C.C. MYERS INC.

51 Macalla Road
(415) 399-0175

San Francisco, CA 94130
Fax (415) 399-0587

December 12, 2005

Document No.: 215-STL.00211

State of California
Department of Transportation
333 Burma Road
Oakland, CA 94607

Temporary Bypass Structure
Contract No. 04-0120R4
CCM Job # 215

Attn: Mr. Lourdes David
Resident Engineer

Re: TBS Deck Drainage

Dear Mr. David,

Attached please find a copy of letter #163 from Imbsen & Associates, Inc. with which they provide their analysis for the deck drainage system for the Temporary Bypass Structure. Please proceed to review this information and provide your comments.

In their letter, Imbsen & Associates, Inc. states that they are incorporating their additional costs and impacts as a part of Potential Claim No. 9. Please understand that based on this current analysis of the deck drainage system, C. C. Myers, Inc. as well as our other subcontractors will also incur substantial additional costs. The types of costs will result from having to furnish and install an inordinate amount of deck drain inlets along with the associated piping, from having to construct the barrier rail scuppers, including the specialized asphalt or concrete paving adjacent to the scuppers. Also, be reminded that the mechanical piping design has been and will continue to be affected by this, resulting in additional costs being incurred. We consider all of the costs related to the deck drain design to be within the scope of our Notice of Potential Claim No. 9 and we will pursue payment accordingly. If you do not agree with this, please advise us of such in writing.

Very Truly Yours,
C. C. Myers, Inc.

Robert W. Coupe
Project Manager

cc: AC, DHobbs, CMW, MO, JCG

File: 215-101, 215-9909

IMBSEN & ASSOCIATES, INC.
Engineering Consultants
A TRC Company

December 1, 2005

RECEIVED
DEC 01 2005
CC MYERS, INC.
JOB 215 TEMP BYPASS STRUCTURE
FC-2733
215-201
215-9909
STATE - STL

#1295-320

IAI Letter #: 163

Mr. Bob Coupe
C.C. Myers, Inc.
3286 Fitzgerald Road
Rancho Cordova, CA 95742

Subject: **TBS Deck Drainage**

Dear Mr. Coupe:

Reference is made to IAI Letter #155, dated October 5, 2005, and the meeting between representatives of Caltrans, C.C. Myers and IAI on Friday September 30, 2005 regarding the above subject matter.

Attached, please find the supporting calculations for the TBS deck drainage design based on Caltrans direction. It is important to note that the references that Caltrans is directing us to use such as the FHWA "Urban Drainage Design Manual-Hydraulics Engineering Circular No. 22" dated November 1996 (and August 2001), for the design of depressed curb openings, is outside the contract documents.

We continue to comply with the Engineer's request but would like to remind you that we have spent an enormous amount of time and resources on:

- Determining the structural feasibility of locating drains within the already designed TBS segments.
- Identifying areas of conflict between the new proposed deck drains and the edge beams, reinforcement, pre-stressing ducts, cap beams, hinge/expansion joints, shear studs on stringers, and floor-beams.
- Hydraulic analyses for revised arrangement of the drains and scuppers.

We will incorporate the additional costs and impacts as a part of NOPC #9 which was submitted to C.C. Myers on June 8, 2005.

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(559) 449-4591 Fax

Oakland Office
167 Filbert Street
Oakland, Ca 94607
(510) 267-1835 Phone

Please feel free to contact me at (916) 366-0632 should you have any questions.

Sincerely,

Roy A. Imbsen, P.E., D.Engr.
Project Manager

cc: IAI File, EA, MV, JH

Attachment: Supporting calculations/documentations

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IMBSEN & ASSOCIATES, INC.
Engineering Consultants
A TRC Company

Main Office: Sacramento • 916-366-0632
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New York • Memphis

Job Title: Bay Bridge - Temporary Bypass Structure		IAI Job Number: 1295	Sheet
Subject: Deck Drainage			of
Designed By: J. Holman		Date: 11/28/05	Total Sheet
Checked By		Date	of

Overall Assumptions

Sources:

Caltrans, Bridge Design Aids, Chapter 17, October 1989 and January 1999.

FHWA, HEC 22 - Urban Drainage Design Manual, Second Edition, 2001.

Parsons Brinckerhoff Quade & Douglas, Temporary Bypass Structure Contract Plans, March 2003 and Revisions.

TRC Imbsen, Temporary Bypass Structure Design Plans, Current submittals.

Manna Consultