.75	0.63	0.01	4.66	
09/17/2015 14:00	0.94	0.90	0.01	9.28	
09/17/2015 13:45	0.94	0.99	0.01	10.20	
09/17/2015 13:30	0.87	0.99	0.01	9.11	
09/17/2015 13:15	0.87	0.99	0.01	9.11	
09/17/2015 13:00	0.87	0.84	0.01	7.73	
09/17/2015 12:45	0.87	0.84	0.01	7.73	
09/17/2015 12:30	1.00	0.84	0.01	9.48	
09/17/2015 12:15	1.00	0.84	0.01	9.48	
09/17/2015 12:00	1.00	0.84	0.01	9.48	
09/17/2015 11:45	0.82	0.67	0.01	5.65	
09/17/2015 11:30	0.79	0.67	0.01	5.35	
09/17/2015 11:15	0.79	0.67	0.01	5.35	
09/17/2015 11:00	0.82	0.77	0.01	6.50	
09/17/2015 10:45	0.87	0.88	0.01	8.10	
09/17/2015 10:30	0.87	0.88	0.01	8.10	
09/17/2015 10:15	0.87	0.77	0.01	7.09	
09/17/2015 10:00	0.87	0.92	0.01	8.47	
09/17/2015 09:45	0.71	0.94	0.01	6.42	
09/17/2015 09:30	0.71	0.95	0.01	6.49	
09/17/2015 09:15	0.93	0.95	0.01	9.64	
09/17/2015 09:00	0.93	1.00	0.01	10.15	
09/17/2015 08:45	0.93	0.95	0.01	9.64	
09/17/2015 08:30	0.93	1.00	0.01	10.15	
09/17/2015 08:15	0.93	1.06	0.02	10.75	
09/17/2015 08:00	0.93	1.06	0.02	10.75	
09/17/2015 07:45	0.97	1.01	0.02	10.90	
09/17/2015 07:30	0.97	1.01	0.02	10.90	
09/17/2015 07:15	0.97	0.90	0.01	9.71	
09/17/2015 07:00	1.00	0.88	0.01	9.93	
09/17/2015 06:45	1.00	0.66	0.01	7.45	
09/17/2015 06:30	1.00	0.66	0.01	7.45	
09/17/2015 06:15	1.00	0.66	0.01	7.45	
09/17/2015 06:00	0.98	0.74	0.01	8.10	
09/17/2015 05:45	0.96	0.91	0.01	9.67	
09/17/2015 05:30	0.96	0.91	0.01	9.67	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/17/2015 05:15	0.96	0.91	0.01	9.67	
09/17/2015 05:00	0.94	1.10	0.02	11.34	
09/17/2015 04:45	0.94	1.10	0.02	11.34	
09/17/2015 04:30	1.04	1.40	0.02	16.72	
09/17/2015 04:15	1.04	1.41	0.02	16.84	
09/17/2015 04:00	1.04	1.41	0.02	16.84	
09/17/2015 03:45	1.04	1.40	0.02	16.72	
09/17/2015 03:30	1.04	1.28	0.02	15.29	
09/17/2015 03:15	1.05	1.28	0.02	15.50	
09/17/2015 03:00	1.01	1.26	0.02	14.42	
09/17/2015 02:45	1.03	1.26	0.02	14.84	
09/17/2015 02:30	1.11	1.26	0.02	16.55	
09/17/2015 02:15	1.03	1.27	0.02	14.96	
09/17/2015 02:00	0.97	1.26	0.02	13.60	
09/17/2015 01:45	1.03	0.85	0.01	10.01	
09/17/2015 01:30	1.01	0.69	0.01	7.90	
09/17/2015 01:15	1.01	0.73	0.01	8.36	
09/17/2015 01:00	1.01	0.73	0.01	8.36	
09/17/2015 00:45	1.01	0.85	0.01	9.73	
09/17/2015 00:30	1.00	1.42	0.02	16.02	
09/17/2015 00:15	0.98	1.42	0.02	15.55	
09/17/2015 00:00	0.98	1.42	0.02	15.55	
09/16/2015 23:45	0.98	1.11	0.02	12.16	
09/16/2015 23:30	1.01	1.11	0.02	12.70	
09/16/2015 23:15	1.01	0.97	0.02	11.10	
09/16/2015 23:00	1.01	0.84	0.01	9.61	
09/16/2015 22:45	1.21	0.84	0.02	12.50	
09/16/2015 22:30	1.04	0.84	0.01	10.03	
09/16/2015 22:15	1.03	0.84	0.01	9.89	
09/16/2015 22:00	1.03	0.84	0.01	9.89	
09/16/2015 21:45	1.04	1.22	0.02	14.57	
09/16/2015 21:30	1.04	1.22	0.02	14.57	
09/16/2015 21:15	1.18	1.22	0.03	17.51	
09/16/2015 21:00	1.18	1.19	0.02	17.08	
09/16/2015 20:45	1.18	1.07	0.02	15.36	
09/16/2015 20:30	1.01	1.07	0.02	12.25	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/16/2015 20:15	0.80	1.07	0.01	8.71	
09/16/2015 20:00	0.76	1.02	0.01	7.70	
09/16/2015 19:45	0.76	1.07	0.01	8.07	
09/16/2015 19:30	0.76	0.95	0.01	7.17	
09/16/2015 19:15	0.76	0.84	0.01	6.34	
09/16/2015 19:00	0.76	0.95	0.01	7.17	
09/16/2015 18:45	0.79	0.95	0.01	7.59	
09/16/2015 18:30	0.72	0.84	0.01	5.85	
09/16/2015 18:15	0.72	0.81	0.01	5.65	
09/16/2015 18:00	0.62	0.80	0.01	4.47	
09/16/2015 17:45	0.62	0.80	0.01	4.47	
09/16/2015 17:30	0.62	0.80	0.01	4.47	
09/16/2015 17:15	0.84	0.86	0.01	7.52	
09/16/2015 17:00	0.84	0.94	0.01	8.22	
09/16/2015 16:45	0.84	0.94	0.01	8.22	
09/16/2015 16:30	0.69	0.94	0.01	6.15	
09/16/2015 16:15	0.62	0.88	0.01	4.92	
09/16/2015 16:00	0.62	0.88	0.01	4.92	
09/16/2015 15:45	0.62	0.88	0.01	4.92	
09/16/2015 15:30	0.71	0.89	0.01	6.08	
09/16/2015 15:15	0.71	0.89	0.01	6.08	
09/16/2015 15:00	0.84	0.90	0.01	7.87	
09/16/2015 14:45	0.71	1.05	0.01	7.17	
09/16/2015 14:30	0.68	1.05	0.01	6.73	
09/16/2015 14:15	0.68	0.93	0.01	5.96	
09/16/2015 14:00	0.94	0.93	0.01	9.58	
09/16/2015 13:45	0.78	0.93	0.01	7.29	
09/16/2015 13:30	0.84	0.93	0.01	8.13	
09/16/2015 13:15	0.84	0.93	0.01	8.13	
09/16/2015 13:00	0.84	1.00	0.01	8.74	
09/16/2015 12:45	0.78	1.00	0.01	7.84	
09/16/2015 12:30	0.82	0.73	0.01	6.16	
09/16/2015 12:15	0.79	0.73	0.01	5.83	
09/16/2015 12:00	0.79	0.76	0.01	6.07	
09/16/2015 11:45	0.62	0.71	0.01	3.97	
09/16/2015 11:30	0.69	0.76	0.01	4.98	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/16/2015 11:15	0.69	0.82	0.01	5.37	
09/16/2015 11:00	0.69	0.82	0.01	5.37	
09/16/2015 10:45	0.72	0.85	0.01	5.92	
09/16/2015 10:30	0.72	0.85	0.01	5.92	
09/16/2015 10:15	0.89	0.90	0.01	8.56	
09/16/2015 10:00	0.89	0.90	0.01	8.56	
09/16/2015 09:45	0.72	0.89	0.01	6.20	
09/16/2015 09:30	0.72	0.81	0.01	5.65	
09/16/2015 09:15	0.72	0.89	0.01	6.20	
09/16/2015 09:00	0.62	0.81	0.01	4.53	
09/16/2015 08:45	0.62	0.89	0.01	4.98	
09/16/2015 08:30	0.62	0.81	0.01	4.53	
09/16/2015 08:15	0.62	0.78	0.01	4.36	
09/16/2015 08:00	0.80	0.72	0.01	5.86	
09/16/2015 07:45	0.86	0.72	0.01	6.51	
09/16/2015 07:30	0.86	0.63	0.01	5.70	
09/16/2015 07:15	0.80	0.59	0.01	4.80	
09/16/2015 07:00	0.87	0.63	0.01	5.80	
09/16/2015 06:45	0.87	0.64	0.01	5.89	
09/16/2015 06:30	0.65	0.64	0.01	3.84	
09/16/2015 06:15	0.65	0.64	0.01	3.84	
09/16/2015 06:00	0.65	0.64	0.01	3.84	
09/16/2015 05:45	0.50	0.70	0.00	2.85	
09/16/2015 05:30	0.46	0.70	0.00	2.52	
09/16/2015 05:15	0.46	0.87	0.00	3.13	
09/16/2015 05:00	0.48	1.47	0.01	5.63	
09/16/2015 04:45	0.46	1.47	0.01	5.29	
09/16/2015 04:30	0.48	1.11	0.01	4.25	
09/16/2015 04:15	0.48	1.11	0.01	4.25	
09/16/2015 04:00	0.47	1.11	0.01	4.12	
09/16/2015 03:45	0.44	0.99	0.00	3.33	
09/16/2015 03:30	0.47	0.97	0.01	3.60	
09/16/2015 03:15	0.47	0.97	0.01	3.60	
09/16/2015 03:00	0.44	0.94	0.00	3.16	
09/16/2015 02:45	0.47	0.92	0.00	3.42	
09/16/2015 02:30	0.47	0.92	0.00	3.42	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/16/2015 02:15	0.48	0.87	0.00	3.33	
09/16/2015 02:00	0.48	0.87	0.00	3.33	
09/16/2015 01:45	0.50	0.78	0.00	3.17	
09/16/2015 01:30	0.50	0.73	0.00	2.97	
09/16/2015 01:15	0.44	0.72	0.00	2.42	
09/16/2015 01:00	0.44	0.73	0.00	2.46	
09/16/2015 00:45	0.46	0.73	0.00	2.63	
09/16/2015 00:30	0.44	0.73	0.00	2.46	
09/16/2015 00:15	0.46	0.75	0.00	2.70	
09/16/2015 00:00	0.50	0.85	0.00	3.46	
09/15/2015 23:45	0.50	0.86	0.01	3.50	
09/15/2015 23:30	0.44	0.86	0.00	2.90	
09/15/2015 23:15	0.44	0.86	0.00	2.90	
09/15/2015 23:00	0.44	0.85	0.00	2.86	
09/15/2015 22:45	0.44	0.80	0.00	2.69	
09/15/2015 22:30	0.44	0.80	0.00	2.69	
09/15/2015 22:15	0.44	0.85	0.00	2.86	
09/15/2015 22:00	0.46	0.80	0.00	2.88	
09/15/2015 21:45	0.47	0.80	0.00	2.97	
09/15/2015 21:30	0.48	0.80	0.00	3.06	
09/15/2015 21:15	0.53	0.76	0.00	3.37	
09/15/2015 21:00	0.55	0.76	0.01	3.56	
09/15/2015 20:45	0.65	0.76	0.01	4.56	
09/15/2015 20:30	0.80	0.86	0.01	7.00	
09/15/2015 20:15	0.87	0.86	0.01	7.91	
09/15/2015 20:00	0.87	0.98	0.01	9.02	
09/15/2015 19:45	0.80	0.86	0.01	7.00	
09/15/2015 19:30	0.76	0.86	0.01	6.49	
09/15/2015 19:15	0.76	0.87	0.01	6.57	
09/15/2015 19:00	0.76	0.87	0.01	6.57	
09/15/2015 18:45	0.76	0.86	0.01	6.49	
09/15/2015 18:30	0.76	0.87	0.01	6.57	
09/15/2015 18:15	0.76	0.87	0.01	6.57	
09/15/2015 18:00	0.76	0.86	0.01	6.49	
09/15/2015 17:45	0.87	0.84	0.01	7.73	
09/15/2015 17:30	0.93	0.87	0.01	8.83	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/15/2015 17:15	0.93	0.87	0.01	8.83	
09/15/2015 17:00	0.93	0.87	0.01	8.83	
09/15/2015 16:45	0.97	0.89	0.01	9.60	
09/15/2015 16:30	0.79	0.89	0.01	7.11	
09/15/2015 16:15	0.79	0.87	0.01	6.95	
09/15/2015 16:00	0.76	0.79	0.01	5.96	
09/15/2015 15:45	0.76	0.79	0.01	5.96	
09/15/2015 15:30	0.76	0.79	0.01	5.96	
09/15/2015 15:15	0.76	0.79	0.01	5.96	
09/15/2015 15:00	0.78	0.81	0.01	6.35	
09/15/2015 14:45	0.78	0.81	0.01	6.35	
09/15/2015 14:30	0.76	0.77	0.01	5.81	
09/15/2015 14:15	0.75	0.74	0.01	5.48	
09/15/2015 14:00	0.76	0.77	0.01	5.81	
09/15/2015 13:45	0.76	0.77	0.01	5.81	
09/15/2015 13:30	0.90	0.94	0.01	9.09	
09/15/2015 13:15	0.90	0.94	0.01	9.09	
09/15/2015 13:00	0.96	0.95	0.01	10.10	
09/15/2015 12:45	0.96	0.95	0.01	10.10	
09/15/2015 12:30	0.96	0.95	0.01	10.10	
09/15/2015 12:15	0.90	0.94	0.01	9.09	
09/15/2015 12:00	1.00	0.95	0.02	10.72	
09/15/2015 11:45	1.00	0.94	0.02	10.60	
09/15/2015 11:30	1.00	0.93	0.02	10.49	
09/15/2015 11:15	0.90	0.87	0.01	8.41	
09/15/2015 11:00	0.76	0.87	0.01	6.57	
09/15/2015 10:45	0.75	0.79	0.01	5.85	
09/15/2015 10:30	0.75	0.79	0.01	5.85	
09/15/2015 10:15	0.76	0.79	0.01	5.96	
09/15/2015 10:00	0.76	0.86	0.01	6.49	
09/15/2015 09:45	0.76	0.86	0.01	6.49	
09/15/2015 09:30	0.80	0.86	0.01	7.00	
09/15/2015 09:15	0.78	0.96	0.01	7.53	
09/15/2015 09:00	0.78	0.82	0.01	6.43	
09/15/2015 08:45	0.78	0.71	0.01	5.57	
09/15/2015 08:30	0.80	0.71	0.01	5.78	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/15/2015 08:15	0.86	0.82	0.01	7.42	
09/15/2015 08:00	0.86	0.77	0.01	6.97	
09/15/2015 07:45	0.91	0.77	0.01	7.57	
09/15/2015 07:30	0.91	0.84	0.01	8.26	
09/15/2015 07:15	1.29	0.95	0.02	15.51	
09/15/2015 07:00	0.76	0.77	0.01	5.81	
09/15/2015 06:45	0.91	0.84	0.01	8.26	
09/15/2015 06:30	0.82	1.14	0.01	9.62	

Utility Systems Science and Software

Report Date: 10/01/2015
Customer: Fuscoe
Group: Newport Beach
SiteID: 507

Statistics for Newport Jamboree Site: 09/15/2015 thru 09/29/2015

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
9/15/2015	6.74	15.51	2.69	0.01	0.02	0.00	0.85	1.14	0.71	0.77	1.29	0.44	9,700	
9/16/2015	6.48	17.51	2.42	0.01	0.03	0.00	0.89	1.47	0.59	0.72	1.21	0.44	9,332	
9/17/2015	8.39	16.84	2.84	0.01	0.02	0.00	0.95	1.42	0.63	0.83	1.11	0.46	12,080	
9/18/2015	6.83	15.09	3.42	0.01	0.02	0.00	0.95	1.48	0.65	0.73	1.09	0.44	9,839	
9/19/2015	5.24	11.74	2.67	0.01	0.02	0.00	0.96	1.77	0.60	0.62	1.14	0.44	7,539	
9/20/2015	4.35	10.62	1.83	0.01	0.02	0.00	0.86	1.77	0.51	0.57	0.94	0.43	6,260	
Week:	**6.34**	**17.51**	**1.83**	**0.01**	**0.03**	**0.00**	**0.91**	**1.77**	**0.51**	**0.71**	**1.29**	**0.43**	**54,751**	
9/21/2015	7.00	21.10	2.36	0.01	0.03	0.00	0.92	1.55	0.57	0.74	1.57	0.41	10,087	
9/22/2015	5.25	17.42	1.63	0.01	0.03	0.00	0.79	1.68	0.50	0.68	1.73	0.41	7,558	
9/23/2015	6.27	10.47	0.00	0.01	0.02	0.00	0.87	1.78	0.00	0.74	1.12	0.41	9,027	
9/24/2015	5.58	18.25	1.69	0.01	0.03	0.00	0.79	1.32	0.47	0.70	1.15	0.43	8,035	
9/25/2015	4.50	9.34	1.76	0.01	0.01	0.00	0.84	1.49	0.51	0.60	0.91	0.43	6,477	
9/26/2015	3.22	6.39	1.72	0.00	0.01	0.00	0.75	1.26	0.46	0.52	0.80	0.43	4,642	
9/27/2015	3.52	6.64	1.79	0.01	0.01	0.00	0.73	1.30	0.54	0.55	0.78	0.43	5,074	
Week:	**5.05**	**21.10**	**0.00**	**0.01**	**0.03**	**0.00**	**0.82**	**1.78**	**0.00**	**0.65**	**1.73**	**0.41**	**50,900**	
9/28/2015	5.17	17.80	0.00	0.01	0.03	0.00	0.88	2.57	0.00	0.64	0.97	0.39	7,445	
9/29/2015	5.96	11.85	2.36	0.01	0.02	0.00	0.96	2.57	0.60	0.67	1.03	0.41	8,581	
Week:	**5.56**	**17.80**	**0.00**	**0.01**	**0.03**	**0.00**	**0.92**	**2.57**	**0.00**	**0.65**	**1.03**	**0.39**	**16,027**	

Utility Systems Science and Software

Report Date: 10/01/2015
Customer: Fuscoe
Group: Newport Beach
SiteID: 506

Raw Data for Newport Santa Barbara Site: 09/15/2015 thru 09/29/2015

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/29/2015 12:30	1.05	3.46	0.06	41.91	
09/29/2015 12:15	1.04	3.46	0.06	41.33	
09/29/2015 12:00	1.05	3.46	0.06	41.91	
09/29/2015 11:45	1.09	3.65	0.07	46.68	
09/29/2015 11:30	1.11	3.82	0.07	50.17	
09/29/2015 11:15	1.12	3.99	0.08	53.09	
09/29/2015 11:00	1.12	3.99	0.08	53.09	
09/29/2015 10:45	1.14	3.99	0.08	54.47	
09/29/2015 10:30	1.19	4.03	0.08	58.55	
09/29/2015 10:15	1.26	3.92	0.09	61.87	
09/29/2015 10:00	1.16	3.80	0.08	53.20	
09/29/2015 09:45	1.16	3.80	0.08	53.20	
09/29/2015 09:30	1.16	3.80	0.08	53.20	
09/29/2015 09:15	1.15	3.80	0.08	52.54	
09/29/2015 09:00	1.15	3.80	0.08	52.54	
09/29/2015 08:45	1.14	3.92	0.08	53.51	
09/29/2015 08:30	1.15	3.97	0.08	54.89	
09/29/2015 08:15	1.15	4.08	0.08	56.41	
09/29/2015 08:00	1.23	4.15	0.09	63.26	
09/29/2015 07:45	1.23	4.15	0.09	63.26	
09/29/2015 07:30	1.23	4.15	0.09	63.26	
09/29/2015 07:15	1.12	3.98	0.08	52.95	
09/29/2015 07:00	1.04	3.66	0.06	43.72	
09/29/2015 06:45	0.86	3.11	0.04	28.14	
09/29/2015 06:30	0.78	2.98	0.03	23.36	
09/29/2015 06:15	0.68	2.91	0.03	18.65	
09/29/2015 06:00	0.64	2.76	0.02	16.17	
09/29/2015 05:45	0.64	2.76	0.02	16.17	
09/29/2015 05:30	0.64	2.59	0.02	15.18	
09/29/2015 05:15	0.66	2.60	0.02	15.94	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/29/2015 05:00	0.66	2.76	0.02	16.92	
09/29/2015 04:45	0.68	2.77	0.03	17.75	
09/29/2015 04:30	0.68	2.60	0.02	16.66	
09/29/2015 04:15	0.66	2.60	0.02	15.94	
09/29/2015 04:00	0.48	2.35	0.01	9.00	
09/29/2015 03:45	0.48	2.31	0.01	8.85	
09/29/2015 03:30	0.48	2.28	0.01	8.73	
09/29/2015 03:15	0.48	2.28	0.01	8.73	
09/29/2015 03:00	0.46	2.31	0.01	8.31	
09/29/2015 02:45	0.46	1.68	0.01	6.04	
09/29/2015 02:30	0.46	1.61	0.01	5.79	
09/29/2015 02:15	0.46	1.61	0.01	5.79	
09/29/2015 02:00	0.46	1.61	0.01	5.79	
09/29/2015 01:45	0.46	1.61	0.01	5.79	
09/29/2015 01:30	0.50	2.31	0.01	9.40	
09/29/2015 01:15	0.51	2.47	0.01	10.35	
09/29/2015 01:00	0.72	2.65	0.03	18.47	
09/29/2015 00:45	0.72	2.65	0.03	18.47	
09/29/2015 00:30	0.73	2.74	0.03	19.49	
09/29/2015 00:15	0.76	2.65	0.03	20.00	
09/29/2015 00:00	0.79	2.65	0.03	21.17	
09/28/2015 23:45	0.91	3.18	0.05	31.25	
09/28/2015 23:30	0.91	3.18	0.05	31.25	
09/28/2015 23:15	0.91	3.19	0.05	31.35	
09/28/2015 23:00	0.91	3.20	0.05	31.45	
09/28/2015 22:45	0.91	3.25	0.05	31.94	
09/28/2015 22:30	0.91	3.42	0.05	33.61	
09/28/2015 22:15	0.93	3.45	0.05	35.00	
09/28/2015 22:00	0.91	3.45	0.05	33.91	
09/28/2015 21:45	0.91	3.45	0.05	33.91	
09/28/2015 21:30	0.89	3.37	0.05	32.06	
09/28/2015 21:15	0.83	3.04	0.04	26.11	
09/28/2015 21:00	0.79	2.96	0.03	23.65	
09/28/2015 20:45	0.79	2.96	0.03	23.65	
09/28/2015 20:30	0.79	2.96	0.03	23.65	
09/28/2015 20:15	0.86	3.19	0.04	28.86	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/28/2015 20:00	0.86	3.19	0.04	28.86	
09/28/2015 19:45	0.86	3.19	0.04	28.86	
09/28/2015 19:30	0.86	3.06	0.04	27.69	
09/28/2015 19:15	0.86	3.06	0.04	27.69	
09/28/2015 19:00	0.86	3.06	0.04	27.69	
09/28/2015 18:45	0.89	3.45	0.05	32.82	
09/28/2015 18:30	0.93	3.45	0.05	35.00	
09/28/2015 18:15	1.08	3.61	0.07	45.56	
09/28/2015 18:00	1.12	3.61	0.07	48.03	
09/28/2015 17:45	1.12	3.61	0.07	48.03	
09/28/2015 17:30	1.12	3.61	0.07	48.03	
09/28/2015 17:15	1.03	3.61	0.06	42.52	
09/28/2015 17:00	0.87	3.53	0.05	32.48	
09/28/2015 16:45	0.87	3.52	0.05	32.39	
09/28/2015 16:30	0.93	3.52	0.05	35.71	
09/28/2015 16:15	0.89	3.23	0.04	30.73	
09/28/2015 16:00	0.93	3.48	0.05	35.31	
09/28/2015 15:45	0.93	3.48	0.05	35.31	
09/28/2015 15:30	0.93	3.31	0.05	33.58	
09/28/2015 15:15	0.93	3.20	0.05	32.47	
09/28/2015 15:00	0.93	3.20	0.05	32.47	
09/28/2015 14:45	0.91	3.03	0.04	29.78	
09/28/2015 14:30	0.89	3.02	0.04	28.73	
09/28/2015 14:15	0.89	3.02	0.04	28.73	
09/28/2015 14:00	0.89	3.02	0.04	28.73	
09/28/2015 13:45	0.97	3.02	0.05	32.59	
09/28/2015 13:30	1.04	3.32	0.06	39.66	
09/28/2015 13:15	1.08	3.62	0.07	45.68	
09/28/2015 13:00	1.08	3.62	0.07	45.68	
09/28/2015 12:45	1.04	3.62	0.06	43.24	
09/28/2015 12:30	1.04	3.68	0.06	43.95	
09/28/2015 12:15	1.04	3.68	0.06	43.95	
09/28/2015 12:00	1.04	3.51	0.06	41.92	
09/28/2015 11:45	1.04	3.36	0.06	40.13	
09/28/2015 11:30	1.04	3.37	0.06	40.25	
09/28/2015 11:15	1.05	3.37	0.06	40.82	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/28/2015 11:00	1.05	3.37	0.06	40.82	
09/28/2015 10:45	1.11	3.56	0.07	46.75	
09/28/2015 10:30	1.22	3.60	0.08	54.23	
09/28/2015 10:15	1.23	3.68	0.08	56.09	
09/28/2015 10:00	1.26	3.74	0.09	59.03	
09/28/2015 09:45	1.26	3.82	0.09	60.29	
09/28/2015 09:30	1.32	3.95	0.10	66.68	
09/28/2015 09:15	1.32	4.48	0.11	75.63	
09/28/2015 09:00	1.32	4.48	0.11	75.63	
09/28/2015 08:45	1.32	4.48	0.11	75.63	
09/28/2015 08:30	1.19	4.02	0.08	58.41	
09/28/2015 08:15	1.19	3.91	0.08	56.81	
09/28/2015 08:00	1.14	3.90	0.08	53.24	
09/28/2015 07:45	1.14	3.85	0.08	52.56	
09/28/2015 07:30	1.05	3.85	0.07	46.63	
09/28/2015 07:15	1.05	3.48	0.06	42.15	
09/28/2015 07:00	1.03	3.25	0.06	38.28	
09/28/2015 06:45	0.78	2.95	0.03	23.13	
09/28/2015 06:30	0.73	2.78	0.03	19.77	
09/28/2015 06:15	0.65	2.51	0.02	15.05	
09/28/2015 06:00	0.64	2.38	0.02	13.95	
09/28/2015 05:45	0.53	2.33	0.01	10.33	
09/28/2015 05:30	0.53	2.33	0.01	10.33	
09/28/2015 05:15	0.53	2.34	0.01	10.38	
09/28/2015 05:00	0.53	2.33	0.01	10.33	
09/28/2015 04:45	0.51	2.33	0.01	9.76	
09/28/2015 04:30	0.51	2.34	0.01	9.80	
09/28/2015 04:15	0.51	2.33	0.01	9.76	
09/28/2015 04:00	0.51	2.33	0.01	9.76	
09/28/2015 03:45	0.51	2.33	0.01	9.76	
09/28/2015 03:30	0.53	2.39	0.02	10.60	
09/28/2015 03:15	0.53	2.33	0.01	10.33	
09/28/2015 03:00	0.53	2.38	0.02	10.56	
09/28/2015 02:45	0.51	2.38	0.01	9.97	
09/28/2015 02:30	0.53	2.46	0.02	10.91	
09/28/2015 02:15	0.53	2.41	0.02	10.69	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/28/2015 02:00	0.55	2.42	0.02	11.34	
09/28/2015 01:45	0.58	2.49	0.02	12.62	
09/28/2015 01:30	0.58	2.49	0.02	12.62	
09/28/2015 01:15	0.64	2.44	0.02	14.30	
09/28/2015 01:00	0.65	2.67	0.02	16.01	
09/28/2015 00:45	0.66	2.78	0.02	17.05	
09/28/2015 00:30	0.66	2.67	0.02	16.37	
09/28/2015 00:15	0.66	2.67	0.02	16.37	
09/28/2015 00:00	0.69	2.78	0.03	18.20	
09/27/2015 23:45	0.66	2.67	0.02	16.37	
09/27/2015 23:30	0.69	2.67	0.03	17.48	
09/27/2015 23:15	0.69	2.79	0.03	18.27	
09/27/2015 23:00	0.82	2.92	0.04	24.64	
09/27/2015 22:45	1.03	3.61	0.06	42.52	
09/27/2015 22:30	1.08	3.80	0.07	47.95	
09/27/2015 22:15	1.08	3.80	0.07	47.95	
09/27/2015 22:00	1.03	3.61	0.06	42.52	
09/27/2015 21:45	0.97	3.46	0.05	37.33	
09/27/2015 21:30	0.97	3.37	0.05	36.36	
09/27/2015 21:15	0.93	3.37	0.05	34.19	
09/27/2015 21:00	0.96	3.37	0.05	35.82	
09/27/2015 20:45	0.96	3.37	0.05	35.82	
09/27/2015 20:30	0.93	3.09	0.05	31.35	
09/27/2015 20:15	0.93	3.09	0.05	31.35	
09/27/2015 20:00	0.79	3.08	0.04	24.60	
09/27/2015 19:45	0.79	2.69	0.03	21.49	
09/27/2015 19:30	0.79	3.08	0.04	24.60	
09/27/2015 19:15	0.79	3.12	0.04	24.92	
09/27/2015 19:00	0.82	3.12	0.04	26.32	
09/27/2015 18:45	0.89	3.12	0.04	29.68	
09/27/2015 18:30	0.93	3.12	0.05	31.65	
09/27/2015 18:15	0.89	3.09	0.04	29.40	
09/27/2015 18:00	0.93	3.09	0.05	31.35	
09/27/2015 17:45	0.93	3.09	0.05	31.35	
09/27/2015 17:30	1.07	3.61	0.06	44.94	
09/27/2015 17:15	1.07	3.61	0.06	44.94	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/27/2015 17:00	1.07	3.67	0.07	45.69	
09/27/2015 16:45	1.07	3.67	0.07	45.69	
09/27/2015 16:30	1.03	3.65	0.06	42.99	
09/27/2015 16:15	1.03	3.65	0.06	42.99	
09/27/2015 16:00	1.07	3.86	0.07	48.05	
09/27/2015 15:45	1.07	3.65	0.07	45.44	
09/27/2015 15:30	1.16	3.89	0.08	54.46	
09/27/2015 15:15	1.16	3.89	0.08	54.46	
09/27/2015 15:00	1.21	3.92	0.08	58.35	
09/27/2015 14:45	1.16	3.80	0.08	53.20	
09/27/2015 14:30	1.16	3.80	0.08	53.20	
09/27/2015 14:15	1.18	3.80	0.08	54.54	
09/27/2015 14:00	1.23	3.97	0.09	60.51	
09/27/2015 13:45	1.19	3.74	0.08	54.34	
09/27/2015 13:30	1.23	3.82	0.08	58.23	
09/27/2015 13:15	1.26	3.82	0.09	60.29	
09/27/2015 13:00	1.26	3.82	0.09	60.29	
09/27/2015 12:45	1.26	3.82	0.09	60.29	
09/27/2015 12:30	1.28	3.92	0.09	63.30	
09/27/2015 12:15	1.28	4.01	0.09	64.75	
09/27/2015 12:00	1.26	4.07	0.09	64.24	
09/27/2015 11:45	1.21	4.07	0.09	60.58	
09/27/2015 11:30	1.43	4.38	0.12	82.99	
09/27/2015 11:15	1.43	4.29	0.12	81.28	
09/27/2015 11:00	1.36	4.21	0.11	74.20	
09/27/2015 10:45	1.36	4.21	0.11	74.20	
09/27/2015 10:30	1.36	4.21	0.11	74.20	
09/27/2015 10:15	1.26	4.21	0.10	66.45	
09/27/2015 10:00	1.22	4.09	0.09	61.61	
09/27/2015 09:45	1.16	3.97	0.08	55.58	
09/27/2015 09:30	1.19	3.83	0.08	55.65	
09/27/2015 09:15	1.19	3.97	0.08	57.68	
09/27/2015 09:00	1.19	3.97	0.08	57.68	
09/27/2015 08:45	1.19	3.97	0.08	57.68	
09/27/2015 08:30	1.19	3.89	0.08	56.52	
09/27/2015 08:15	1.09	3.89	0.07	49.75	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/27/2015 08:00	1.09	3.89	0.07	49.75	
09/27/2015 07:45	1.08	3.54	0.06	44.67	
09/27/2015 07:30	1.08	3.45	0.06	43.54	
09/27/2015 07:15	1.08	3.45	0.06	43.54	
09/27/2015 07:00	1.08	3.45	0.06	43.54	
09/27/2015 06:45	1.05	3.16	0.06	38.27	
09/27/2015 06:30	0.86	3.16	0.04	28.59	
09/27/2015 06:15	0.75	3.16	0.03	23.39	
09/27/2015 06:00	0.64	2.58	0.02	15.12	
09/27/2015 05:45	0.61	2.50	0.02	13.65	
09/27/2015 05:30	0.59	2.47	0.02	12.84	
09/27/2015 05:15	0.55	2.32	0.02	10.87	
09/27/2015 05:00	0.53	2.28	0.01	10.11	
09/27/2015 04:45	0.53	2.24	0.01	9.93	
09/27/2015 04:30	0.53	2.28	0.01	10.11	
09/27/2015 04:15	0.53	2.22	0.01	9.85	
09/27/2015 04:00	0.54	2.22	0.01	10.12	
09/27/2015 03:45	0.54	2.27	0.01	10.35	
09/27/2015 03:30	0.54	2.29	0.02	10.44	
09/27/2015 03:15	0.54	2.29	0.02	10.44	
09/27/2015 03:00	0.58	2.34	0.02	11.86	
09/27/2015 02:45	0.58	2.34	0.02	11.86	
09/27/2015 02:30	0.58	2.34	0.02	11.86	
09/27/2015 02:15	0.58	2.40	0.02	12.16	
09/27/2015 02:00	0.62	2.52	0.02	14.09	
09/27/2015 01:45	0.64	2.52	0.02	14.77	
09/27/2015 01:30	0.65	2.66	0.02	15.95	
09/27/2015 01:15	0.71	2.69	0.03	18.37	
09/27/2015 01:00	0.79	2.76	0.03	22.05	
09/27/2015 00:45	0.83	3.04	0.04	26.11	
09/27/2015 00:30	0.79	3.03	0.03	24.20	
09/27/2015 00:15	0.97	3.19	0.05	34.42	
09/27/2015 00:00	0.97	3.20	0.05	34.53	
09/26/2015 23:45	0.97	3.20	0.05	34.53	
09/26/2015 23:30	0.97	3.20	0.05	34.53	
09/26/2015 23:15	1.05	3.21	0.06	38.88	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/26/2015 23:00	1.05	3.36	0.06	40.70	
09/26/2015 22:45	1.05	3.36	0.06	40.70	
09/26/2015 22:30	1.04	3.36	0.06	40.13	
09/26/2015 22:15	1.04	3.36	0.06	40.13	
09/26/2015 22:00	1.04	3.36	0.06	40.13	
09/26/2015 21:45	1.00	3.30	0.05	37.23	
09/26/2015 21:30	1.00	3.30	0.05	37.23	
09/26/2015 21:15	1.04	3.30	0.06	39.42	
09/26/2015 21:00	1.04	3.56	0.06	42.52	
09/26/2015 20:45	1.07	3.56	0.06	44.32	
09/26/2015 20:30	1.07	3.56	0.06	44.32	
09/26/2015 20:15	1.07	3.56	0.06	44.32	
09/26/2015 20:00	0.87	3.51	0.05	32.30	
09/26/2015 19:45	0.87	3.47	0.05	31.93	
09/26/2015 19:30	0.87	3.38	0.04	31.10	
09/26/2015 19:15	0.87	3.38	0.04	31.10	
09/26/2015 19:00	1.11	3.42	0.06	44.91	
09/26/2015 18:45	1.11	3.42	0.06	44.91	
09/26/2015 18:30	1.12	3.73	0.07	49.63	
09/26/2015 18:15	1.12	3.73	0.07	49.63	
09/26/2015 18:00	1.12	3.73	0.07	49.63	
09/26/2015 17:45	1.09	3.57	0.07	45.66	
09/26/2015 17:30	1.09	3.56	0.07	45.53	
09/26/2015 17:15	1.08	3.35	0.06	42.27	
09/26/2015 17:00	1.04	3.35	0.06	40.01	
09/26/2015 16:45	1.00	3.56	0.06	40.16	
09/26/2015 16:30	1.00	3.35	0.05	37.79	
09/26/2015 16:15	1.00	3.35	0.05	37.79	
09/26/2015 16:00	1.04	3.76	0.06	44.91	
09/26/2015 15:45	1.12	3.83	0.07	50.96	
09/26/2015 15:30	1.12	3.83	0.07	50.96	
09/26/2015 15:15	1.14	3.83	0.08	52.28	
09/26/2015 15:00	1.14	3.75	0.07	51.19	
09/26/2015 14:45	1.14	3.75	0.07	51.19	
09/26/2015 14:30	1.14	3.58	0.07	48.87	
09/26/2015 14:15	1.14	3.61	0.07	49.28	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/26/2015 14:00	1.08	3.58	0.07	45.18	
09/26/2015 13:45	1.04	3.58	0.06	42.76	
09/26/2015 13:30	1.04	3.54	0.06	42.28	
09/26/2015 13:15	1.04	3.44	0.06	41.09	
09/26/2015 13:00	1.04	3.44	0.06	41.09	
09/26/2015 12:45	1.05	3.54	0.06	42.88	
09/26/2015 12:30	1.08	3.65	0.07	46.06	
09/26/2015 12:15	1.08	3.65	0.07	46.06	
09/26/2015 12:00	1.08	3.65	0.07	46.06	
09/26/2015 11:45	1.08	3.76	0.07	47.45	
09/26/2015 11:30	1.16	3.31	0.07	46.34	
09/26/2015 11:15	1.18	3.31	0.07	47.51	
09/26/2015 11:00	1.18	3.16	0.07	45.35	
09/26/2015 10:45	1.18	4.04	0.08	57.98	
09/26/2015 10:30	1.15	3.44	0.07	47.56	
09/26/2015 10:15	1.14	3.86	0.08	52.69	
09/26/2015 10:00	1.14	3.86	0.08	52.69	
09/26/2015 09:45	1.15	3.86	0.08	53.37	
09/26/2015 09:30	1.15	3.75	0.07	51.85	
09/26/2015 09:15	1.14	3.86	0.08	52.69	
09/26/2015 09:00	1.09	3.75	0.07	47.96	
09/26/2015 08:45	1.09	3.71	0.07	47.45	
09/26/2015 08:30	1.09	3.61	0.07	46.17	
09/26/2015 08:15	1.11	3.59	0.07	47.15	
09/26/2015 08:00	1.11	3.43	0.06	45.04	
09/26/2015 07:45	1.11	3.30	0.06	43.34	
09/26/2015 07:30	0.98	3.23	0.05	35.38	
09/26/2015 07:15	0.93	3.23	0.05	32.77	
09/26/2015 07:00	0.79	3.04	0.03	24.28	
09/26/2015 06:45	0.76	2.93	0.03	22.11	
09/26/2015 06:30	0.71	2.70	0.03	18.44	
09/26/2015 06:15	0.66	2.61	0.02	16.00	
09/26/2015 06:00	0.64	2.46	0.02	14.42	
09/26/2015 05:45	0.55	2.36	0.02	11.06	
09/26/2015 05:30	0.61	2.46	0.02	13.43	
09/26/2015 05:15	0.61	2.52	0.02	13.76	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/26/2015 05:00	0.51	2.35	0.01	9.85	
09/26/2015 04:45	0.61	2.52	0.02	13.76	
09/26/2015 04:30	0.64	2.60	0.02	15.24	
09/26/2015 04:15	0.72	2.77	0.03	19.31	
09/26/2015 04:00	0.72	2.77	0.03	19.31	
09/26/2015 03:45	0.72	2.77	0.03	19.31	
09/26/2015 03:30	0.59	2.37	0.02	12.32	
09/26/2015 03:15	0.53	2.29	0.01	10.16	
09/26/2015 03:00	0.53	2.26	0.01	10.02	
09/26/2015 02:45	0.53	2.29	0.01	10.16	
09/26/2015 02:30	0.53	2.29	0.01	10.16	
09/26/2015 02:15	0.53	2.24	0.01	9.93	
09/26/2015 02:00	0.53	2.29	0.01	10.16	
09/26/2015 01:45	0.53	2.40	0.02	10.64	
09/26/2015 01:30	0.62	2.41	0.02	13.48	
09/26/2015 01:15	0.64	2.41	0.02	14.12	
09/26/2015 01:00	0.66	2.52	0.02	15.45	
09/26/2015 00:45	0.66	2.60	0.02	15.94	
09/26/2015 00:30	0.94	3.22	0.05	33.18	
09/26/2015 00:15	0.83	3.10	0.04	26.63	
09/26/2015 00:00	0.83	3.10	0.04	26.63	
09/25/2015 23:45	0.83	3.10	0.04	26.63	
09/25/2015 23:30	0.82	3.05	0.04	25.73	
09/25/2015 23:15	0.80	3.05	0.04	24.82	
09/25/2015 23:00	0.80	3.05	0.04	24.82	
09/25/2015 22:45	0.80	3.05	0.04	24.82	
09/25/2015 22:30	0.82	3.20	0.04	27.00	
09/25/2015 22:15	1.00	3.37	0.05	38.01	
09/25/2015 22:00	1.03	3.55	0.06	41.81	
09/25/2015 21:45	1.00	3.37	0.05	38.01	
09/25/2015 21:30	1.00	3.37	0.05	38.01	
09/25/2015 21:15	0.93	3.35	0.05	33.99	
09/25/2015 21:00	0.90	3.29	0.05	31.82	
09/25/2015 20:45	0.86	3.25	0.04	29.41	
09/25/2015 20:30	0.82	3.08	0.04	25.99	
09/25/2015 20:15	0.90	3.14	0.04	30.37	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/25/2015 20:00	0.89	3.08	0.04	29.30	
09/25/2015 19:45	0.89	3.08	0.04	29.30	
09/25/2015 19:30	0.96	3.14	0.05	33.37	
09/25/2015 19:15	0.96	3.38	0.05	35.92	
09/25/2015 19:00	1.05	3.41	0.06	41.30	
09/25/2015 18:45	1.05	3.41	0.06	41.30	
09/25/2015 18:30	1.05	3.38	0.06	40.94	
09/25/2015 18:15	1.04	3.22	0.06	38.46	
09/25/2015 18:00	1.04	3.22	0.06	38.46	
09/25/2015 17:45	1.04	3.22	0.06	38.46	
09/25/2015 17:30	1.04	3.54	0.06	42.28	
09/25/2015 17:15	1.04	3.54	0.06	42.28	
09/25/2015 17:00	1.04	3.67	0.06	43.84	
09/25/2015 16:45	1.00	3.54	0.06	39.93	
09/25/2015 16:30	1.03	3.58	0.06	42.16	
09/25/2015 16:15	1.04	3.58	0.06	42.76	
09/25/2015 16:00	1.09	3.58	0.07	45.79	
09/25/2015 15:45	1.03	3.58	0.06	42.16	
09/25/2015 15:30	1.09	3.59	0.07	45.91	
09/25/2015 15:15	1.11	3.87	0.07	50.82	
09/25/2015 15:00	1.11	3.89	0.07	51.08	
09/25/2015 14:45	1.09	3.89	0.07	49.75	
09/25/2015 14:30	1.14	4.12	0.08	56.24	
09/25/2015 14:15	1.14	4.12	0.08	56.24	
09/25/2015 14:00	1.11	3.42	0.06	44.91	
09/25/2015 13:45	1.11	3.25	0.06	42.68	
09/25/2015 13:30	1.12	3.42	0.07	45.50	
09/25/2015 13:15	1.11	3.25	0.06	42.68	
09/25/2015 13:00	1.08	3.42	0.06	43.16	
09/25/2015 12:45	1.07	3.57	0.06	44.44	
09/25/2015 12:30	1.07	3.73	0.07	46.44	
09/25/2015 12:15	1.00	3.57	0.06	40.27	
09/25/2015 12:00	0.98	3.57	0.06	39.10	
09/25/2015 11:45	0.98	3.57	0.06	39.10	
09/25/2015 11:30	1.14	3.84	0.08	52.42	
09/25/2015 11:15	1.14	3.71	0.07	50.65	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/25/2015 11:00	1.14	3.71	0.07	50.65	
09/25/2015 10:45	1.15	3.84	0.08	53.09	
09/25/2015 10:30	1.19	4.03	0.08	58.55	
09/25/2015 10:15	1.19	4.03	0.08	58.55	
09/25/2015 10:00	1.34	4.29	0.11	74.01	
09/25/2015 09:45	1.34	4.29	0.11	74.01	
09/25/2015 09:30	1.41	4.32	0.12	80.21	
09/25/2015 09:15	1.43	4.32	0.12	81.85	
09/25/2015 09:00	1.34	3.92	0.10	67.63	
09/25/2015 08:45	1.23	3.92	0.09	59.75	
09/25/2015 08:30	1.23	4.26	0.09	64.93	
09/25/2015 08:15	1.21	3.76	0.08	55.97	
09/25/2015 08:00	1.21	3.87	0.08	57.60	
09/25/2015 07:45	1.21	3.87	0.08	57.60	
09/25/2015 07:30	1.16	3.82	0.08	53.48	
09/25/2015 07:15	1.05	3.42	0.06	41.42	
09/25/2015 07:00	0.80	3.01	0.04	24.49	
09/25/2015 06:45	0.79	2.94	0.03	23.49	
09/25/2015 06:30	0.75	2.84	0.03	21.02	
09/25/2015 06:15	0.75	2.77	0.03	20.50	
09/25/2015 06:00	0.72	2.72	0.03	18.96	
09/25/2015 05:45	0.68	2.68	0.02	17.17	
09/25/2015 05:30	0.68	2.65	0.02	16.98	
09/25/2015 05:15	0.59	2.57	0.02	13.36	
09/25/2015 05:00	0.58	2.57	0.02	13.02	
09/25/2015 04:45	0.58	2.37	0.02	12.01	
09/25/2015 04:30	0.57	2.36	0.02	11.66	
09/25/2015 04:15	0.53	2.34	0.01	10.38	
09/25/2015 04:00	0.50	2.10	0.01	8.54	
09/25/2015 03:45	0.50	2.10	0.01	8.54	
09/25/2015 03:30	0.48	2.15	0.01	8.23	
09/25/2015 03:15	0.48	2.15	0.01	8.23	
09/25/2015 03:00	0.48	2.11	0.01	8.08	
09/25/2015 02:45	0.48	2.14	0.01	8.20	
09/25/2015 02:30	0.48	2.14	0.01	8.20	
09/25/2015 02:15	0.48	2.14	0.01	8.20	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/25/2015 02:00	0.48	2.20	0.01	8.43	
09/25/2015 01:45	0.51	2.33	0.01	9.76	
09/25/2015 01:30	0.55	2.38	0.02	11.15	
09/25/2015 01:15	0.65	2.63	0.02	15.77	
09/25/2015 01:00	0.69	2.63	0.02	17.22	
09/25/2015 00:45	0.71	2.66	0.03	18.16	
09/25/2015 00:30	0.72	2.73	0.03	19.03	
09/25/2015 00:15	0.72	3.03	0.03	21.12	
09/25/2015 00:00	0.87	3.03	0.04	27.88	
09/24/2015 23:45	0.97	3.04	0.05	32.80	
09/24/2015 23:30	1.09	3.10	0.06	39.65	
09/24/2015 23:15	1.09	3.31	0.06	42.33	
09/24/2015 23:00	1.09	3.37	0.06	43.10	
09/24/2015 22:45	1.04	3.37	0.06	40.25	
09/24/2015 22:30	0.90	3.37	0.05	32.59	
09/24/2015 22:15	0.90	3.34	0.05	32.30	
09/24/2015 22:00	0.89	3.24	0.04	30.82	
09/24/2015 21:45	0.96	3.24	0.05	34.43	
09/24/2015 21:30	0.93	3.34	0.05	33.89	
09/24/2015 21:15	0.96	3.34	0.05	35.50	
09/24/2015 21:00	0.96	3.16	0.05	33.58	
09/24/2015 20:45	1.08	3.62	0.07	45.68	
09/24/2015 20:30	1.09	3.52	0.06	45.02	
09/24/2015 20:15	1.12	3.52	0.07	46.83	
09/24/2015 20:00	1.12	3.57	0.07	47.50	
09/24/2015 19:45	1.09	3.57	0.07	45.66	
09/24/2015 19:30	0.97	3.52	0.05	37.98	
09/24/2015 19:15	0.96	3.57	0.05	37.94	
09/24/2015 19:00	0.96	3.57	0.05	37.94	
09/24/2015 18:45	0.96	3.57	0.05	37.94	
09/24/2015 18:30	0.97	3.57	0.06	38.52	
09/24/2015 18:15	0.96	3.57	0.05	37.94	
09/24/2015 18:00	0.96	3.37	0.05	35.82	
09/24/2015 17:45	0.96	3.37	0.05	35.82	
09/24/2015 17:30	0.98	3.37	0.05	36.91	
09/24/2015 17:15	1.00	3.70	0.06	41.74	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/24/2015 17:00	1.00	3.70	0.06	41.74	
09/24/2015 16:45	1.05	3.70	0.06	44.81	
09/24/2015 16:30	1.05	3.65	0.06	44.21	
09/24/2015 16:15	0.98	3.58	0.06	39.21	
09/24/2015 16:00	0.93	3.31	0.05	33.58	
09/24/2015 15:45	0.90	3.25	0.05	31.43	
09/24/2015 15:30	0.90	3.25	0.05	31.43	
09/24/2015 15:15	0.90	3.25	0.05	31.43	
09/24/2015 15:00	1.08	3.36	0.06	42.40	
09/24/2015 14:45	1.08	3.36	0.06	42.40	
09/24/2015 14:30	1.08	3.36	0.06	42.40	
09/24/2015 14:15	0.91	3.36	0.05	33.02	
09/24/2015 14:00	0.91	3.46	0.05	34.01	
09/24/2015 13:45	0.91	3.46	0.05	34.01	
09/24/2015 13:30	1.04	3.63	0.06	43.36	
09/24/2015 13:15	1.04	3.63	0.06	43.36	
09/24/2015 13:00	1.04	3.63	0.06	43.36	
09/24/2015 12:45	1.04	3.88	0.07	46.34	
09/24/2015 12:30	1.11	3.88	0.07	50.95	
09/24/2015 12:15	1.12	3.95	0.08	52.55	
09/24/2015 12:00	1.12	3.95	0.08	52.55	
09/24/2015 11:45	1.12	3.95	0.08	52.55	
09/24/2015 11:30	1.12	3.46	0.07	46.03	
09/24/2015 11:15	1.11	3.46	0.07	45.44	
09/24/2015 11:00	1.11	3.46	0.07	45.44	
09/24/2015 10:45	1.12	3.46	0.07	46.03	
09/24/2015 10:30	1.12	3.69	0.07	49.09	
09/24/2015 10:15	1.12	3.76	0.07	50.03	
09/24/2015 10:00	1.14	3.80	0.07	51.88	
09/24/2015 09:45	1.14	3.80	0.07	51.88	
09/24/2015 09:30	1.14	3.96	0.08	54.06	
09/24/2015 09:15	1.18	3.96	0.08	56.84	
09/24/2015 09:00	1.18	3.96	0.08	56.84	
09/24/2015 08:45	1.21	3.98	0.09	59.24	
09/24/2015 08:30	1.21	4.14	0.09	61.62	
09/24/2015 08:15	1.21	4.14	0.09	61.62	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/24/2015 08:00	1.22	4.17	0.09	62.81	
09/24/2015 07:45	1.28	4.17	0.10	67.33	
09/24/2015 07:30	1.28	3.98	0.09	64.27	
09/24/2015 07:15	1.21	3.94	0.08	58.65	
09/24/2015 07:00	1.18	3.94	0.08	56.55	
09/24/2015 06:45	1.14	3.87	0.08	52.83	
09/24/2015 06:30	0.97	3.76	0.06	40.57	
09/24/2015 06:15	0.79	3.30	0.04	26.36	
09/24/2015 06:00	0.72	2.92	0.03	20.35	
09/24/2015 05:45	0.71	2.90	0.03	19.80	
09/24/2015 05:30	0.51	2.18	0.01	9.13	
09/24/2015 05:15	0.51	2.14	0.01	8.97	
09/24/2015 05:00	0.51	2.14	0.01	8.97	
09/24/2015 04:45	0.51	2.01	0.01	8.42	
09/24/2015 04:30	0.51	2.06	0.01	8.63	
09/24/2015 04:15	0.51	2.06	0.01	8.63	
09/24/2015 04:00	0.51	2.06	0.01	8.63	
09/24/2015 03:45	0.51	2.01	0.01	8.42	
09/24/2015 03:30	0.50	1.99	0.01	8.10	
09/24/2015 03:15	0.48	1.73	0.01	6.63	
09/24/2015 03:00	0.47	1.73	0.01	6.42	
09/24/2015 02:45	0.47	1.73	0.01	6.42	
09/24/2015 02:30	0.48	2.06	0.01	7.89	
09/24/2015 02:15	0.66	2.73	0.02	16.74	
09/24/2015 02:00	0.73	2.80	0.03	19.92	
09/24/2015 01:45	0.79	2.81	0.03	22.45	
09/24/2015 01:30	0.79	2.88	0.03	23.01	
09/24/2015 01:15	0.79	2.88	0.03	23.01	
09/24/2015 01:00	0.79	2.81	0.03	22.45	
09/24/2015 00:45	0.64	2.69	0.02	15.76	
09/24/2015 00:30	0.64	2.69	0.02	15.76	
09/24/2015 00:15	0.64	2.69	0.02	15.76	
09/24/2015 00:00	0.78	2.73	0.03	21.40	
09/23/2015 23:45	0.78	2.74	0.03	21.48	
09/23/2015 23:30	0.78	2.83	0.03	22.19	
09/23/2015 23:15	0.91	3.45	0.05	33.91	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/23/2015 23:00	0.98	3.55	0.06	38.88	
09/23/2015 22:45	0.98	3.55	0.06	38.88	
09/23/2015 22:30	0.98	3.55	0.06	38.88	
09/23/2015 22:15	0.96	3.38	0.05	35.92	
09/23/2015 22:00	0.96	3.38	0.05	35.92	
09/23/2015 21:45	0.90	2.99	0.04	28.92	
09/23/2015 21:30	0.90	2.99	0.04	28.92	
09/23/2015 21:15	0.97	3.47	0.05	37.44	
09/23/2015 21:00	0.97	3.47	0.05	37.44	
09/23/2015 20:45	0.97	3.47	0.05	37.44	
09/23/2015 20:30	1.04	3.56	0.06	42.52	
09/23/2015 20:15	1.12	3.78	0.07	50.29	
09/23/2015 20:00	1.12	3.78	0.07	50.29	
09/23/2015 19:45	1.12	3.78	0.07	50.29	
09/23/2015 19:30	0.94	3.71	0.06	38.23	
09/23/2015 19:15	0.94	3.63	0.05	37.41	
09/23/2015 19:00	0.94	3.52	0.05	36.28	
09/23/2015 18:45	0.94	3.52	0.05	36.28	
09/23/2015 18:30	1.04	3.26	0.06	38.94	
09/23/2015 18:15	1.05	3.52	0.06	42.63	
09/23/2015 18:00	1.09	3.26	0.06	41.69	
09/23/2015 17:45	1.15	3.26	0.06	45.07	
09/23/2015 17:30	1.15	3.67	0.07	50.74	
09/23/2015 17:15	1.15	3.67	0.07	50.74	
09/23/2015 17:00	1.14	3.39	0.07	46.28	
09/23/2015 16:45	1.12	3.39	0.06	45.10	
09/23/2015 16:30	1.04	3.39	0.06	40.49	
09/23/2015 16:15	1.00	3.39	0.06	38.24	
09/23/2015 16:00	1.00	3.34	0.05	37.68	
09/23/2015 15:45	1.01	3.56	0.06	40.75	
09/23/2015 15:30	1.04	3.69	0.06	44.07	
09/23/2015 15:15	1.04	3.69	0.06	44.07	
09/23/2015 15:00	1.14	3.72	0.07	50.78	
09/23/2015 14:45	1.15	4.00	0.08	55.30	
09/23/2015 14:30	1.15	4.10	0.08	56.69	
09/23/2015 14:15	1.15	4.00	0.08	55.30	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/23/2015 14:00	1.14	4.00	0.08	54.61	
09/23/2015 13:45	1.15	3.61	0.07	49.91	
09/23/2015 13:30	1.11	3.60	0.07	47.28	
09/23/2015 13:15	1.11	3.48	0.07	45.70	
09/23/2015 13:00	1.11	3.60	0.07	47.28	
09/23/2015 12:45	1.11	3.57	0.07	46.88	
09/23/2015 12:30	1.11	3.57	0.07	46.88	
09/23/2015 12:15	1.11	3.57	0.07	46.88	
09/23/2015 12:00	1.11	3.57	0.07	46.88	
09/23/2015 11:45	1.11	3.57	0.07	46.88	
09/23/2015 11:30	1.11	3.83	0.07	50.30	
09/23/2015 11:15	1.11	3.83	0.07	50.30	
09/23/2015 11:00	1.12	3.83	0.07	50.96	
09/23/2015 10:45	1.12	3.85	0.07	51.22	
09/23/2015 10:30	1.15	3.85	0.08	53.23	
09/23/2015 10:15	1.15	3.91	0.08	54.06	
09/23/2015 10:00	1.16	3.91	0.08	54.74	
09/23/2015 09:45	1.16	3.85	0.08	53.90	
09/23/2015 09:30	1.16	3.42	0.07	47.88	
09/23/2015 09:15	1.14	3.42	0.07	46.69	
09/23/2015 09:00	1.14	3.40	0.07	46.41	
09/23/2015 08:45	1.11	3.42	0.06	44.91	
09/23/2015 08:30	1.11	3.76	0.07	49.38	
09/23/2015 08:15	1.11	3.76	0.07	49.38	
09/23/2015 08:00	1.11	4.05	0.08	53.19	
09/23/2015 07:45	1.11	4.05	0.08	53.19	
09/23/2015 07:30	1.11	3.57	0.07	46.88	
09/23/2015 07:15	1.08	3.57	0.06	45.05	
09/23/2015 07:00	1.00	3.50	0.06	39.48	
09/23/2015 06:45	1.00	3.50	0.06	39.48	
09/23/2015 06:30	0.93	3.50	0.05	35.51	
09/23/2015 06:15	0.75	2.92	0.03	21.61	
09/23/2015 06:00	0.66	2.91	0.03	17.84	
09/23/2015 05:45	0.62	2.62	0.02	14.65	
09/23/2015 05:30	0.54	2.33	0.02	10.62	
09/23/2015 05:15	0.53	2.27	0.01	10.07	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/23/2015 05:00	0.51	2.16	0.01	9.05	
09/23/2015 04:45	0.51	2.04	0.01	8.55	
09/23/2015 04:30	0.51	1.99	0.01	8.34	
09/23/2015 04:15	0.50	1.87	0.01	7.61	
09/23/2015 04:00	0.48	1.87	0.01	7.16	
09/23/2015 03:45	0.47	1.86	0.01	6.91	
09/23/2015 03:30	0.47	1.87	0.01	6.94	
09/23/2015 03:15	0.47	1.92	0.01	7.13	
09/23/2015 03:00	0.71	2.82	0.03	19.25	
09/23/2015 02:45	0.73	3.15	0.03	22.41	
09/23/2015 02:30	0.83	3.15	0.04	27.05	
09/23/2015 02:15	0.83	3.15	0.04	27.05	
09/23/2015 02:00	0.83	3.15	0.04	27.05	
09/23/2015 01:45	0.83	3.15	0.04	27.05	
09/23/2015 01:30	0.54	2.37	0.02	10.81	
09/23/2015 01:15	0.53	2.36	0.02	10.47	
09/23/2015 01:00	0.53	2.36	0.02	10.47	
09/23/2015 00:45	0.53	2.37	0.02	10.51	
09/23/2015 00:30	0.53	2.37	0.02	10.51	
09/23/2015 00:15	0.64	2.77	0.02	16.23	
09/23/2015 00:00	0.97	3.53	0.05	38.09	
09/22/2015 23:45	0.97	3.55	0.06	38.30	
09/22/2015 23:30	1.05	3.55	0.06	43.00	
09/22/2015 23:15	1.05	3.53	0.06	42.76	
09/22/2015 23:00	1.05	3.53	0.06	42.76	
09/22/2015 22:45	1.05	3.55	0.06	43.00	
09/22/2015 22:30	1.05	3.55	0.06	43.00	
09/22/2015 22:15	1.05	3.56	0.06	43.12	
09/22/2015 22:00	1.05	3.67	0.06	44.45	
09/22/2015 21:45	1.05	3.67	0.06	44.45	
09/22/2015 21:30	1.09	3.89	0.07	49.75	
09/22/2015 21:15	1.09	3.97	0.07	50.77	
09/22/2015 21:00	1.09	3.97	0.07	50.77	
09/22/2015 20:45	1.09	3.89	0.07	49.75	
09/22/2015 20:30	1.08	3.72	0.07	46.94	
09/22/2015 20:15	1.08	3.72	0.07	46.94	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/22/2015 20:00	1.00	3.54	0.06	39.93	
09/22/2015 19:45	1.00	3.54	0.06	39.93	
09/22/2015 19:30	1.03	3.66	0.06	43.10	
09/22/2015 19:15	1.03	3.56	0.06	41.93	
09/22/2015 19:00	1.03	3.56	0.06	41.93	
09/22/2015 18:45	1.05	3.63	0.06	43.97	
09/22/2015 18:30	1.03	3.63	0.06	42.75	
09/22/2015 18:15	1.01	3.63	0.06	41.55	
09/22/2015 18:00	1.01	3.63	0.06	41.55	
09/22/2015 17:45	1.01	3.36	0.06	38.46	
09/22/2015 17:30	1.01	3.25	0.05	37.20	
09/22/2015 17:15	1.04	3.25	0.06	38.82	
09/22/2015 17:00	1.08	3.36	0.06	42.40	
09/22/2015 16:45	1.08	3.52	0.06	44.42	
09/22/2015 16:30	1.08	3.55	0.06	44.80	
09/22/2015 16:15	1.08	3.55	0.06	44.80	
09/22/2015 16:00	1.08	3.55	0.06	44.80	
09/22/2015 15:45	1.08	3.52	0.06	44.42	
09/22/2015 15:30	1.08	3.52	0.06	44.42	
09/22/2015 15:15	1.08	3.52	0.06	44.42	
09/22/2015 15:00	1.08	3.66	0.07	46.19	
09/22/2015 14:45	1.09	3.86	0.07	49.37	
09/22/2015 14:30	1.11	3.86	0.07	50.69	
09/22/2015 14:15	1.11	3.86	0.07	50.69	
09/22/2015 14:00	1.09	3.77	0.07	48.22	
09/22/2015 13:45	1.09	3.76	0.07	48.09	
09/22/2015 13:30	1.09	3.76	0.07	48.09	
09/22/2015 13:15	1.09	3.76	0.07	48.09	
09/22/2015 13:00	1.09	3.77	0.07	48.22	
09/22/2015 12:45	1.09	3.80	0.07	48.60	
09/22/2015 12:30	1.09	3.83	0.07	48.98	
09/22/2015 12:15	1.12	3.84	0.07	51.09	
09/22/2015 12:00	1.12	3.84	0.07	51.09	
09/22/2015 11:45	1.12	3.89	0.07	51.76	
09/22/2015 11:30	1.12	3.89	0.07	51.76	
09/22/2015 11:15	1.12	4.03	0.08	53.62	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/22/2015 11:00	1.09	4.03	0.07	51.54	
09/22/2015 10:45	1.09	4.03	0.07	51.54	
09/22/2015 10:30	1.09	3.70	0.07	47.32	
09/22/2015 10:15	1.09	3.70	0.07	47.32	
09/22/2015 10:00	1.09	3.53	0.07	45.15	
09/22/2015 09:45	1.09	3.53	0.07	45.15	
09/22/2015 09:30	1.09	3.53	0.07	45.15	
09/22/2015 09:15	1.11	3.84	0.07	50.43	
09/22/2015 09:00	1.16	3.53	0.07	49.42	
09/22/2015 08:45	1.21	3.98	0.09	59.24	
09/22/2015 08:30	1.21	4.01	0.09	59.69	
09/22/2015 08:15	1.29	4.04	0.10	65.97	
09/22/2015 08:00	1.21	4.04	0.09	60.13	
09/22/2015 07:45	1.14	4.04	0.08	55.15	
09/22/2015 07:30	1.14	4.04	0.08	55.15	
09/22/2015 07:15	1.14	3.98	0.08	54.33	
09/22/2015 07:00	1.12	3.43	0.07	45.64	
09/22/2015 06:45	0.80	3.00	0.04	24.41	
09/22/2015 06:30	0.78	3.00	0.03	23.52	
09/22/2015 06:15	0.69	2.84	0.03	18.59	
09/22/2015 06:00	0.68	2.81	0.03	18.00	
09/22/2015 05:45	0.65	2.77	0.02	16.61	
09/22/2015 05:30	0.65	2.77	0.02	16.61	
09/22/2015 05:15	0.65	2.76	0.02	16.55	
09/22/2015 05:00	0.68	2.76	0.03	17.68	
09/22/2015 04:45	0.68	2.76	0.03	17.68	
09/22/2015 04:30	0.68	2.75	0.03	17.62	
09/22/2015 04:15	0.68	2.65	0.02	16.98	
09/22/2015 04:00	0.54	2.18	0.01	9.94	
09/22/2015 03:45	0.54	2.13	0.01	9.71	
09/22/2015 03:30	0.53	2.13	0.01	9.45	
09/22/2015 03:15	0.51	2.13	0.01	8.92	
09/22/2015 03:00	0.51	2.13	0.01	8.92	
09/22/2015 02:45	0.46	2.00	0.01	7.19	
09/22/2015 02:30	0.46	2.00	0.01	7.19	
09/22/2015 02:15	0.46	2.00	0.01	7.19	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/22/2015 02:00	0.54	2.29	0.02	10.44	
09/22/2015 01:45	0.55	2.49	0.02	11.67	
09/22/2015 01:30	0.68	2.74	0.03	17.56	
09/22/2015 01:15	0.68	2.74	0.03	17.56	
09/22/2015 01:00	0.97	3.66	0.06	39.49	
09/22/2015 00:45	1.01	3.71	0.06	42.46	
09/22/2015 00:30	1.01	3.71	0.06	42.46	
09/22/2015 00:15	0.94	3.44	0.05	35.45	
09/22/2015 00:00	0.94	3.44	0.05	35.45	
09/21/2015 23:45	0.94	3.31	0.05	34.11	
09/21/2015 23:30	0.94	3.25	0.05	33.49	
09/21/2015 23:15	0.94	2.92	0.04	30.09	
09/21/2015 23:00	0.96	2.92	0.04	31.03	
09/21/2015 22:45	1.07	3.14	0.06	39.09	
09/21/2015 22:30	1.07	2.92	0.05	36.35	
09/21/2015 22:15	1.07	3.14	0.06	39.09	
09/21/2015 22:00	1.07	3.75	0.07	46.69	
09/21/2015 21:45	1.07	3.75	0.07	46.69	
09/21/2015 21:30	1.07	3.25	0.06	40.46	
09/21/2015 21:15	1.07	3.44	0.06	42.83	
09/21/2015 21:00	1.07	3.44	0.06	42.83	
09/21/2015 20:45	1.07	3.44	0.06	42.83	
09/21/2015 20:30	1.03	3.44	0.06	40.51	
09/21/2015 20:15	1.07	3.59	0.06	44.69	
09/21/2015 20:00	1.07	3.59	0.06	44.69	
09/21/2015 19:45	0.84	3.15	0.04	27.53	
09/21/2015 19:30	0.84	3.15	0.04	27.53	
09/21/2015 19:15	0.90	3.22	0.04	31.14	
09/21/2015 19:00	0.90	3.22	0.04	31.14	
09/21/2015 18:45	1.00	3.48	0.06	39.26	
09/21/2015 18:30	1.00	3.81	0.06	42.98	
09/21/2015 18:15	1.07	3.81	0.07	47.43	
09/21/2015 18:00	1.07	3.81	0.07	47.43	
09/21/2015 17:45	1.07	3.76	0.07	46.81	
09/21/2015 17:30	0.87	3.17	0.04	29.17	
09/21/2015 17:15	0.87	3.16	0.04	29.08	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/21/2015 17:00	0.83	3.16	0.04	27.14	
09/21/2015 16:45	0.87	3.16	0.04	29.08	
09/21/2015 16:30	0.87	3.23	0.04	29.72	
09/21/2015 16:15	0.93	3.52	0.05	35.71	
09/21/2015 16:00	0.93	3.52	0.05	35.71	
09/21/2015 15:45	0.93	3.53	0.05	35.81	
09/21/2015 15:30	0.93	3.56	0.05	36.12	
09/21/2015 15:15	0.93	3.67	0.05	37.23	
09/21/2015 15:00	1.01	3.67	0.06	42.00	
09/21/2015 14:45	1.11	3.79	0.07	49.77	
09/21/2015 14:30	1.11	3.79	0.07	49.77	
09/21/2015 14:15	1.08	3.42	0.06	43.16	
09/21/2015 14:00	1.08	3.34	0.06	42.15	
09/21/2015 13:45	1.08	3.42	0.06	43.16	
09/21/2015 13:30	1.05	3.36	0.06	40.70	
09/21/2015 13:15	1.05	3.36	0.06	40.70	
09/21/2015 13:00	1.05	3.36	0.06	40.70	
09/21/2015 12:45	1.05	3.54	0.06	42.88	
09/21/2015 12:30	1.12	3.60	0.07	47.90	
09/21/2015 12:15	1.14	3.73	0.07	50.92	
09/21/2015 12:00	1.14	3.87	0.08	52.83	
09/21/2015 11:45	1.15	3.90	0.08	53.92	
09/21/2015 11:30	1.15	3.87	0.08	53.51	
09/21/2015 11:15	1.14	3.87	0.08	52.83	
09/21/2015 11:00	1.11	3.52	0.07	46.23	
09/21/2015 10:45	1.11	3.52	0.07	46.23	
09/21/2015 10:30	1.11	3.52	0.07	46.23	
09/21/2015 10:15	1.19	4.26	0.09	61.89	
09/21/2015 10:00	1.22	4.26	0.09	64.17	
09/21/2015 09:45	1.22	4.26	0.09	64.17	
09/21/2015 09:30	1.22	4.19	0.09	63.11	
09/21/2015 09:15	1.19	3.96	0.08	57.54	
09/21/2015 09:00	1.14	3.94	0.08	53.79	
09/21/2015 08:45	1.11	3.94	0.07	51.74	
09/21/2015 08:30	1.11	3.78	0.07	49.64	
09/21/2015 08:15	1.11	3.94	0.07	51.74	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/21/2015 08:00	1.11	3.94	0.07	51.74	
09/21/2015 07:45	1.09	3.93	0.07	50.26	
09/21/2015 07:30	1.09	3.78	0.07	48.34	
09/21/2015 07:15	1.09	3.65	0.07	46.68	
09/21/2015 07:00	0.98	3.41	0.05	37.35	
09/21/2015 06:45	0.97	3.41	0.05	36.79	
09/21/2015 06:30	0.68	2.80	0.03	17.94	
09/21/2015 06:15	0.65	2.66	0.02	15.95	
09/21/2015 06:00	0.65	2.61	0.02	15.65	
09/21/2015 05:45	0.55	2.54	0.02	11.90	
09/21/2015 05:30	0.55	2.54	0.02	11.90	
09/21/2015 05:15	0.55	2.54	0.02	11.90	
09/21/2015 05:00	0.64	2.63	0.02	15.41	
09/21/2015 04:45	0.64	2.66	0.02	15.59	
09/21/2015 04:30	0.64	2.66	0.02	15.59	
09/21/2015 04:15	0.64	2.63	0.02	15.41	
09/21/2015 04:00	0.51	1.97	0.01	8.25	
09/21/2015 03:45	0.48	1.83	0.01	7.01	
09/21/2015 03:30	0.47	1.82	0.01	6.76	
09/21/2015 03:15	0.48	1.82	0.01	6.97	
09/21/2015 03:00	0.48	1.83	0.01	7.01	
09/21/2015 02:45	0.48	1.83	0.01	7.01	
09/21/2015 02:30	0.51	2.09	0.01	8.76	
09/21/2015 02:15	0.53	2.12	0.01	9.40	
09/21/2015 02:00	0.54	2.13	0.01	9.71	
09/21/2015 01:45	0.66	2.62	0.02	16.07	
09/21/2015 01:30	0.69	2.75	0.03	18.00	
09/21/2015 01:15	0.69	2.75	0.03	18.00	
09/21/2015 01:00	0.69	2.75	0.03	18.00	
09/21/2015 00:45	0.62	2.57	0.02	14.37	
09/21/2015 00:30	0.62	2.57	0.02	14.37	
09/21/2015 00:15	0.59	2.56	0.02	13.30	
09/21/2015 00:00	0.62	2.57	0.02	14.37	
09/20/2015 23:45	0.66	2.84	0.03	17.41	
09/20/2015 23:30	0.96	3.51	0.05	37.30	
09/20/2015 23:15	0.96	3.51	0.05	37.30	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/20/2015 23:00	0.96	3.51	0.05	37.30	
09/20/2015 22:45	1.03	3.53	0.06	41.57	
09/20/2015 22:30	1.03	3.53	0.06	41.57	
09/20/2015 22:15	0.82	3.25	0.04	27.42	
09/20/2015 22:00	0.82	3.25	0.04	27.42	
09/20/2015 21:45	1.03	3.53	0.06	41.57	
09/20/2015 21:30	0.87	3.39	0.04	31.20	
09/20/2015 21:15	0.87	3.39	0.04	31.20	
09/20/2015 21:00	0.87	3.39	0.04	31.20	
09/20/2015 20:45	0.87	3.39	0.04	31.20	
09/20/2015 20:30	0.82	3.20	0.04	27.00	
09/20/2015 20:15	0.82	3.14	0.04	26.49	
09/20/2015 20:00	0.82	3.14	0.04	26.49	
09/20/2015 19:45	0.98	3.20	0.05	35.05	
09/20/2015 19:30	1.08	3.46	0.06	43.66	
09/20/2015 19:15	1.08	3.46	0.06	43.66	
09/20/2015 19:00	1.08	3.46	0.06	43.66	
09/20/2015 18:45	0.94	3.45	0.05	35.55	
09/20/2015 18:30	0.94	3.45	0.05	35.55	
09/20/2015 18:15	0.93	3.25	0.05	32.97	
09/20/2015 18:00	0.93	3.25	0.05	32.97	
09/20/2015 17:45	0.98	3.39	0.05	37.13	
09/20/2015 17:30	0.98	3.39	0.05	37.13	
09/20/2015 17:15	0.93	3.25	0.05	32.97	
09/20/2015 17:00	0.86	3.01	0.04	27.23	
09/20/2015 16:45	0.79	2.94	0.03	23.49	
09/20/2015 16:30	0.79	2.94	0.03	23.49	
09/20/2015 16:15	0.86	3.01	0.04	27.23	
09/20/2015 16:00	0.97	3.13	0.05	33.77	
09/20/2015 15:45	1.08	3.56	0.06	44.92	
09/20/2015 15:30	1.12	3.65	0.07	48.56	
09/20/2015 15:15	1.12	3.65	0.07	48.56	
09/20/2015 15:00	1.12	4.03	0.08	53.62	
09/20/2015 14:45	1.12	4.03	0.08	53.62	
09/20/2015 14:30	1.12	3.69	0.07	49.09	
09/20/2015 14:15	1.12	3.69	0.07	49.09	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/20/2015 14:00	1.14	3.69	0.07	50.37	
09/20/2015 13:45	1.14	3.36	0.07	45.87	
09/20/2015 13:30	1.15	3.69	0.07	51.02	
09/20/2015 13:15	1.15	3.55	0.07	49.08	
09/20/2015 13:00	1.14	3.49	0.07	47.64	
09/20/2015 12:45	1.14	3.55	0.07	48.46	
09/20/2015 12:30	1.15	3.87	0.08	53.51	
09/20/2015 12:15	1.14	3.55	0.07	48.46	
09/20/2015 12:00	1.14	3.89	0.08	53.10	
09/20/2015 11:45	1.16	3.89	0.08	54.46	
09/20/2015 11:30	1.16	3.80	0.08	53.20	
09/20/2015 11:15	1.16	3.80	0.08	53.20	
09/20/2015 11:00	1.18	3.80	0.08	54.54	
09/20/2015 10:45	1.19	3.80	0.08	55.21	
09/20/2015 10:30	1.19	4.24	0.09	61.60	
09/20/2015 10:15	1.19	4.24	0.09	61.60	
09/20/2015 10:00	1.19	4.24	0.09	61.60	
09/20/2015 09:45	1.19	4.24	0.09	61.60	
09/20/2015 09:30	1.16	3.97	0.08	55.58	
09/20/2015 09:15	1.16	3.89	0.08	54.46	
09/20/2015 09:00	1.18	3.97	0.08	56.98	
09/20/2015 08:45	1.16	3.89	0.08	54.46	
09/20/2015 08:30	1.15	3.60	0.07	49.77	
09/20/2015 08:15	1.07	3.60	0.06	44.82	
09/20/2015 08:00	1.01	3.55	0.06	40.63	
09/20/2015 07:45	1.01	3.54	0.06	40.52	
09/20/2015 07:30	0.97	3.50	0.05	37.76	
09/20/2015 07:15	0.71	3.16	0.03	21.58	
09/20/2015 07:00	0.69	2.85	0.03	18.66	
09/20/2015 06:45	0.69	2.85	0.03	18.66	
09/20/2015 06:30	0.71	2.85	0.03	19.46	
09/20/2015 06:15	0.71	2.70	0.03	18.44	
09/20/2015 06:00	0.64	2.63	0.02	15.41	
09/20/2015 05:45	0.55	2.44	0.02	11.43	
09/20/2015 05:30	0.48	2.04	0.01	7.81	
09/20/2015 05:15	0.48	2.04	0.01	7.81	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/20/2015 05:00	0.48	1.98	0.01	7.58	
09/20/2015 04:45	0.48	2.04	0.01	7.81	
09/20/2015 04:30	0.51	2.23	0.01	9.34	
09/20/2015 04:15	0.53	2.28	0.01	10.11	
09/20/2015 04:00	0.69	2.82	0.03	18.46	
09/20/2015 03:45	0.71	2.84	0.03	19.39	
09/20/2015 03:30	0.71	2.88	0.03	19.66	
09/20/2015 03:15	0.69	2.84	0.03	18.59	
09/20/2015 03:00	0.69	2.82	0.03	18.46	
09/20/2015 02:45	0.51	2.08	0.01	8.71	
09/20/2015 02:30	0.51	2.08	0.01	8.71	
09/20/2015 02:15	0.51	2.08	0.01	8.71	
09/20/2015 02:00	0.54	2.42	0.02	11.03	
09/20/2015 01:45	0.54	2.48	0.02	11.31	
09/20/2015 01:30	0.55	2.49	0.02	11.67	
09/20/2015 01:15	0.68	2.85	0.03	18.26	
09/20/2015 01:00	0.84	3.07	0.04	26.83	
09/20/2015 00:45	0.84	3.07	0.04	26.83	
09/20/2015 00:30	0.84	3.07	0.04	26.83	
09/20/2015 00:15	0.75	2.89	0.03	21.39	
09/20/2015 00:00	0.69	2.75	0.03	18.00	
09/19/2015 23:45	0.69	2.75	0.03	18.00	
09/19/2015 23:30	0.69	2.75	0.03	18.00	
09/19/2015 23:15	0.75	3.01	0.03	22.28	
09/19/2015 23:00	1.01	3.30	0.05	37.77	
09/19/2015 22:45	1.01	3.43	0.06	39.26	
09/19/2015 22:30	1.01	3.43	0.06	39.26	
09/19/2015 22:15	0.98	3.48	0.05	38.11	
09/19/2015 22:00	0.96	3.48	0.05	36.98	
09/19/2015 21:45	0.96	3.47	0.05	36.88	
09/19/2015 21:30	0.82	3.09	0.04	26.07	
09/19/2015 21:15	0.96	3.47	0.05	36.88	
09/19/2015 21:00	1.01	3.47	0.06	39.72	
09/19/2015 20:45	1.04	3.49	0.06	41.69	
09/19/2015 20:30	1.04	3.49	0.06	41.69	
09/19/2015 20:15	1.04	3.49	0.06	41.69	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/19/2015 20:00	1.01	3.42	0.06	39.14	
09/19/2015 19:45	0.98	3.42	0.05	37.46	
09/19/2015 19:30	0.84	3.08	0.04	26.92	
09/19/2015 19:15	0.76	3.04	0.03	22.94	
09/19/2015 19:00	0.76	3.02	0.03	22.79	
09/19/2015 18:45	0.84	3.04	0.04	26.57	
09/19/2015 18:30	0.89	3.04	0.04	28.92	
09/19/2015 18:15	1.09	3.76	0.07	48.09	
09/19/2015 18:00	1.09	3.76	0.07	48.09	
09/19/2015 17:45	1.09	3.76	0.07	48.09	
09/19/2015 17:30	1.12	3.43	0.07	45.64	
09/19/2015 17:15	1.08	3.36	0.06	42.40	
09/19/2015 17:00	1.08	3.36	0.06	42.40	
09/19/2015 16:45	1.14	3.43	0.07	46.82	
09/19/2015 16:30	1.14	3.86	0.08	52.69	
09/19/2015 16:15	1.21	3.92	0.08	58.35	
09/19/2015 16:00	1.22	4.03	0.09	60.70	
09/19/2015 15:45	1.26	4.03	0.09	63.61	
09/19/2015 15:30	1.30	4.16	0.10	68.70	
09/19/2015 15:15	1.30	4.16	0.10	68.70	
09/19/2015 15:00	1.30	3.93	0.09	64.90	
09/19/2015 14:45	1.09	3.68	0.07	47.07	
09/19/2015 14:30	1.08	3.48	0.06	43.91	
09/19/2015 14:15	1.08	3.48	0.06	43.91	
09/19/2015 14:00	1.09	3.68	0.07	47.07	
09/19/2015 13:45	1.12	3.68	0.07	48.96	
09/19/2015 13:30	1.14	3.79	0.07	51.74	
09/19/2015 13:15	1.14	3.87	0.08	52.83	
09/19/2015 13:00	1.14	4.03	0.08	55.02	
09/19/2015 12:45	1.18	4.03	0.08	57.84	
09/19/2015 12:30	1.18	4.06	0.08	58.27	
09/19/2015 12:15	1.18	4.15	0.09	59.56	
09/19/2015 12:00	1.18	4.15	0.09	59.56	
09/19/2015 11:45	1.26	4.33	0.10	68.34	
09/19/2015 11:30	1.34	4.45	0.11	76.77	
09/19/2015 11:15	1.34	4.49	0.11	77.46	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/19/2015 11:00	1.34	4.51	0.11	77.81	
09/19/2015 10:45	1.29	4.51	0.11	73.65	
09/19/2015 10:30	1.26	4.57	0.10	72.13	
09/19/2015 10:15	1.26	4.51	0.10	71.18	
09/19/2015 10:00	1.29	4.50	0.11	73.49	
09/19/2015 09:45	1.30	4.44	0.11	73.32	
09/19/2015 09:30	1.30	4.50	0.11	74.31	
09/19/2015 09:15	1.30	4.44	0.11	73.32	
09/19/2015 09:00	1.30	4.30	0.10	71.01	
09/19/2015 08:45	1.21	4.07	0.09	60.58	
09/19/2015 08:30	1.18	3.96	0.08	56.84	
09/19/2015 08:15	1.16	3.85	0.08	53.90	
09/19/2015 08:00	1.05	3.83	0.07	46.39	
09/19/2015 07:45	1.01	3.48	0.06	39.83	
09/19/2015 07:30	0.91	3.33	0.05	32.73	
09/19/2015 07:15	0.91	3.33	0.05	32.73	
09/19/2015 07:00	0.64	2.59	0.02	15.18	
09/19/2015 06:45	0.64	2.59	0.02	15.18	
09/19/2015 06:30	0.64	2.59	0.02	15.18	
09/19/2015 06:15	0.59	2.82	0.02	14.66	
09/19/2015 06:00	0.59	2.82	0.02	14.66	
09/19/2015 05:45	0.59	2.82	0.02	14.66	
09/19/2015 05:30	0.55	2.36	0.02	11.06	
09/19/2015 05:15	0.51	2.14	0.01	8.97	
09/19/2015 05:00	0.46	1.88	0.01	6.76	
09/19/2015 04:45	0.51	2.14	0.01	8.97	
09/19/2015 04:30	0.51	2.14	0.01	8.97	
09/19/2015 04:15	0.48	1.99	0.01	7.62	
09/19/2015 04:00	0.47	1.78	0.01	6.61	
09/19/2015 03:45	0.47	1.78	0.01	6.61	
09/19/2015 03:30	0.47	1.76	0.01	6.53	
09/19/2015 03:15	0.47	1.73	0.01	6.42	
09/19/2015 03:00	0.47	1.73	0.01	6.42	
09/19/2015 02:45	0.47	1.76	0.01	6.53	
09/19/2015 02:30	0.48	1.83	0.01	7.01	
09/19/2015 02:15	0.51	1.89	0.01	7.92	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/19/2015 02:00	0.68	2.69	0.02	17.24	
09/19/2015 01:45	0.69	2.92	0.03	19.12	
09/19/2015 01:30	0.79	2.96	0.03	23.65	
09/19/2015 01:15	0.79	2.96	0.03	23.65	
09/19/2015 01:00	0.71	2.96	0.03	20.21	
09/19/2015 00:45	0.78	2.96	0.03	23.21	
09/19/2015 00:30	0.75	2.91	0.03	21.54	
09/19/2015 00:15	0.75	2.91	0.03	21.54	
09/19/2015 00:00	0.78	2.91	0.03	22.82	
09/18/2015 23:45	0.82	3.23	0.04	27.25	
09/18/2015 23:30	0.94	3.23	0.05	33.29	
09/18/2015 23:15	1.01	3.51	0.06	40.17	
09/18/2015 23:00	1.01	3.52	0.06	40.29	
09/18/2015 22:45	1.01	3.52	0.06	40.29	
09/18/2015 22:30	1.01	3.14	0.05	35.94	
09/18/2015 22:15	0.87	2.99	0.04	27.51	
09/18/2015 22:00	0.87	2.99	0.04	27.51	
09/18/2015 21:45	0.72	2.88	0.03	20.07	
09/18/2015 21:30	0.72	2.99	0.03	20.84	
09/18/2015 21:15	0.86	3.11	0.04	28.14	
09/18/2015 21:00	0.94	3.47	0.05	35.76	
09/18/2015 20:45	1.09	3.11	0.06	39.78	
09/18/2015 20:30	1.09	3.47	0.06	44.38	
09/18/2015 20:15	1.09	3.47	0.06	44.38	
09/18/2015 20:00	1.09	3.49	0.06	44.64	
09/18/2015 19:45	1.07	3.55	0.06	44.20	
09/18/2015 19:30	1.01	3.55	0.06	40.63	
09/18/2015 19:15	1.01	3.55	0.06	40.63	
09/18/2015 19:00	0.86	3.40	0.04	30.76	
09/18/2015 18:45	0.86	3.40	0.04	30.76	
09/18/2015 18:30	0.86	3.40	0.04	30.76	
09/18/2015 18:15	0.97	3.45	0.05	37.22	
09/18/2015 18:00	0.97	3.45	0.05	37.22	
09/18/2015 17:45	1.00	3.47	0.06	39.14	
09/18/2015 17:30	1.00	3.50	0.06	39.48	
09/18/2015 17:15	1.00	3.45	0.06	38.92	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/18/2015 17:00	0.96	3.45	0.05	36.67	
09/18/2015 16:45	0.96	3.45	0.05	36.67	
09/18/2015 16:30	0.84	3.24	0.04	28.32	
09/18/2015 16:15	0.84	3.24	0.04	28.32	
09/18/2015 16:00	0.96	3.45	0.05	36.67	
09/18/2015 15:45	1.01	3.56	0.06	40.75	
09/18/2015 15:30	1.12	3.60	0.07	47.90	
09/18/2015 15:15	1.15	3.65	0.07	50.46	
09/18/2015 15:00	1.15	3.72	0.07	51.43	
09/18/2015 14:45	1.12	3.72	0.07	49.49	
09/18/2015 14:30	1.16	3.72	0.07	52.08	
09/18/2015 14:15	1.15	3.86	0.08	53.37	
09/18/2015 14:00	1.11	3.86	0.07	50.69	
09/18/2015 13:45	1.11	3.60	0.07	47.28	
09/18/2015 13:30	1.12	3.55	0.07	47.23	
09/18/2015 13:15	1.12	3.84	0.07	51.09	
09/18/2015 13:00	1.12	3.62	0.07	48.16	
09/18/2015 12:45	1.12	3.62	0.07	48.16	
09/18/2015 12:30	1.12	3.62	0.07	48.16	
09/18/2015 12:15	1.14	3.73	0.07	50.92	
09/18/2015 12:00	1.12	3.62	0.07	48.16	
09/18/2015 11:45	1.12	3.73	0.07	49.63	
09/18/2015 11:30	1.14	3.77	0.07	51.47	
09/18/2015 11:15	1.19	3.77	0.08	54.77	
09/18/2015 11:00	1.28	4.05	0.09	65.40	
09/18/2015 10:45	1.34	4.19	0.10	72.29	
09/18/2015 10:30	1.28	4.19	0.10	67.66	
09/18/2015 10:15	1.34	4.34	0.11	74.88	
09/18/2015 10:00	1.34	4.34	0.11	74.88	
09/18/2015 09:45	1.26	4.34	0.10	68.50	
09/18/2015 09:30	1.25	3.94	0.09	61.47	
09/18/2015 09:15	1.25	3.94	0.09	61.47	
09/18/2015 09:00	1.25	3.94	0.09	61.47	
09/18/2015 08:45	1.19	3.93	0.08	57.10	
09/18/2015 08:30	1.19	3.93	0.08	57.10	
09/18/2015 08:15	1.15	3.52	0.07	48.67	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/18/2015 08:00	1.15	3.52	0.07	48.67	
09/18/2015 07:45	1.21	3.52	0.08	52.39	
09/18/2015 07:30	1.22	3.91	0.08	58.90	
09/18/2015 07:15	1.22	3.91	0.08	58.90	
09/18/2015 07:00	1.22	3.91	0.08	58.90	
09/18/2015 06:45	1.19	3.75	0.08	54.48	
09/18/2015 06:30	1.11	3.73	0.07	48.98	
09/18/2015 06:15	0.80	2.97	0.03	24.17	
09/18/2015 06:00	0.62	2.24	0.02	12.53	
09/18/2015 05:45	0.58	2.15	0.02	10.89	
09/18/2015 05:30	0.58	2.15	0.02	10.89	
09/18/2015 05:15	0.58	2.06	0.02	10.44	
09/18/2015 05:00	0.55	2.06	0.01	9.65	
09/18/2015 04:45	0.55	2.06	0.01	9.65	
09/18/2015 04:30	0.55	1.99	0.01	9.32	
09/18/2015 04:15	0.55	1.96	0.01	9.18	
09/18/2015 04:00	0.55	1.90	0.01	8.90	
09/18/2015 03:45	0.57	1.90	0.01	9.38	
09/18/2015 03:30	0.57	1.88	0.01	9.28	
09/18/2015 03:15	0.58	1.90	0.01	9.63	
09/18/2015 03:00	0.58	1.90	0.01	9.63	
09/18/2015 02:45	0.61	1.94	0.02	10.59	
09/18/2015 02:30	0.64	2.23	0.02	13.07	
09/18/2015 02:15	0.64	2.31	0.02	13.54	
09/18/2015 02:00	0.65	2.35	0.02	14.09	
09/18/2015 01:45	0.68	2.54	0.02	16.27	
09/18/2015 01:30	0.68	2.54	0.02	16.27	
09/18/2015 01:15	0.68	2.54	0.02	16.27	
09/18/2015 01:00	0.68	2.54	0.02	16.27	
09/18/2015 00:45	0.64	2.45	0.02	14.36	
09/18/2015 00:30	0.62	2.34	0.02	13.08	
09/18/2015 00:15	0.62	2.34	0.02	13.08	
09/18/2015 00:00	0.64	2.45	0.02	14.36	
09/17/2015 23:45	0.82	2.84	0.03	23.96	
09/17/2015 23:30	0.86	3.04	0.04	27.51	
09/17/2015 23:15	0.87	3.51	0.05	32.30	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/17/2015 23:00	1.04	3.25	0.06	38.82	
09/17/2015 22:45	1.04	3.25	0.06	38.82	
09/17/2015 22:30	1.04	3.57	0.06	42.64	
09/17/2015 22:15	1.04	3.57	0.06	42.64	
09/17/2015 22:00	1.04	3.64	0.06	43.48	
09/17/2015 21:45	1.08	3.93	0.07	49.59	
09/17/2015 21:30	1.11	3.98	0.08	52.27	
09/17/2015 21:15	1.11	3.93	0.07	51.61	
09/17/2015 21:00	1.11	3.93	0.07	51.61	
09/17/2015 20:45	1.09	3.74	0.07	47.83	
09/17/2015 20:30	1.08	3.42	0.06	43.16	
09/17/2015 20:15	1.08	3.30	0.06	41.64	
09/17/2015 20:00	1.04	3.30	0.06	39.42	
09/17/2015 19:45	1.04	3.39	0.06	40.49	
09/17/2015 19:30	0.98	3.39	0.05	37.13	
09/17/2015 19:15	1.04	3.56	0.06	42.52	
09/17/2015 19:00	1.04	3.59	0.06	42.88	
09/17/2015 18:45	0.98	3.59	0.06	39.32	
09/17/2015 18:30	0.98	3.59	0.06	39.32	
09/17/2015 18:15	0.94	3.56	0.05	36.69	
09/17/2015 18:00	0.94	3.34	0.05	34.42	
09/17/2015 17:45	0.94	3.34	0.05	34.42	
09/17/2015 17:30	0.94	3.42	0.05	35.25	
09/17/2015 17:15	0.98	3.45	0.05	37.79	
09/17/2015 17:00	1.03	3.45	0.06	40.63	
09/17/2015 16:45	1.11	3.45	0.07	45.31	
09/17/2015 16:30	1.14	3.84	0.08	52.42	
09/17/2015 16:15	1.15	3.85	0.08	53.23	
09/17/2015 16:00	1.15	3.85	0.08	53.23	
09/17/2015 15:45	1.11	3.37	0.06	44.26	
09/17/2015 15:30	1.18	3.85	0.08	55.26	
09/17/2015 15:15	1.11	3.13	0.06	41.10	
09/17/2015 15:00	1.11	3.13	0.06	41.10	
09/17/2015 14:45	1.16	3.21	0.06	44.94	
09/17/2015 14:30	1.18	3.42	0.07	49.08	
09/17/2015 14:15	1.19	3.42	0.07	49.69	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/17/2015 14:00	1.19	3.74	0.08	54.34	
09/17/2015 13:45	1.21	3.42	0.07	50.91	
09/17/2015 13:30	1.21	3.42	0.07	50.91	
09/17/2015 13:15	1.19	3.42	0.07	49.69	
09/17/2015 13:00	1.19	3.42	0.07	49.69	
09/17/2015 12:45	1.12	2.62	0.05	34.86	
09/17/2015 12:30	1.12	2.62	0.05	34.86	
09/17/2015 12:15	1.12	2.98	0.06	39.65	
09/17/2015 12:00	1.12	3.96	0.08	52.69	
09/17/2015 11:45	1.12	3.55	0.07	47.23	
09/17/2015 11:30	1.15	3.96	0.08	54.75	
09/17/2015 11:15	1.15	3.96	0.08	54.75	
09/17/2015 11:00	1.19	4.07	0.09	59.13	
09/17/2015 10:45	1.22	4.07	0.09	61.31	
09/17/2015 10:30	1.30	4.07	0.10	67.21	
09/17/2015 10:15	1.32	4.17	0.10	70.40	
09/17/2015 10:00	1.30	4.00	0.10	66.05	
09/17/2015 09:45	1.30	4.00	0.10	66.05	
09/17/2015 09:30	1.30	3.24	0.08	53.50	
09/17/2015 09:15	1.22	3.96	0.09	59.65	
09/17/2015 09:00	1.22	3.96	0.09	59.65	
09/17/2015 08:45	1.25	4.27	0.10	66.62	
09/17/2015 08:30	1.25	4.08	0.09	63.66	
09/17/2015 08:15	1.30	4.27	0.10	70.51	
09/17/2015 08:00	1.36	4.36	0.11	76.85	
09/17/2015 07:45	1.36	4.36	0.11	76.85	
09/17/2015 07:30	1.36	4.16	0.11	73.32	
09/17/2015 07:15	1.25	4.16	0.09	64.91	
09/17/2015 07:00	1.08	3.73	0.07	47.07	
09/17/2015 06:45	0.98	3.29	0.05	36.03	
09/17/2015 06:30	0.83	3.25	0.04	27.91	
09/17/2015 06:15	0.82	2.96	0.04	24.97	
09/17/2015 06:00	0.78	2.86	0.03	22.42	
09/17/2015 05:45	0.73	2.84	0.03	20.20	
09/17/2015 05:30	0.61	2.22	0.02	12.12	
09/17/2015 05:15	0.61	2.20	0.02	12.01	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/17/2015 05:00	0.61	2.20	0.02	12.01	
09/17/2015 04:45	0.64	2.20	0.02	12.89	
09/17/2015 04:30	0.64	2.20	0.02	12.89	
09/17/2015 04:15	0.71	2.79	0.03	19.05	
09/17/2015 04:00	0.71	2.79	0.03	19.05	
09/17/2015 03:45	0.73	2.89	0.03	20.56	
09/17/2015 03:30	0.71	2.79	0.03	19.05	
09/17/2015 03:15	0.58	2.01	0.01	10.19	
09/17/2015 03:00	0.58	2.01	0.01	10.19	
09/17/2015 02:45	0.64	2.26	0.02	13.24	
09/17/2015 02:30	0.64	2.26	0.02	13.24	
09/17/2015 02:15	0.64	2.31	0.02	13.54	
09/17/2015 02:00	0.64	2.31	0.02	13.54	
09/17/2015 01:45	0.64	2.33	0.02	13.65	
09/17/2015 01:30	0.65	2.46	0.02	14.75	
09/17/2015 01:15	0.78	2.84	0.03	22.27	
09/17/2015 01:00	0.78	2.84	0.03	22.27	
09/17/2015 00:45	1.08	3.18	0.06	40.13	
09/17/2015 00:30	1.11	3.76	0.07	49.38	
09/17/2015 00:15	1.11	3.25	0.06	42.68	
09/17/2015 00:00	1.11	3.18	0.06	41.76	
09/16/2015 23:45	1.11	3.25	0.06	42.68	
09/16/2015 23:30	1.11	3.59	0.07	47.15	
09/16/2015 23:15	1.03	3.55	0.06	41.81	
09/16/2015 23:00	1.01	3.55	0.06	40.63	
09/16/2015 22:45	1.01	3.59	0.06	41.09	
09/16/2015 22:30	0.94	3.55	0.05	36.59	
09/16/2015 22:15	0.94	3.55	0.05	36.59	
09/16/2015 22:00	1.04	3.71	0.06	44.31	
09/16/2015 21:45	1.07	3.71	0.07	46.19	
09/16/2015 21:30	1.11	3.71	0.07	48.72	
09/16/2015 21:15	1.14	3.71	0.07	50.65	
09/16/2015 21:00	1.11	3.63	0.07	47.67	
09/16/2015 20:45	1.14	3.63	0.07	49.55	
09/16/2015 20:30	1.14	3.63	0.07	49.55	
09/16/2015 20:15	1.04	3.61	0.06	43.12	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/16/2015 20:00	1.04	3.61	0.06	43.12	
09/16/2015 19:45	1.05	3.48	0.06	42.15	
09/16/2015 19:30	0.97	3.40	0.05	36.69	
09/16/2015 19:15	0.97	3.22	0.05	34.74	
09/16/2015 19:00	0.90	3.22	0.04	31.14	
09/16/2015 18:45	0.90	3.22	0.04	31.14	
09/16/2015 18:30	0.90	3.54	0.05	34.23	
09/16/2015 18:15	1.04	3.60	0.06	43.00	
09/16/2015 18:00	1.05	3.76	0.07	45.54	
09/16/2015 17:45	1.05	3.60	0.06	43.60	
09/16/2015 17:30	1.05	3.60	0.06	43.60	
09/16/2015 17:15	0.96	3.47	0.05	36.88	
09/16/2015 17:00	0.87	3.08	0.04	28.34	
09/16/2015 16:45	0.86	3.03	0.04	27.41	
09/16/2015 16:30	0.87	3.03	0.04	27.88	
09/16/2015 16:15	0.91	2.99	0.04	29.39	
09/16/2015 16:00	0.91	2.99	0.04	29.39	
09/16/2015 15:45	1.07	3.15	0.06	39.22	
09/16/2015 15:30	1.19	3.64	0.08	52.89	
09/16/2015 15:15	1.19	3.64	0.08	52.89	
09/16/2015 15:00	1.19	3.95	0.08	57.39	
09/16/2015 14:45	1.18	3.95	0.08	56.69	
09/16/2015 14:30	1.16	3.95	0.08	55.30	
09/16/2015 14:15	1.15	3.95	0.08	54.61	
09/16/2015 14:00	1.12	3.95	0.08	52.55	
09/16/2015 13:45	1.15	3.95	0.08	54.61	
09/16/2015 13:30	1.15	3.90	0.08	53.92	
09/16/2015 13:15	1.19	3.87	0.08	56.23	
09/16/2015 13:00	1.19	3.86	0.08	56.08	
09/16/2015 12:45	1.19	3.59	0.08	52.16	
09/16/2015 12:30	1.15	3.23	0.06	44.66	
09/16/2015 12:15	1.15	3.59	0.07	49.63	
09/16/2015 12:00	1.15	3.59	0.07	49.63	
09/16/2015 11:45	1.15	3.23	0.06	44.66	
09/16/2015 11:30	1.18	3.59	0.07	51.52	
09/16/2015 11:15	1.21	3.90	0.08	58.05	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/16/2015 11:00	1.37	4.42	0.11	78.73	
09/16/2015 10:45	1.39	4.42	0.12	80.39	
09/16/2015 10:30	1.55	4.67	0.14	99.34	
09/16/2015 10:15	1.55	4.75	0.15	101.04	
09/16/2015 10:00	1.55	4.67	0.14	99.34	
09/16/2015 09:45	1.40	4.61	0.12	84.72	
09/16/2015 09:30	1.40	4.66	0.12	85.64	
09/16/2015 09:15	1.40	4.61	0.12	84.72	
09/16/2015 09:00	1.40	4.58	0.12	84.17	
09/16/2015 08:45	1.32	4.41	0.11	74.45	
09/16/2015 08:30	1.32	4.41	0.11	74.45	
09/16/2015 08:15	1.32	4.25	0.10	71.75	
09/16/2015 08:00	1.39	4.30	0.11	78.21	
09/16/2015 07:45	1.39	4.29	0.11	78.03	
09/16/2015 07:30	1.39	4.29	0.11	78.03	
09/16/2015 07:15	1.26	3.98	0.09	62.82	
09/16/2015 07:00	1.25	3.52	0.08	54.92	
09/16/2015 06:45	1.12	3.52	0.07	46.83	
09/16/2015 06:30	1.04	3.41	0.06	40.73	
09/16/2015 06:15	0.94	3.33	0.05	34.32	
09/16/2015 06:00	0.86	3.33	0.04	30.13	
09/16/2015 05:45	0.75	3.05	0.03	22.57	
09/16/2015 05:30	0.64	2.53	0.02	14.83	
09/16/2015 05:15	0.64	2.39	0.02	14.00	
09/16/2015 05:00	0.62	2.39	0.02	13.36	
09/16/2015 04:45	0.62	2.39	0.02	13.36	
09/16/2015 04:30	0.62	2.39	0.02	13.36	
09/16/2015 04:15	0.64	2.43	0.02	14.24	
09/16/2015 04:00	0.78	2.69	0.03	21.09	
09/16/2015 03:45	0.78	2.75	0.03	21.56	
09/16/2015 03:30	0.78	2.75	0.03	21.56	
09/16/2015 03:15	0.78	2.69	0.03	21.09	
09/16/2015 03:00	0.64	2.41	0.02	14.12	
09/16/2015 02:45	0.64	2.41	0.02	14.12	
09/16/2015 02:30	0.64	2.41	0.02	14.12	
09/16/2015 02:15	0.62	2.45	0.02	13.70	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/16/2015 02:00	0.62	2.46	0.02	13.76	
09/16/2015 01:45	0.75	2.84	0.03	21.02	
09/16/2015 01:30	0.75	2.96	0.03	21.91	
09/16/2015 01:15	1.05	3.24	0.06	39.24	
09/16/2015 01:00	1.12	3.38	0.06	44.97	
09/16/2015 00:45	1.12	3.38	0.06	44.97	
09/16/2015 00:30	1.12	3.64	0.07	48.43	
09/16/2015 00:15	0.96	3.64	0.06	38.68	
09/16/2015 00:00	0.96	3.64	0.06	38.68	
09/15/2015 23:45	0.89	3.07	0.04	29.21	
09/15/2015 23:30	0.89	3.07	0.04	29.21	
09/15/2015 23:15	0.89	3.07	0.04	29.21	
09/15/2015 23:00	0.97	3.01	0.05	32.48	
09/15/2015 22:45	0.97	3.01	0.05	32.48	
09/15/2015 22:30	1.12	3.42	0.07	45.50	
09/15/2015 22:15	1.14	3.47	0.07	47.37	
09/15/2015 22:00	1.14	3.47	0.07	47.37	
09/15/2015 21:45	1.12	3.84	0.07	51.09	
09/15/2015 21:30	1.14	3.84	0.08	52.42	
09/15/2015 21:15	1.14	3.84	0.08	52.42	
09/15/2015 21:00	1.09	3.65	0.07	46.68	
09/15/2015 20:45	1.14	3.84	0.08	52.42	
09/15/2015 20:30	1.16	3.96	0.08	55.44	
09/15/2015 20:15	1.21	4.06	0.09	60.43	
09/15/2015 20:00	1.21	4.06	0.09	60.43	
09/15/2015 19:45	1.21	4.06	0.09	60.43	
09/15/2015 19:30	1.18	3.56	0.07	51.09	
09/15/2015 19:15	1.09	3.40	0.06	43.48	
09/15/2015 19:00	1.05	3.40	0.06	41.18	
09/15/2015 18:45	1.03	3.40	0.06	40.04	
09/15/2015 18:30	0.97	3.41	0.05	36.79	
09/15/2015 18:15	0.97	3.40	0.05	36.69	
09/15/2015 18:00	0.97	3.41	0.05	36.79	
09/15/2015 17:45	0.97	3.41	0.05	36.79	
09/15/2015 17:30	1.07	3.41	0.06	42.45	
09/15/2015 17:15	1.07	3.37	0.06	41.95	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/15/2015 17:00	1.07	3.46	0.06	43.08	
09/15/2015 16:45	1.07	3.49	0.06	43.45	
09/15/2015 16:30	1.07	3.49	0.06	43.45	
09/15/2015 16:15	1.07	3.58	0.06	44.57	
09/15/2015 16:00	1.15	3.71	0.07	51.29	
09/15/2015 15:45	1.15	3.68	0.07	50.88	
09/15/2015 15:30	1.18	3.71	0.08	53.25	
09/15/2015 15:15	1.15	3.68	0.07	50.88	
09/15/2015 15:00	1.18	3.89	0.08	55.83	
09/15/2015 14:45	1.18	3.85	0.08	55.26	
09/15/2015 14:30	1.18	3.91	0.08	56.12	
09/15/2015 14:15	1.18	3.85	0.08	55.26	
09/15/2015 14:00	1.18	3.88	0.08	55.69	
09/15/2015 13:45	1.18	3.88	0.08	55.69	
09/15/2015 13:30	1.18	3.88	0.08	55.69	
09/15/2015 13:15	1.18	3.73	0.08	53.53	
09/15/2015 13:00	1.18	3.88	0.08	55.69	
09/15/2015 12:45	1.18	3.65	0.08	52.39	
09/15/2015 12:30	1.18	3.65	0.08	52.39	
09/15/2015 12:15	1.18	3.77	0.08	54.11	
09/15/2015 12:00	1.18	3.93	0.08	56.40	
09/15/2015 11:45	1.22	3.93	0.09	59.20	
09/15/2015 11:30	1.22	3.93	0.09	59.20	
09/15/2015 11:15	1.23	3.93	0.09	59.90	
09/15/2015 11:00	1.23	3.93	0.09	59.90	
09/15/2015 10:45	1.22	3.89	0.08	58.60	
09/15/2015 10:30	1.29	3.89	0.09	63.52	
09/15/2015 10:15	1.29	3.92	0.09	64.01	
09/15/2015 10:00	1.23	3.92	0.09	59.75	
09/15/2015 09:45	1.18	3.92	0.08	56.26	
09/15/2015 09:30	1.19	4.00	0.08	58.12	
09/15/2015 09:15	1.19	4.07	0.09	59.13	
09/15/2015 09:00	1.19	4.09	0.09	59.42	
09/15/2015 08:45	1.44	4.62	0.13	88.42	
09/15/2015 08:30	1.48	4.63	0.13	92.17	
09/15/2015 08:15	1.50	4.65	0.14	94.37	

Timestamp	Level	Velocity	Flow (MGD)	Flow (GPM)	Rain
09/15/2015 08:00	1.53	4.72	0.14	98.55	
09/15/2015 07:45	1.61	4.99	0.16	112.08	
09/15/2015 07:30	1.48	4.65	0.13	92.57	
09/15/2015 07:15	1.53	4.72	0.14	98.55	
09/15/2015 07:00	2.16	4.77	0.23	162.46	

Utility Systems Science and Software

Report Date: 10/01/2015
Customer: Fuscoe
Group: Newport Beach
SiteID: 506

Statistics for Newport Santa Barbara Site: 09/15/2015 thru 09/29/2015

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
9/15/2015	56.52	162.48	29.21	0.08	0.23	0.04	3.80	4.99	3.01	1.18	2.16	0.89	81,385	
9/16/2015	45.30	101.05	13.37	0.07	0.15	0.02	3.51	4.75	2.39	1.05	1.55	0.62	65,236	
9/17/2015	40.91	76.85	10.19	0.06	0.11	0.01	3.34	4.36	2.01	1.01	1.36	0.58	58,906	
9/18/2015	36.93	74.88	8.90	0.05	0.11	0.01	3.23	4.34	1.88	0.95	1.34	0.55	53,175	
9/19/2015	38.53	77.81	6.42	0.06	0.11	0.01	3.33	4.57	1.73	0.94	1.34	0.46	55,482	
9/20/2015	34.10	61.61	7.58	0.05	0.09	0.01	3.25	4.24	1.98	0.90	1.19	0.48	49,101	
Week:	**42.05**	**162.48**	**6.42**	**0.06**	**0.23**	**0.01**	**3.41**	**4.99**	**1.73**	**1.01**	**2.16**	**0.46**	**363,286**	
9/21/2015	34.59	64.17	6.76	0.05	0.09	0.01	3.23	4.26	1.82	0.91	1.22	0.47	49,813	
9/22/2015	38.89	65.98	7.19	0.06	0.10	0.01	3.41	4.04	2.00	0.97	1.29	0.46	56,007	
9/23/2015	36.37	56.69	6.91	0.05	0.08	0.01	3.29	4.10	1.86	0.94	1.16	0.47	52,371	
9/24/2015	36.03	67.34	6.42	0.05	0.10	0.01	3.27	4.17	1.73	0.93	1.28	0.47	51,883	
9/25/2015	35.60	81.86	8.08	0.05	0.12	0.01	3.24	4.32	2.10	0.93	1.43	0.48	51,270	
9/26/2015	35.49	57.99	9.85	0.05	0.08	0.01	3.24	4.04	2.24	0.94	1.18	0.51	51,101	
9/27/2015	38.31	82.99	9.85	0.06	0.12	0.01	3.32	4.38	2.22	0.96	1.43	0.53	55,172	
Week:	**36.47**	**82.99**	**6.42**	**0.05**	**0.12**	**0.01**	**3.29**	**4.38**	**1.73**	**0.94**	**1.43**	**0.46**	**367,617**	
9/28/2015	32.14	75.64	9.76	0.05	0.11	0.01	3.17	4.48	2.33	0.88	1.32	0.51	46,288	
9/29/2015	31.57	63.26	5.79	0.05	0.09	0.01	3.08	4.15	1.61	0.85	1.26	0.46	45,463	
Week:	**31.86**	**75.64**	**5.79**	**0.05**	**0.11**	**0.01**	**3.12**	**4.48**	**1.61**	**0.86**	**1.32**	**0.46**	**91,751**	

Appendix 5

Design Criteria and Sewer Generation Rates

DESIGN CRITERIA

GENERAL

For more information on Design Criteria look in The City of Newport Beach Engineering Standards Manual. It provides consultants with authorized Newport Beach project requirements pertaining to production of construction drawings, project deliverables, related quality assurance, submitting final hard copies and digital plans. This information is intended for all engineering disciplines.
Consultants shall adhere to the CAD requirements for delivering plans. The guidelines shall be enforced during both the project design period and construction services period.

This Manual is not intended to replace codes or accepted industry standards and practices.

1. Submitting hard copy drawings

a. All submitters should contact the project engineer to get a project number. The project engineer shall contact the Public Works Department to get the last project number assigned for their type of project. The project number shall be reflected on the right bottom corner of all drawing pages. E.g. W-3567-S, TRM_15634, T_5678_S, etc.

b. Drawings shall exactly 24"x36" cut sheet. Drawing border should be only 1" on the left side of the sheet and ½" on other three sides. Refer to 2-e for more detail.

c. All sheets shall be issued a **SEQUENTIAL NUMERIC SHEET NUMBER.** Alphanumeric numbers shall not be assigned in lieu of numeric numbers. Duplicate numbering such as sheet 6 and 6A shall not be used. In the case of revisions and additions of additional sheets all sheets may have to be re-numbered so they remain sequential or added to the end of the set.

d. Title sheets shall have an index and/or key map **clearly indicating** the sheet numbers issued. Provide a Vicinity map, a legend of abbreviations, symbols and, line types used.

e. Scales for profile shall not be smaller than 1" = 40' horizontal and 1" = 10' vertical. The vertical scale should be changed to appropriate scale when grades are steep or very flat. Scales for plan views shall not be smaller than 1" = 40'. For complex intersections or similar plans, the scale shall be 1" = 10' or as approved by City's Project Engineer.

f. Large tracts shall have separate small-scale maps showing the overall layout of water, sewer,
storm drain, and street lighting systems.

b. There are more than one fire service connection to the same parcel or site.

c. The building being serviced by the connection is 3-stories in height or greater.

d. There are hazardous chemicals or materials either stored or used on the site being served by the connection.

e. There is a private storage or fire protection reservoir on the site being served by the connection.

f. The connection serves a marina or boat dock slip.

K. Pressure Booster Pump Stations (Private Domestic & Private Fire)

1. Pressure boosting stations shall be permitted only as a temporary installation by special permission from the Public Works Department.

a. Where such installations are allowed, they shall be served by metered service connections having both RPP type backflow prevention assembly and pressure sustaining valve equipment.

(1.) These installations require special design and review by the Utilities Department and the Public Works Department.

b. Backflow device shall be reduced pressure principle (RPP) type in accord with the applicable City standards.

IV. SEWER SYSTEM

A. Mains

1. General

a. Substantiating engineering calculations for sizing pipe and structural designs shall accompany all plan submittals.

b. Minimum size shall be 8 inches inside diameter.

c. Design flow shall not exceed H of full depth.

d. Pipe joints shall be elastomeric compression type unless otherwise specified.

e. Pipe material shall be SDR-35 PVC or standard strength VCP.

f. HDPE, ductile iron, RPM or filament bonded PVC flexible pipe materials can only be used upon special approval by the Utilities Department.

g. Structural design shall be per water system requirements listed in Section III D. "Structural Pipe Design", except that:

(1). Minimum test pressure shall be per the *Standard Specifications*.

(2). Minimum factor of safety for VCP shall be 1.5.

h. PVC fittings shall be prefabricated (molded) full-body fittings.

i. Backfill shall be in conformance with the *Standard Specifications* Section 306-1.3, except that relative compaction shall be 90% minimum.

j. Pipe Bedding

(1.) VCP shall be bedded in conformance with section 306-1.2.1 of the *Standard Specifications*. PVC shall be bedded in I inch crushed rock.

(2.) Pipe bedding and backfill shall be done in accord with the applicable portions of City STD-105-L and STD-106-L.

2. Locations

a. Alleys - Mains shall be offset 3.0 feet minimum from centerline to clear gutter. The offset shall be to the opposite side of the alley from any existing or proposed water main.

(1.) Clearance between sewer and water mains shall be in strict accord with the California DOHS requirements for "water and sewer separation.

(a). Horizontal clearance shall be at least 10 ft. wall to wall.

(b). Horizontal clearances less than 10 ft., but greater than 4 ft. may be allowed with special material construction. Utilities Department and State DOHS written permission is mandatory.

(2.) Clearance between sewer and utility conduits other than water shall be at least 2 ft. horizontal and 1 ft. vertical.

b. Streets - Main locations shall be in accord with STD-101-L.

c. Sewers in streets with more than 84 feet of right-of-way width require special design.

d. Extend and cap all dead ends beyond pavement limits. Refer to STD-401-L.

3. Minimum Gravity Sewer Slopes expressed in units of feet per foot:

Pipe Size (in.)	**Minimum Slope** (ft./ft.)	**Preferred Slope** (ft./ft.)
8"	0.0032	0.0040
10"	0.0026	0.0032
12"	0.0020	0.0032

4. Gravity Sewer Hydraulic Criteria

a. Hydraulic analysis shall be performed using Manning's Equation in the US Customary Unit System. Long-hand, manual calculations may be requested for City review on all sewer designs.

(1.) Manning's Roughness coefficient shall not be less than 0.013 for any sewer main. ($n \geq 0.013$)

(2.) Flows shall be first analyzed as "steady, uniform, non-turbulent" flow.

b. Velocity Criteria

(1.) Minimum design velocity shall be 2.0 ft./sec.

(2.) Maximum velocity shall be 6.0 ft./sec. Analysis shall be performed to determine whether flow regime is "sub-critical" or "super-critical".

(a.) Initial critical flow analysis shall be via Froude Number (f).

(b.) Depth of flow limit requirement shall be for "sub-critical" flow depth.

(3.) Froude Number (f) shall be determined from the following equation:

$$f = \frac{v}{\sqrt{gd}}$$ where the variables in the equation are:

f .....is the Froude Number
v.....is the velocity of the waste stream
g.....is the gravitational constant (32.2 ft/sec^2)
d.....is the depth of flow (subcritical depth)

5. Sewer Hydraulic Loading Design

a. Wastewater hydraulic calculations shall be performed utilizing the quantities of wastewater from the table below; (these should be considered design minimums, they are based on actual field flow monitoring tests):

Development Size (dwelling units)	**Average flow** (gallons per day)	**Peaking Factor** (dimensionless)	**Peak flow** (gallons per day)

0 to 75	315	3.80	1,200
76 to 150	285	3.65	1,040
151to 250	265	3.40	900
250& up	245	3.15	770

b. Certain developments with special circumstances may require design to consider flows higher than those in the table above. In no case shall the design flows be less than the amounts determined by the table above.

B. Manholes

Manholes shall be designed in accord with City of Newport Beach Standards, Standard Drawings, Standard Special Provisions and these Design Criteria. Manholes are required:

1. At all changes in slope.

2. At all changes in direction.

a. Horizontal curves for radii in excess of 150 feet may be used in areas without services only by the special approval of both the Utilities Department and the Public Works Department and only where straight sewer main runs are infeasible because of interference with other underground utilities.

3. At all intersections of mains. Match crown lines. Use 0.20 foot drop through manhole per City STD-401-L.

4. At all intersections between mains and laterals sized 8 inches and larger.

5. Minimum spacing is 300 feet; maximum spacing is 400 feet.

6. At the ends of dead end mains greater than 200 feet in length.

7. To have a special lining (either fiberglass or T-Lock) installed wherever:

a. Any sewer main connecting to the manhole has a slope greater than 7%.

b. Any change in slope of 5% or greater occurs between the upstream and the downstream manhole.

C. Terminal Cleanouts

1. Are required at ends of all mains where it is impractical or impossible to construct a sewer manhole.

2. May be used at other locations only by special permission of the Public Works Department.

D. Laterals

Each residential dwelling unit, residence, condominium, or rental unit (for buildings with four or less units) shall have an individual lateral, unless otherwise approved by the Public Works Department.

1. Size

a. Single family, apartment or condominium units shall be 4 inches minimum diameter per City STD-406-L unless slope is less than
G inch per foot. (In which case the lateral shall be upsized to
6 inches diameter.)

b. All other laterals shall be a minimum of 6 inches in diameter.

2. Location

a. At right angles or radial to street right-of-way.

b. Center of lot frontage or 5 feet toward the center of the lot from the downstream lot line. All lateral locations shall be shown and dimensioned or stationed on the construction plans.

c. In commercial developments, laterals shall connect the main line at manholes wherever possible.

d. All lateral connections 8 inches and larger shall connect to the sewer main at manholes.

e. All connections to existing manholes shall be mechanically saw cored and the joints made shall be sealed closed around the installed pipe using a non-shrink concrete grout or epoxy material.

3. Minimum depth of lateral pipe cover shall be 4 feet below finished grade at property line for level lots or lots sloping toward street. Special design is required for lots sloping away from street.

4. Cleanout shall be provided at property line in accord with STD-406-L
on all lateral connections 6 inches in diameter and smaller. 8-inch diameter laterals and larger require manholes as cleanouts at or near the property line.

E. Wastewater Pump Stations

1. Special Design Required

a. In all cases where a wastewater lift station is required, special design and review by City is required.

2. General Design Requirements

SEWARAGE FACILITIES CHARGE GUIDE
RESIDENTIAL AND COMMERCIAL CATEGORIES

(GR.SQ.FT.) = Gross Square Feet: area included within the exterior of the surrounding walls of a building excluding court.

EFFECTIVE DATE: April 6, 2012

Line No.	FACILITY DESCRIPTION	FEE RATE
1	Acupuncture Office/Clinic	$495/1000 GR.SQ.FT.
2	Arcade - Video Games	$206/1000 GR.SQ.FT.
3	Auditorium (a)	$12/SEAT
4	Auto Parking (a)	$83/1000 GR.SQ.FT.
5	Auto Mfg., Service Maintenance (b)	Actual
6	Bakery	$2956/1000 GR.SQ.FT.
7	Bank: Headquarters	$495/1000 GR.SQ.FT.
8	Bank: Branch	$206/1000 GR.SQ.FT.
9	Ballroom	$1445/1000 GR.SQ.FT.
10	Banquet Room	$1445/1000 GR.SQ.FT.
11	Bar: Cocktail, Fixed Set (a) (c)	$60/SEAT
12	Bar: Juice, No Baking Facilities (d)	$2973/1000 GR.SQ.FT.
13	Bar: Juice, with Baking Facilities (d)	$2973/1000 GR.SQ.FT.
14	Bar: Cocktail, Public Table Area (c)	$2973/1000 GR.SQ.FT.
15	Barber Shop	$495/1000 GR.SQ.FT.
16	Barber Shop (s)	$62/STALL.
17	Beauty Parlor	$1755/1000 GR.SQ.FT.
18	Beauty Parlor (s)	$206/STALL.
19	Bldg. Const/Field Office (e)	$483/OFFICE
20	Bowling Alley: Alley, Lanes & Lobby Area	$206/1000 GR.SQ.FT.
21	Bowling Facility: Arcade/Bar/Restaurant/Dancing	Total
22	Cafeteria: Fixed Seat	$162/SEAT
23	Car Wash: Automatic (b)	Actual
24	Car Wash: Coin Operated Bays (b)	Actual
25	Car Wash: Hand Wash (b)	Actual
26	Car Wash: Counter & Sales Area	$206/1000 GR.SQ.FT.
27	Chapel: Fixed Seat	$12/SEAT
28	Chiropractic Office	$495/1000 GR.SQ.FT.
29	Church: Fixed Seat	$12/SEAT
30	Church School: Day Care/Elem	$36/OCCUPANT
31	Church School: One Day Use (s)	$36/OCCUPANT
32	Cocktail Lounge: Fixed Seat (f)	$60/SEAT
33	Coffee House: No Food Preparation (d)	$2973/1000 GR.SQ.FT.
34	Coffee House: Pastry Baking Only (d)	$2973/1000 GR.SQ.FT.
35	Coffee House: Serves Prepared Food (d)	$135/SEAT
36	Cold Storage: No Sales (g)	$124/1000 GR.SQ.FT.
37	Cold Storage: Retail Sales (g)	$206/1000 GR.SQ.FT.
38	Comfort Station: Public	$322/FIXTURE
39	Commercial Use (a)	$206/1000 GR.SQ.FT.
40	Community Center	$12/OCCUPANT
41	Conference Room of Office Bldg.	$495/1000 GR.SQ.FT.

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42	Counseling Center (h)	$495/1000 GR.SQ.FT.
43	Credit Union	$495/1000 GR.SQ.FT.
44	Dairy	Average Flow
45	Dairy: Barn	Average Flow
46	Dairy: Retail Area	$206/1000 GR.SQ.FT.
47	Dancing Area (of Bars or Nightclub) (c)	$1445/1000 GR.SQ.FT.
48	Dance Studio (i)	$206/1000 GR.SQ.FT.
49	Dental Office/Clinic	$1032/1000 GR.SQ.FT.
50	Doughnut Shop	$1540/1000 GR.SQ.FT.
51	Drug Rehabilitation Center (h)	$495/1000 GR.SQ.FT.
52	Equipment Booth	$124/1000 GR.SQ.FT.
53	Film Processing (Retail)	$206/1000 GR.SQ.FT.
54	Film Processing (Industrial)	Actual
55	Food Processing Plant (b)	Actual
56	Gas Station: Self Service	$403/W.C.
57	Gas Station: Four Bays Max	$3168/STATION
58	Golf Course Facility: Lobby/Office/Restaurant/Bar	Total
59	Gymnasium: Basketball, Volleyball (k)	$826/1000 GR.SQ.FT.
60	Hanger (Aircraft)	$206/1000 GR.SQ.FT.
61	Health Club/Spa (k)	$2684/1000 GR.SQ.FT.
62	Homeless Shelter	$282/BED
63	Hospital	$415/BED
64	Hospital: Convalescent (a)	$282/BED
65	Hospital: Animal	$1811/1000 GR.SQ.FT.
66	Hospital: Psychiatric	$282/BED
67	Hospital: Surgical (a)	$1450/BED
68	Hotel: Use Guest Rooms Only (a)	$483/ROOM
69	Jail	$342/INMATE
70	Kennel: Dog Kennel/Open	$413/1000 GR.SQ.FT.
71	Laboratory: Commercial	$1032/1000 GR.SQ.FT.
72	Laboratory: Industrial	Actual
73	Laundromat	$837/MACHINE
74	Library: Public Area	$206/1000 GR.SQ.FT.
75	Library: Stacks, Storage	$124/1000 GR.SQ.FT.
76	Lobby of Retail Area (l)	$206/1000 GR.SQ.FT.
77	Lodge Hall	$12/SEAT
78	Lounge (l)	$206/1000 GR.SQ.FT.
79	Machine Shop (No Industrial Waste Permit Required) (b)	$206/1000 GR.SQ.FT.
80	Machine Shop (Industrial)	Actual
81	Mfg or Industrial Facility (No IW Permit Required) (b)	$206/1000 GR.SQ.FT.
82	Mfg or Industrial Facility (Industrial)	Actual
83	Massage Parlor	$1032/1000 GR.SQ.FT.
84	Medical Building (a)	$929/1000 GR.SQ.FT.

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RESIDENTIAL AND COMMERCIAL CATEGORIES

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EFFECTIVE DATE: April 6, 2012

85	Medical: Lab in Hospital	$1057/1000 GR.SQ.FT.
86	Medical Office/Clinic	$1032/1000 GR.SQ.FT.
87	Mini-Mall (No Food)	$206/1000 GR.SQ.FT.
88	Mortuary: Chapel	$12/SEAT
89	Mortuary: Embalming	$1644/1000 GR.SQ.FT.
90	Mortuary: Living Area	$206/1000 GR.SQ.FT.
91	Motel: Use Guest Room Only (a)	$483/ROOM
92	Museum: All Area	$124/1000 GR.SQ.FT.
93	Museum: Office Over 15%	$495/1000 GR.SQ.FT.
94	Museum: Sales Area	$206/1000 GR.SQ.FT.
95	Office Building (a)	$495/1000 GR.SQ.FT.
96	Office Bldg w/Cooling Tower	$702/1000 GR.SQ.FT.
97	Plating Plant (No IW Permit Required) (b)	$206/1000 GR.SQ.FT.
98	Plating Plant (Industrial) (b)	Actual
99	Pool Hall (No Alcohol)	$206/1000 GR.SQ.FT.
100	Post Office: Full Service (m)	$495/1000 GR.SQ.FT.
101	Post Office: Private Mail Box Rental	$206/1000 GR.SQ.FT.
102	Prisons	$705/INMATE
103	Residential Dorm: College or Residential (n)	$282/STUDENT
104	Residential: Boarding House	$282/BED
105	Residential: Apt - Bachelor (a)	$302/DU
106	Residential: Apt - 1 BDR (a) (o)	$443/DU
107	Residential: Apt - 2 BDR (a) (o)	$604/DU
108	Residential: Apt - 3 BDR (a) (o)	$765/DU
109	Residential: Apt - >3 BDR (o)	$161 PER ADDITIONAL BEDROOM
110	Residential: Condo - 1 BDR (o)	$443/DU
111	Residential: Condo - 2 BDR (o)	$604/DU
112	Residential: Condo - 3 BDR (o)	$765/DU
113	Residential: Condo - >3 BDR (o)	$161 PER ADDITIONAL BEDROOM
114	Residential: Duplex/Towhhouse - 1 BR (o)	$443/DU
115	Residential: Duplex/Towhhouse - 2 BR (o)	$604/DU
116	Residential: Duplex/Towhhouse - 3 BR (o)	$765/DU
117	Residential: Duplex/Towhhouse - >3 BR (o)	$161 PER ADDITIONAL BEDROOM
118	Residential: SFD - 1 BR (o)	$578/DU
119	Residential: SFD - 2 BR (o)	$764/DU
120	Residential: SFD - 3 BR (o)	$950/DU
121	Residential: SFD - >3 BR (o)	$186/BDR
122	Residential Room Addition: Bedroom (o)	$181/BDR
123	Residential Room Conversion: Into a Bedroom (o)	$181/BDR
124	Residential: Mobile Home	Same as Apt
125	Residential: Artist (2/3 Area)	$302/DU
126	Residential: Artist Residence	$302/DU
127	Residential: Guest Home w/ Kitchen	Same as Apt

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RESIDENTIAL AND COMMERCIAL CATEGORIES

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128	Residential: Guest Home w/o Kitchen	$181/BDR
129	Rest Home	$327/BED
130	Restaurant: Drive-In	$270/STALL
131	Restaurant: Drive-In Seating Area	$135/SEAT
132	Restaurant: Fast Food Indoor Seat	$135/SEAT
133	Restaurant: Fast Food Outdoor Seat	$135/SEAT
134	Restaurant: Full Service Indoor Seat (a)	$162/SEAT
135	Restaurant: Full Service Outdoor Seat	$162/SEAT
136	Restaurant: Take Out	$1650/1000 GR.SQ.FT.
137	Retail Area (greater than 100,000 SF)	$206/1000 GR.SQ.FT.
138	Retail Area (less than 100,000 SF)	$103/1000 GR.SQ.FT.
139	Rifle Range: Shooting Stalls/Lanes, Lobby	$206/1000 GR.SQ.FT.
140	Rifle Range Facility: Bar/Restaurant	Total
141	School: Arts/Dancing/Music (i)	$45/1000 GR.SQ.FT.
142	School: Elementary/Jr. High (a) (p)	$36/STUDENT
143	School: High School (a) (p)	$44/STUDENT
144	School: Kindergarten (s)	$36/STUDENT
145	School: Martial Arts (i)	$36/STUDENT
146	School: Nursery-Day Care (p)	$36/CHILD
147	School: Special Class (p)	$36/STUDENT
148	School: Trade or Vocational (p)	$44/STUDENT
149	School: Training (p)	$44/STUDENT
150	School: University/College (a) (p)	$64/STUDENT
151	School: Dormitory (a) (n)	$282/STUDENT
152	School: Stadium, Pavilion	$12/SEAT
153	Spa/Jacuzzi (Commercial with backwash filters)	Total
154	Storage: Building/Warehouse	$124/1000 GR.SQ.FT.
155	Storage: Self-Storage Bldg	$124/1000 GR.SQ.FT.
156	Store: Ice Cream/Yogurt	$138/1000 GR.SQ.FT.
157	Store: Retail (l)	$206/1000 GR.SQ.FT.
158	Studio: Film/TV - Audience Viewing Room (q)	$12/SEAT
159	Studio: Film/TV - Regular Use Indoor Filming Area (q)	$206/1000 GR.SQ.FT.
160	Studio: Film/TV - Ind. Use Film Process/Machine Shop (q)	$206/1000 GR.SQ.FT.
161	Studio: Film/TV - Ind. Use Film Process/Machine Shop	Total
162	Studio: Recording	$206/1000 GR.SQ.FT.
163	Swimming Pool (Commercial with backwash filters)	Total
164	Tanning Salon: Independent, No Shower (r)	$206/1000 GR.SQ.FT.
165	Tanning Salon: Within a Health Spa/Club	$2642/1000 GR.SQ.FT.
166	Theater: Drive-In	$24/VEHICLE
167	Theater: Live/Music/Opera	$12/SEAT
168	Theater: Cinema	$12/SEAT
169	Tract: Commercial/Residential	$4/ACRE
170	Trailer: Const/Field Office (e)	$483/OFFICE

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171	Veterinary Clinic/Office	$1032/1000 GR.SQ.FT.
172	Warehouse	$124/1000 GR.SQ.FT.
173	Warehouse w/ Office	Total
174	Waste Dump: Recreational	$4090/STATION
175	Wine Tasting Room: Kitchen	$826/1000 GR.SQ.FT.
176	Wine Tasting Room: All Area	$206/1000 GR.SQ.FT.

FOOTNOTES TO SFC Table

(a) SFC rates for these facilities have historically been published in SFC ordinances.

(b) Bureau of Sanitation will determine the flow based on the information given by applicants for facilities with industrial discharge. The flow will be redetermined by Sanitation inspectors annually based on water bills. If the actual flow exceeds the previous year's determined flow, the applicants will be charged for the difference.
If this type of facility is exempt from an industrial discharge permit, only the domestic SFC will be assessed.

(c) The SFC for a bar shall be the sum of SFC's for all areas based on the SGF for each area (ex. fixed seat area, public table area, dancing area).

(d) The determination of SGF for juice bars and coffee houses previously depended on the extent of the actual food preparation in house, not by the types of food provided. Food is assumed to be prepared offsite and as such, the three prior subcategories have been consolidated.

1) SGF for no pastry baking and no food preparation is 720 gpd/1000 gr.sq.ft.
2) SGF for pastry baking only and no food preparation is 720 gpd/1000 gr.sq.ft.
3) SGF for complete food preparation is 25 gpd/seat, the same as a fast food restaurant.

Juice bars and coffee houses do not serve any alcoholic drinks.

(e) Building construction includes trailers, field offices, etc.

(f) Cocktail lounge usually does not serve prepared food.

(g) Cold storage facilities are categorized as follow:

1) No Sales - the cold storage facility is used only for temporary storage, no selling is involved. For example, cold storage facilities at the harbor temporarily store seafood until it is distributed.
2) Cold storage w/ retail sales - the primary function of this facility is to support the wholesale/retail operation of a store, such as supermarket freezers, refrigerators, etc.

(h) Counseling centers include marriage counseling centers, alcohol/drug rehabilitation /dependency centers, nutrition centers, diet centers, etc.

(i) Part-time basis schools or dance studios should be charged as retail area - 50 gpd /1000 gr.sq.ft. Full-time basis schools should be charged by the number of students.

(j) Domestic waste is estimated at 50 gpd/1,000 square feet in addition to total process flow.

(k) Bureau of Sanitation will determine if an industrial permit is needed for health spas. The first year flow is based on 650 gpd/1000 gr.sq.ft., and the Sanitation inspectors will redetermine the flow annually based on water bill from the previous year. The applicants are responsible for paying the difference of SFC.

Health club/spa includes lobby area, workout floors, aerobic rooms, swimming pools, Jacuzzi, sauna, locker rooms, showers, and restrooms. If a health club/spa has a gymnasium type of facility, this portion should be charged separately at the gymnasium SFC rate.

Gymnasiums include basketball court, volleyball court, and any other large open space with low occupancy density.

(l) Lobby of retail includes lounges, holding rooms, or waiting area, etc.

(m) Full service post offices include U.S. Postal Service, UPS, Federal Express, DHL, and etc.

(n) The SGF for a college dormitory based on student capacity also includes the SGF for the dormitory cafeterias.

(o) A bedroom is defined as an enclosed subdivision with 50 sq.ft. or more floor area in a residential building commonly used for sleeping purpose, and is partitioned off to form a habitable room.

(p) The SGF for schools based on the student capacity, covers the following facilities:

1) classrooms and lecture halls
2) professors' offices
3) administration offices
4) laboratories for classes or research
5) libraries
6) bookstores
7) student/professor lounges
8) school cafeterias
9) warehouses and storage areas
10) auditoriums
11) gymnasiums
12) restrooms

It does not include water used by schools for swimming pools. When a school files an application for addition of any of the foregoing facilities, the student population will be reassessed and the total gpd for the new facility will be based on the number of students increased since the last SFC was paid or when the City implemented the SFC for the first time. The SFC for any school facility (ex. stadium, dormitory, etc.) not listed above, will be based on the designated SGF for that category.

(q) The SFC for a TV or motion picture studio shall be the sum of SFC's for different facilities in the studio, based on the SGF for each facility. A studio may include one or more of the following facilities: audience viewing room, filming room, film processing, storage area, etc.

(r) No independent tanning salons with shower were encountered during 1996 survey.

(s) Alternative basis of charge for City's consideration. The prior square footage basis is also presented should the City decide to continue charging on that basis.

(t) The formula for calculating total SFCs for sewage flow and its strength components is as follows:

SFC = (flow in gpd*$344/100 gpd) + (flow in mg*BOD in mg/l*8.34 lb/day*$159/ppd) + (flow in mg*SS in mg/l*8.34 lb/day*$147/ppd)

Exanple: Let us assume flow = 100 gpd, BOD = 265 mg/l (ppm), and SS = 275 mg/l (ppm).

Pounds of wastewater strength in 100 gpd:

$$\text{BOD} = \frac{100\text{ mg}}{1{,}000{,}000} \times 265\text{ mg/l} \times 8.34\text{ lb/day} = 0.22101\text{ lb/day}$$

$$\text{SS} = \frac{100\text{ mg}}{1{,}000{,}000} \times 275\text{ mg/l} \times 8.34\text{ lb/day} = 0.22935\text{ lb/day}$$

Base Fee:

Flow			= $344
BOD = 0.22101 lb/day (ppd)	X	$159 per ppd	= $35
SS = 0.22101 lb/day (ppd)	X	$147 per ppd	= $34
Total			**= $413**

SEWARAGE FACILITIES CHARGE
SEWAGE GENERATION FACTOR FOR
RESIDENTIAL AND COMMERCIAL CATEGORIES

EFFECTIVE DATE: April 6, 2012

Line No.	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
1	Acupuncture Office/Clinic	120/1,000 Gr SF	265	275
2	Arcade - Video Games	50/1,000 Gr SF	265	275
3	Auditorium (a)	3/Seat	265	275
4	Auto Parking (a)	20/1,000 Gr SF	265	275
5	Auto Mfg., Service Maintenance (b)	Actual	1,260	1,165
6	Bakery	280/1,000 Gr SF	3,020	2,540
7	Bank: Headquarters	120/1,000 Gr SF	265	275
8	Bank: Branch	50/1,000 Gr SF	265	275
9	Ballroom	350/1,000 Gr SF	265	275
10	Banquet Room	350/1,000 Gr SF	265	275
11	Bar: Cocktail, Fixed Set (a) (c)	15/Seat	265	275
12	Bar: Juice, No Baking Facilities (d)	720/1,000 Gr SF	265	275
13	Bar: Juice, with Baking Facilities (d)	720/1,000 Gr SF	265	275
14	Bar: Cocktail, Public Table Area (c)	720/1,000 Gr SF	265	275
15	Barber Shop	120/1,000 Gr SF	265	275
16	Barber Shop (s)	15/Stall	265	275
17	Beauty Parlor	425/1,000 Gr SF	265	275
18	Beauty Parlor (s)	50/Stall	265	275
19	Bldg. Const/Field Office (e)	120/Office	265	275
20	Bowling Alley: Alley, Lanes & Lobby Area	50/1,000 Gr SF	265	275
21	Bowling Facility: Arcade/Bar/Restaurant/Dancing	Total	Average	Average
22	Cafeteria: Fixed Seat	30/Seat	1,000	600
23	Car Wash: Automatic (b)	Actual	265	285
24	Car Wash: Coin Operated Bays (b)	Actual	265	285
25	Car Wash: Hand Wash (b)	Actual	265	285
26	Car Wash: Counter & Sales Area	50/1,000 Gr SF	265	275
27	Chapel: Fixed Seat	3/Seat	265	275
28	Chiropractic Office	120/1,000 Gr SF	265	275
29	Church: Fixed Seat	3/Seat	265	275
30	Church School: Day Care/Elem	9/Occupant	265	275
31	Church School: One Day Use (s)	9/Occupant	265	275
32	Cocktail Lounge: Fixed Seat (f)	15/Seat	265	275
33	Coffee House: No Food Preparation (d)	720/1,000 Gr SF	265	275
34	Coffee House: Pastry Baking Only (d)	720/1,000 Gr SF	265	275
35	Coffee House: Serves Prepared Food (d)	25/Seat	1,000	600
36	Cold Storage: No Sales (g)	30/1,000 Gr SF	265	275
37	Cold Storage: Retail Sales (g)	50/1,000 Gr SF	265	275
38	Comfort Station: Public	80/Fixture	265	275
39	Commercial Use (a)	50/1,000 Gr SF	265	275
40	Community Center	3/Occupant	265	275
41	Conference Room of Office Bldg.	120/1,000 Gr SF	265	275
42	Counseling Center (h)	120/1,000 Gr SF	265	275
43	Credit Union	120/1,000 Gr SF	265	275
44	Dairy	Average Flow	1,510	325
45	Dairy: Barn	Average Flow	1,510	325
46	Dairy: Retail Area	50/1,000 Gr SF	265	275
47	Dancing Area (of Bars or Nightclub) (c)	350/1,000 Gr SF	265	275
48	Dance Studio (i)	50/1,000 Gr SF	265	275
49	Dental Office/Clinic	250/1,000 Gr SF	265	275

SEWARAGE FACILITIES CHARGE
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Line No.	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
50	Doughnut Shop	280/1,000 Gr SF	1,000	600
51	Drug Rehabilitation Center (h)	120/1,000 Gr SF	265	275
52	Equipment Booth	30/1,000 Gr SF	265	275
53	Film Processing (Retail)	50/1,000 Gr SF	265	275
54	Film Processing (Industrial)	Actual	265	275
55	Food Processing Plant (b)	Actual	2,210	1,450
56	Gas Station: Self Service	100/W.C.	265	275
57	Gas Station: Four Bays Max	430/Station	1,950	1,175
58	Golf Course Facility: Lobby/Office/Restaurant/Bar	Total	700	450
59	Gymnasium: Basketball, Volleyball (k)	200/1,000 Gr SF	265	275
60	Hanger (Aircraft)	50/1,000 Gr SF	265	275
61	Health Club/Spa (k)	650/1,000 Gr SF	265	275
62	Homeless Shelter	70/Bed	265	275
63	Hospital	70/Bed	820	1,230
64	Hospital: Convalescent (a)	70/Bed	265	275
65	Hospital: Animal	300/1,000 Gr SF	820	1,230
66	Hospital: Psychiatric	70/Bed	265	275
67	Hospital: Surgical (a)	360/Bed	265	275
68	Hotel: Use Guest Rooms Only (a)	120/Room	265	275
69	Jail	85/Inmate	265	275
70	Kennel: Dog Kennel/Open	100/1,000 Gr SF	265	275
71	Laboratory: Commercial	250/1,000 Gr SF	265	275
72	Laboratory: Industrial	Actual	265	275
73	Laundromat	185/Machine	550	370
74	Library: Public Area	50/1,000 Gr SF	265	275
75	Library: Stacks, Storage	30/1,000 Gr SF	265	275
76	Lobby of Retail Area (l)	50/1,000 Gr SF	265	275
77	Lodge Hall	3/Seat	265	275
78	Lounge (l)	50/1,000 Gr SF	265	275
79	Machine Shop (No Industrial Waste Permit Required) (b)	50/1,000 Gr SF	265	275
80	Machine Shop (Industrial)	Actual	265	275
81	Mfg or Industrial Facility (No IW Permit Required) (b)	50/1,000 Gr SF	265	275
82	Mfg or Industrial Facility (Industrial)	Actual	265	275
83	Massage Parlor	250/1,000 Gr SF	265	275
84	Medical Building (a)	225/1,000 Gr SF	265	275
85	Medical: Lab in Hospital	250/1,000 Gr SF	340	275
86	Medical Office/Clinic	250/1,000 Gr SF	265	275
87	Mini-Mall (No Food)	50/1,000 Gr SF	265	275
88	Mortuary: Chapel	3/Seat	265	275
89	Mortuary: Embalming	300/1,000 Gr SF	800	800
90	Mortuary: Living Area	50/1,000 Gr SF	265	275
91	Motel: Use Guest Room Only (a)	120/Room	265	275
92	Museum: All Area	30/1,000 Gr SF	265	275
93	Museum: Office Over 15%	120/1,000 Gr SF	265	275
94	Museum: Sales Area	50/1,000 Gr SF	265	275
95	Office Building (a)	120/1,000 Gr SF	265	275
96	Office Bldg w/Cooling Tower	170/1,000 Gr SF	265	275
97	Plating Plant (No IW Permit Required) (b)	50/1,000 Gr SF	265	275
98	Plating Plant (Industrial) (b)	Actual	265	275

SEWARAGE FACILITIES CHARGE
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RESIDENTIAL AND COMMERCIAL CATEGORIES

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Line No.	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
99	Pool Hall (No Alcohol)	50/1,000 Gr SF	265	275
100	Post Office: Full Service (m)	120/1,000 Gr SF	265	275
101	Post Office: Private Mail Box Rental	50/1,000 Gr SF	265	275
102	Prisons	175/Inmate	265	275
103	Residential Dorm: College or Residential (n)	70/Student	265	275
104	Residential: Boarding House	70/Bed	265	275
105	Residential: Apt - Bachelor (a)	75/DU	265	275
106	Residential: Apt - 1 BDR (a) (o)	110/DU	265	275
107	Residential: Apt - 2 BDR (a) (o)	150/DU	265	275
108	Residential: Apt - 3 BDR (a) (o)	190/DU	265	275
109	Residential: Apt - >3 BDR (o)	40/BDR	265	275
110	Residential: Condo - 1 BDR (o)	110/DU	265	275
111	Residential: Condo - 2 BDR (o)	150/DU	265	275
112	Residential: Condo - 3 BDR (o)	190/DU	265	275
113	Residential: Condo - >3 BDR (o)	40/BDR	265	275
114	Residential: Duplex/Towhhouse - 1 BR (o)	110/DU	265	275
115	Residential: Duplex/Towhhouse - 2 BR (o)	150/DU	265	275
116	Residential: Duplex/Towhhouse - 3 BR (o)	190/DU	265	275
117	Residential: Duplex/Towhhouse - >3 BR (o)	40/BDR	265	275
118	Residential: SFD - 1 BR (o)	140/DU	265	275
119	Residential: SFD - 2 BR (o)	185/DU	265	275
120	Residential: SFD - 3 BR (o)	230/DU	265	275
121	Residential: SFD - >3 BR (o)	45/BDR	265	275
122	Residential Room Addition: Bedroom (o)	45/BDR	265	275
123	Residential Room Conversion: Into a Bedroom (o)	45/BDR	265	275
124	Residential: Mobile Home	Same as Apt	265	275
125	Residential: Artist (2/3 Area)	75/DU	265	275
126	Residential: Artist Residence	75/DU	265	275
127	Residential: Guest Home w/ Kitchen	Same as Apt	265	275
128	Residential: Guest Home w/o Kitchen	45/BDR	265	275
129	Rest Home	70/Bed	555	490
130	Restaurant: Drive-In	50/Stall	1000	600
131	Restaurant: Drive-In Seating Area	25/Seat	1000	600
132	Restaurant: Fast Food Indoor Seat	25/Seat	1000	600
133	Restaurant: Fast Food Outdoor Seat	25/Seat	1000	600
134	Restaurant: Full Service Indoor Seat (a)	30/Seat	1000	600
135	Restaurant: Full Service Outdoor Seat	30/Seat	1000	600
136	Restaurant: Take Out	300/1,000 Gr SF	1000	600
137	Retail Area (greater than 100,000 SF)	50/1,000 Gr SF	265	275
138	Retail Area (less than 100,000 SF)	25/1,000 Gr SF	265	275
139	Rifle Range: Shooting Stalls/Lanes, Lobby	50/1,000 Gr SF	265	275
140	Rifle Range Facility: Bar/Restaurant	Total	Average	Average
141	School: Arts/Dancing/Music (i)	11/Student	265	275
142	School: Elementary/Jr. High (a) (p)	9/Student	265	275
143	School: High School (a) (p)	11/Student	265	275
144	School: Kindergarten (s)	9/Student	265	275
145	School: Martial Arts (i)	9/Student	265	275
146	School: Nursery-Day Care (p)	9/Child	265	275
147	School: Special Class (p)	9/Student	265	275

SEWARAGE FACILITIES CHARGE
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RESIDENTIAL AND COMMERCIAL CATEGORIES

EFFECTIVE DATE: April 6, 2012

Line No.	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
148	School: Trade or Vocational (p)	11/Student	265	275
149	School: Training (p)	11/Student	265	275
150	School: University/College (a) (p)	16/Student	265	275
151	School: Dormitory (a) (n)	70/Student	265	275
152	School: Stadium, Pavilion	3/Seat	265	275
153	Spa/Jacuzzi (Commercial with backwash filters)	Total	265	275
154	Storage: Building/Warehouse	30/1,000 Gr SF	265	275
155	Storage: Self-Storage Bldg	30/1,000 Gr SF	265	275
156	Store: Ice Cream/Yogurt	25/1,000 Gr SF	1000	600
157	Store: Retail (l)	50/1,000 Gr SF	265	275
158	Studio: Film/TV - Audience Viewing Room (q)	3/Seat	265	275
159	Studio: Film/TV - Regular Use Indoor Filming Area (q)	50/1,000 Gr SF	265	275
160	Studio: Film/TV - Ind. Use Film Process/Machine Shop (q)	50/1,000 Gr SF	265	275
161	Studio: Film/TV - Ind. Use Film Process/Machine Shop	Total	265	275
162	Studio: Recording	50/1,000 Gr SF	265	275
163	Swimming Pool (Commercial with backwash filters)	Total	265	275
164	Tanning Salon: Independent, No Shower (r)	50/1,000 Gr SF	265	275
165	Tanning Salon: Within a Health Spa/Club	640/1,000 Gr SF	265	275
166	Theater: Drive-In	6/Vehicle	265	275
167	Theater: Live/Music/Opera	3/Seat	265	275
168	Theater: Cinema	3/Seat	265	275
169	Tract: Commercial/Residential	1/Acre	265	275
170	Trailer: Const/Field Office (e)	120/Office	265	275
171	Veterinary Clinic/Office	250/1,000 Gr SF	265	275
172	Warehouse	30/1,000 Gr SF	265	275
173	Warehouse w/ Office	Total	265	275
174	Waste Dump: Recreational	400/Station	2650	2750
175	Wine Tasting Room: Kitchen	200/1,000 Gr SF	265	275
176	Wine Tasting Room: All Area	50/1,000 Gr SF	265	275

FOOTNOTES TO SGFs TABLE

(a) SFC rates for these facilities have historically been published in SFC ordinances.

(b) Bureau of Sanitation will determine the flow based on the information given by applicants for facilities with industrial discharge. The flow will be redetermined by Sanitation inspectors annually based on water bills. If the actual flow exceeds the previous year's determined flow, the applicants will be charged for the difference.
If this type of facility is exempt from an industrial discharge permit, only the domestic SFC will be assessed.

(c) The SFC for a bar shall be the sum of SFC's for all areas based on the SGF for each area (ex. fixed seat area, public table area, dancing area).

(d) The determination of SGF for juice bars and coffee houses previously depended on the extent of the actual food preparation in house, not by the types of food provided. Food is assumed to be prepared offsite and as such, the three prior subcategories have been consolidated.

1) SGF for no pastry baking and no food preparation is 720 gpd/1000 gr.sq.ft.
2) SGF for pastry baking only and no food preparation is 720 gpd/1000 gr.sq.ft.
3) SGF for complete food preparation is 25 gpd/seat, the same as a fast food restaurant.

Juice bars and coffee houses do not serve any alcoholic drinks.

(e) Building construction includes trailers, field offices, etc.

(f) Cocktail lounge usually does not serve prepared food.

(g) Cold storage facilities are categorized as follow:

1) No Sales - the cold storage facility is used only for temporary storage, no selling is involved. For example, cold storage facilities at the harbor temporarily store seafood until it is distributed.
2) Cold storage w/ retail sales - the primary function of this facility is to support the wholesale/retail operation of a store, such as supermarket freezers, refrigerators, etc.

(h) Counseling centers include marriage counseling centers, alcohol/drug rehabilitation /dependency centers, nutrition centers, diet centers, etc.

(i) Part-time basis schools or dance studios should be charged as retail area - 50 gpd /1000 gr.sq.ft. Full-time basis schools should be charged by the number of students.

(j) Domestic waste is estimated at 50 gpd/1,000 square feet in addition to total process flow.

(k) Bureau of Sanitation will determine if an industrial permit is needed for health spas. The first year flow is based on 650 gpd/1000 gr.sq.ft., and the Sanitation inspectors will redetermine the flow annually based on water bill from the previous year. The applicants are responsible for paying the difference of SFC.

Health club/spa includes lobby area, workout floors, aerobic rooms, swimming pools, Jacuzzi, sauna, locker rooms, showers, and restrooms. If a health club/spa has a gymnasium type of facility, this portion should be charged separately at the gymnasium SFC rate.

Gymnasiums include basketball court, volleyball court, and any other large open space with low occupancy density.

(l) Lobby of retail includes lounges, holding rooms, or waiting area, etc.

(m) Full service post offices include U.S. Postal Service, UPS, Federal Express, DHL, and etc.

(n) The SGF for a college dormitory based on student capacity also includes the SGF for the dormitory cafeterias.

(o) A bedroom is defined as an enclosed subdivision with 50 sq.ft. or more floor area in a residential building commonly used for sleeping purpose, and is partitioned off to form a habitable room.

(p) The SGF for schools based on the student capacity, covers the following facilities:

1) classrooms and lecture halls
2) professors' offices
3) administration offices
4) laboratories for classes or research
5) libraries
6) bookstores
7) student/professor lounges
8) school cafeterias
9) warehouses and storage areas
10) auditoriums
11) gymnasiums
12) restrooms

It does not include water used by schools for swimming pools. When a school files an application for addition of any of the foregoing facilities, the student population will be reassessed and the total gpd for the new facility will be based on the number of students increased since the last SFC was paid or when the City implemented the SFC for the first time. The SFC for any school facility (ex. stadium, dormitory, etc.) not listed above, will be based on the designated SGF for that category.

(q) The SFC for a TV or motion picture studio shall be the sum of SFC's for different facilities in the studio, based on the SGF for each facility. A studio may include one or more of the following facilities: audience viewing room, filming room, film processing, storage area, etc.

(r) No independent tanning salons with shower were encountered during 1996 survey.

(s) Alternative basis of charge for City’s consideration. The prior square footage basis is also presented should the City decide to continue charging on that basis.

Appendix 6

Sewer Generation Calculations

OCMA Museum House - Newport Beach

Proposed Sewer Flow Generation

Residential

Number Of Units	Avg Flow (gpd/du)	Peaking Factor	Peak Flow (gpd/du)	Total Peak Flow (gpd)	Total Peak Flow (cfs)
100	285	3.65	1,040	104,000	0.16

Note: Generation Factors Per City of Newport Beach Design Criteria (See Appendix)

Flow Generation

Amenities		Avg Flow	Peaking		
Amenity	Size (sf)	(gpd/sf)	Factor	Peak Flow (gpd)	Peak Flow (cfs)
Fitness Center	500	0.80	2.5	1,460.00	0.00226
Pool	500	0.72	2.5	1,314.00	0.00203
Club Room	500	0.08	2.5	146.00	0.00023
Total	1,500			Sub Total	0.00452
Avg Daily Flow Per City Of LA					
Existing Museum: 0.003 cfs					-0.003
				Total New Flow	**0.16**

Existing Museum: 0.003 cfs
Proposed Additional Flow = 0.165 - 0.003 = 0.16 cfs
Existing Sewer Flow for Existing d/s mh: 0.436 cfs
Total New flow at d/s mh = 0.436+0.16 = 0.596 cfs

OCMA Museum House
Newport Beach

Existing Sewer Flow Generation **Total Flow (From Existing Site (Museum))**
Museum/Commercial

Museum (SF)	Sewer Generation Rate * (gpd/unit/1000 SF)	Existing Wastewater Generation Rate (million gallons per day)	Peaking Factor	Existing Wastewater Generation Rate (cfs)
23,935	30/1000 SF	0.001	2.500	**0.003**

* Sewer Generation Per City Of LA

Appendix 7

Kutter Flow Depth Calculations

Existing Condition @ Downstream Reach

*Cells that are highlighted can be changed

GIVEN:

Qgiven=	0.436	cfs	<== Discharge
n=	0.013		<== Roughness coefficient
S=	0.0060	S=0.6%	<== Slope V:H
r=	0.333	ft	<== Radius

TRIAL DEPTH: 8" VCP

h=	3.940	in	<== Vary this depth to get $Q_{assume} = Q_{given}$
	0.328	ft	

CACULATIONS:

beta=	89.20	degree
R=	0.165	ft
C=	81.442	49.3% FULL
V=	2.563	ft/sec
A=	0.171	sq. ft.
Q_{assume}=	0.438	cfs
$Q_{halffull}$ =	0.45 cfs	$Q_{3/4full}$ = 0.84 cfs

RESULT:

(Qgiven-Qassume) / Qgiven %= -1% <======= OK

Flow Depth (in) =	3.940
Capacity d/r =	98.60%
$Q_{capacity}$ =	0.451 cfs - Capacity = 0.451 CFS
Capacity $Q_{given}/Q_{capacity}$ =	96.77%

($Q_{halffull}$ =	0.45 cfs	($Q_{3/4full}$ =	0.84 cfs
$beta_{halffull}$=	90.000 degree	$beta_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.167 ft	$R_{3/4full}$=	0.201 ft
$C_{halffull}$ =	81.719 ft	$C_{3/4full}$=	85.995 ft
$A_{halffull}$ =	0.174 sq. ft.	$A_{3/4full}$=	0.280 sq. ft.
$V_{halffull}$ =	2.587 ft/sec)	$V_{3/4full}$=	2.986 ft/sec)

EXISTING Condition MH: SB-C1

Santa Barbara Drive

8" VCP @ S=0.0188 (1.88%)

*Cells that are highlighted can be changed

GIVEN:

Qgiven=	0.390	cfs	<== Discharge
n=	0.013		<== Roughness coefficient
S=	0.0188		<== Slope V:H
r=	0.333	ft	<== Radius

TRIAL DEPTH:

h= 2.800 in (0.233 ft) <== Vary this depth to get $Q_{assume} = Q_{given}$

CACULATIONS:

beta=	72.58	degree
R=	0.129	ft
C=	72.064	
V=	3.548	ft/sec
A=	0.109	sq. ft.
Q_{assume}=	0.386	cfs
$Q_{halffull}$ =	0.76 cfs	$Q_{3/4full}$ = 1.41 cfs

35% full

RESULT:

(Qgiven-Qassume) / Qgiven %= 1% <======= OK

Flow Depth (in) =	2.800
Capacity d/r =	70.07%
$Q_{capacity}$ =	0.759 cfs
Capacity $Q_{given}/Q_{capacity}$ =	51.40%

($Q_{halffull}$ =	0.76 cfs	($Q_{3/4full}$ =	1.41 cfs
$beta_{halffull}$=	90.000 degree	$beta_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.167 ft	$R_{3/4full}$=	0.201 ft
$C_{halffull}$ =	77.738 ft	$C_{3/4full}$=	81.865 ft
$A_{halffull}$ =	0.174 sq. ft.	$A_{3/4full}$=	0.280 sq. ft.
$V_{halffull}$ =	4.356 ft/sec)	$V_{3/4full}$=	5.031 ft/sec)

Existing Condition

Existing 8"-Diameter public sewer in easement at 888 San Clemente Drive

Cells that are highlighted can be changed

GIVEN:

5 = Flows at MH SB-01

Qgiven=	0.362 cfs	<== Discharge
n=	0.013	<== Roughness coefficient
S=	0.0100	<== Slope V:H
r=	0.333 ft	<== Radius

TRIAL DEPTH:

h= 3.200 in (0.267 ft) <== Vary this depth to get $Q_{assume} = Q_{given}$

CACULATIONS:

beta=	78.51 degree
R=	0.143 ft
C=	74.199
V=	2.804 ft/sec
A=	0.130 sq. ft.
Q_{assume}=	0.365 cfs
$Q_{halffull}$ =	0.55 cfs
$Q_{3/4full}$ =	1.03 cfs

$\frac{3.2"}{8"} = 40\%$ full

RESULT:

(Qgiven-Qassume) / Qgiven %= -1% <======= OK

Flow Depth (in) =	3.200
Capacity d/r =	80.08%
$Q_{capacity}$ =	0.553 cfs
Capacity $Q_{given}/Q_{capacity}$ =	65.49%

($Q_{halffull}$ =	0.55 cfs	($Q_{3/4full}$ =	1.03 cfs
$beta_{halffull}$=	90.000 degree	$beta_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.167 ft	$R_{3/4full}$=	0.201 ft
$C_{halffull}$ =	77.655 ft	$C_{3/4full}$=	81.783 ft
$A_{halffull}$ =	0.174 sq. ft.	$A_{3/4full}$=	0.280 sq. ft.
$V_{halffull}$ =	3.173 ft/sec)	$V_{3/4full}$=	3.666 ft/sec)

Capacity of:

Existing 8" Diameter Public Sewer in easement at 888 San Clemente Drive

Cells that are highlighted can be changed

GIVEN:

Qgiven=	0.550	cfs	<== Discharge
n=	0.013		<== Roughness coefficient
S=	0.0100		<== Slope V:H
r=	0.333	ft	<== Radius

S = 1%

TRIAL DEPTH:

h=	4.000	in	<== Vary this depth to get $Q_{assume} = Q_{given}$
	0.333	ft	

CACULATIONS:

beta=	90.06	degree
R=	0.167	ft
C=	77.603	
V=	3.168	ft/sec
A=	0.174	sq. ft.
Q_{assume}=	0.552	cfs
$Q_{halffull}$ =	0.55	cfs

Capacity = 0.55 CFS

$Q_{3/4full}$ = 1.03 cfs

RESULT:

(Qgiven-Qassume) / Qgiven %= 0% <======= OK

Flow Depth (in) =	4.000
Capacity d/r =	100.10%
$Q_{capacity}$ =	0.553 cfs
Capacity $Q_{given}/Q_{capacity}$ =	99.50%

($Q_{halffull}$ =	0.55 cfs	($Q_{3/4full}$ =	1.03 cfs
$beta_{halffull}$=	90.000 degree	$beta_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.167 ft	$R_{3/4full}$=	0.201 ft
$C_{halffull}$ =	77.655 ft	$C_{3/4full}$=	81.783 ft
$A_{halffull}$ =	0.174 sq. ft.	$A_{3/4full}$=	0.280 sq. ft.
$V_{halffull}$ =	3.173 ft/sec)	$V_{3/4full}$=	3.666 ft/sec)

Proposed Condition - Exist. 8"-Diameter SS

SB-01 to J-01

*Cells that are highlighted can be changed

GIVEN:

Qgiven=	0.550	cfs	<== Discharge
n=	0.013		<== Roughness coefficient
S=	0.0188		<== Slope V:H
r=	0.333	ft	<== Radius

S=1.88%

TRIAL DEPTH:

h=	3.350	in	<== Vary this depth to get $Q_{assume} = Q_{given}$
	0.279	ft	

CACULATIONS:

beta=	80.70	degree
R=	0.148	ft
C=	75.017	
V=	3.952	ft/sec
A=	0.138	sq. ft.
Q_{assume}=	0.547	cfs

42% Full

$Q_{halffull}$ =	0.76 cfs	$Q_{3/4full}$ =	1.41 cfs

RESULT:

(Qgiven-Qassume) / Qgiven %= 0% <======= OK

Flow Depth (in) =	3.350
Capacity d/r =	83.83%
$Q_{capacity}$ =	0.759 cfs
Capacity $Q_{given}/Q_{capacity}$ =	72.44%

- Capacity = 0.759 cfs

($Q_{halffull}$ =	0.76 cfs	($Q_{3/4full}$ =	1.41 cfs
$beta_{halffull}$=	90.000 degree	$beta_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.167 ft	$R_{3/4full}$=	0.201 ft
$C_{halffull}$ =	77.738 ft	$C_{3/4full}$=	81.865 ft
$A_{halffull}$ =	0.174 sq. ft.	$A_{3/4full}$=	0.280 sq. ft.
$V_{halffull}$ =	4.356 ft/sec)	$V_{3/4full}$=	5.031 ft/sec)

Proposed 12"- Diameter S.S Downstream J-01 to OCSD

Cells that are highlighted can be changed

GIVEN:

Qgiven=	0.596	cfs	<== Discharge
n=	0.013		<== Roughness coefficient
S=	0.0060		<== Slope V:H
r=	0.500	ft	<== Radius

TRIAL DEPTH:

h=	3.950	in	<== Vary this depth to get $Q_{assume} = Q_{given}$
	0.329	ft	

CACULATIONS:

beta=	70.02	degree
R=	0.184	ft
C=	79.735	
V=	2.652	ft/sec
A=	0.225	sq. ft.
Q_{assume}=	0.597	cfs

33% FULL

$Q_{halffull}$ =	1.32 cfs	$Q_{3/4full}$ =	2.44 cfs

RESULT:

(Qgiven-Qassume) / Qgiven %= 0% <======= OK

Flow Depth (in) =	3.950
Capacity d/r =	65.83%
$Q_{capacity}$ =	1.317 cfs
Capacity $Q_{given}/Q_{capacity}$ =	45.25%

($Q_{halffull}$ =	1.32 cfs	($Q_{3/4full}$ =	2.44 cfs
$beta_{halffull}$=	90.000 degree	$beta_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.250 ft	$R_{3/4full}$=	0.302 ft
$C_{halffull}$ =	86.596 ft	$C_{3/4full}$=	90.855 ft
$A_{halffull}$ =	0.393 sq. ft.	$A_{3/4full}$=	0.632 sq. ft.
$V_{halffull}$ =	3.354 ft/sec)	$V_{3/4full}$=	3.865 ft/sec)

Proposed Condition

Existing 8"-Diameter public sewer in easement at 888 San Clemente Drive

Cells that are highlighted can be changed

GIVEN:

S = 0.362 (Testing at MH1SB-01) + 0.16 (Proposed Project flows) 100%

Qgiven=	**0.522** cfs		*<== Discharge*
n=	**0.013**		*<== Roughness coefficient*
S=	**0.0100**	→ S=0.01	*<== Slope V:H*
r=	**0.333** ft		*<== Radius*

TRIAL DEPTH:

h=	**3.870** in	*<== Vary this depth to get $Q_{assume} = Q_{given}$*
	0.323 ft	

CACULATIONS:

beta=	88.19	degree
R=	0.163	ft
C=	77.130	
V=	3.115	ft/sec
A=	0.167	sq. ft.
Q_{assume}=	0.521	cfs

48.3% full

$Q_{halffull}$ =	**0.55 cfs**	**$Q_{3/4full}$ =**	**1.03 cfs**

RESULT:

(Qgiven-Qassume) / Qgiven %= 0% **<======= OK**

Flow Depth (in) =	**3.870**
Capacity d/r =	**96.85%**
$Q_{capacity}$ =	**0.553 cfs**
Capacity $Q_{given}/Q_{capacity}$ =	**94.44%**

($Q_{halffull}$ =	0.55 **cfs**	**($Q_{3/4full}$ =**	1.03 **cfs**
beta $_{halffull}$=	90.000 degree	beta $_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.167 ft	$R_{3/4full}$=	0.201 ft
$C_{halffull}$ =	77.655 ft	$C_{3/4full}$=	81.783 ft
$A_{halffull}$ =	0.174 sq. ft.	$A_{3/4full}$=	0.280 sq. ft.
$V_{halffull}$ =	3.173 ft/sec)	$V_{3/4full}$=	3.666 ft/sec)

Proposed Condition – Capacity of possible 10" S.S Downstream J-01 to OCSD

*Cells that are highlighted can be changed

GIVEN:

Qgiven=	0.596	cfs	<== Discharge
n=	0.013		<== Roughness coefficient
S=	0.0060		<== Slope V:H
r=	0.417	ft	<== Radius

TRIAL DEPTH:

h=	4.250	in	<== Vary this depth to get $Q_{assume} = Q_{given}$
	0.354	ft	

CACULATIONS:

beta=	81.37	degree
R=	0.187	ft
C=	80.008	
V=	2.677	ft/sec
A=	0.221	sq. ft.
Q_{assume}=	0.591	cfs

43% Full (Use 12" VCP - per City)

$Q_{halffull}$ =	0.79 cfs	$Q_{3/4full}$ =	1.48 cfs

RESULT:

(Qgiven-Qassume) / Qgiven %= 1% <======= OK

Flow Depth (in) =	4.250
Capacity d/r =	84.99%
$Q_{capacity}$ =	0.794 cfs
Capacity $Q_{given}/Q_{capacity}$ =	75.02%

($Q_{halffull}$ =	0.79 cfs	($Q_{3/4full}$ =	1.48 cfs
$beta_{halffull}$=	90.000 degree	$beta_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.208 ft	$R_{3/4full}$=	0.251 ft
$C_{halffull}$ =	82.445 ft	$C_{3/4full}$=	86.725 ft
$A_{halffull}$ =	0.273 sq. ft.	$A_{3/4full}$=	0.439 sq. ft.
$V_{halffull}$ =	2.913 ft/sec)	$V_{3/4full}$=	3.368 ft/sec)

Appendix 8

Correspondence & Meeting Minutes

FUSCOE ENGINEERING

OCMA Project
Meeting Minutes – Impacts to OCSD Manhole at Jamboree Road / Santa Barbara Drive Intersection

OCMA – Project No. 0622-13

Meeting Date: September 28, 2015 – 11:00 am

Attendees: Rudy Davila (OCSD), Bill Gilbert (OCSD), John Gonzalez (OCSD), Steven Oh (Related), Oriana Slasor (Fuscoe), Sue Williams (Fuscoe)

Purpose of meeting: To discuss issues, processes, and costs associated with upsizing 81 lineal feet of existing 8″-diameter sewer lateral to a proposed 12″-diameter lateral at the OCSD manhole # BAY0010-0665 on Jamboree Road at Santa Barbara Drive. See attached exhibit.

Item No.	Discussion
1	Rudy Davila (RD) stated that a trunk connection permit would be issued from OCSD to City of Newport Beach for the proposed connection of new 12″ lateral, to replace the existing 8″ lateral connection. The plans (on City title block) are to be emailed to OCSD at the time that they are also submitted to City. OCSD will provide comments on the plans, and will issue permit to City, upon approval of the plans by OCSD. OCSD will require a detail of the proposed connection to be included on the plans.
2	Fee Structure: Plan-check fees will not be required. Inspection fees will be required for connection to OCSD manhole. Capital fees will be required, which are based on net new sewer loadings. RD will/has email the OCSD rate & fee table to Fuscoe and Related. A credit will be given for the existing museum, possibly based on low to average commercial development. RD will send the information.
3	Sue Williams (SW) will/has emailed as-built plans of existing sewer connection to OCSD team.
4	A bypass system will be required for the construction interim for the sewer system on Santa Barbara Drive. Criteria will be per City of NB. (It was mentioned by Bill Gilbert (BG) and RD that a bypass system is required for

	longer pipe lengths, such as the 81 lineal feet of proposed sewer replacement. If it were for a very short reach, then possibly a bypass would not have been required.)
5	OCSD will inspect the existing manhole (possibly this week, depending on permission by City of NB, or next week) to determine whether a new manhole will be required, or if the lateral connection can be replaced with the larger pipe. BG stated that a new manhole (installed) would cost about $25k for a new 60" manhole (manhole only; not earthwork, etc). A new manhole would be expected to incur additional costs, including a sewer bypass system for the 18" OCSD main line, in addition to the bypass for the sewer system in Santa Barbara Drive.
6	Potential bypass systems were discussed. BG mentioned that "Rain for Rent" could provide bypass system costs, including materials, traffic diversions, etc. John Gonzalez (JG) mentioned Charles King as a potential bypass system contractor to be used for the proposed bypass work. It was stated by OCSD that the City of NB will review/approve the bypass plan, and whether a "hard" bypass will be required, or if a "soft" bypass system will be allowed. Inspector will be required to check for leakage or spills, and maintain the system.
7	RD will/has send Design & Construction Requirements, along with the Rates and Fees for 2015-16.
8	OCSD requested that the City of NB standards from 1958 for the existing manhole in Jamboree, be obtained, if possible. The City of NB 1958 standard plan, as called out on the plan is S.P. 5-2256
9	The question of requiring a gas-flap for the lateral, or T-lock for the manhole was discussed. OCSD stated that the possible replacements shall be "in-kind".

Existing OCSD Manhole #BAY00 10-0665

(s = 0.0060)

Exist. 8" VCP - to be replaced w/ 12" VCP 81 lineal feet

MH-SB01

(S=0.0188)

(S=0.0520)

(S=0.0253)

(S=0.0612)

MH-SB02

(S=0.0140)

PROPOSED 8" CONNECTION

S=0.0032

PROPOSED 8"

PROJECT SITE

PROPOSED 6"

S=0.0032

NEWPORTER WAY

SANTA BARBARA DRIVE

BOMBERO

NEWPORT CENTER FIRE STATION RESUB 283

NEWPORT CENTER POLICE FACILITY

RESUB. 616

RESUB. 469

PARCEL 1

PARCEL 2

PARCEL 3

PARCEL 4

RESUB. 730

ST. CLEMENTE

SANTA MARIA

COLONY PLAZA

RESUB. 280

PACIFIC MUTUAL BUILDING

NEWPORT CENTER DRIVE WEST

RESUB. 612 PARCEL 1

RESUB. PARCEL

612 PARCEL 1

RESUB. 497

LOT 19

RAMP T

TUNNEL 20

PARCEL 5

M-169

RESUB. 616

Susan Williams

From: Oriana Slasor
Sent: Thursday, October 22, 2015 12:10 PM
To: Susan Williams
Subject: RE: OCMA Project - Sewer Manhole

Categories: Filed by Newforma

Thanks for the update.

Oriana Slasor, P.E.

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tel (949) 474-1960 ext 4315
fax (949) 474-5315
www.fuscoe.com

From: Susan Williams
Sent: Thursday, October 22, 2015 9:57 AM
To: Oriana Slasor <oslasor@fuscoe.com>
Subject: FW: OCMA Project - Sewer Manhole

Hi Oriana,
Rudy called me back yesterday, to discuss the progress of OCSD's internal discussions regarding the situation of the existing OCSD manhole in Jamboree Road at Santa Barbara Drive. Basically, it will be at least another month or so, to determine whether the 45-year old manhole will be able to be cored, or if it will have to be replaced. The following items need to take place:

1. OCSD needs to have 3-D pictures of the manhole taken, and then studied to determine its condition;
2. OCSD will prepare a traffic control plan, as required by City of Newport Beach;
3. OCSD to prepare service request to get contractor on board;
4. OCSD currently owns 8,400 manholes, and has a manhole replacement program. Rudy will look into the status of when this particular manhole is scheduled to be replaced;
5. Internal approvals are needed for this process;
6. The proposed core shall be 4" wider than the proposed lateral;
7. I will check in with Rudy next week (Wednesday or Thursday) regarding status of proposed manhole inspection.

From: Davila, Rudy [mailto:RDavila@OCSD.COM]
Sent: Wednesday, October 21, 2015 2:22 PM
To: Susan Williams
Subject: RE: OCMA Project - Sewer Plans

Sue

I will call you a little later today to discuss progress of OCSD discussions.

Rudy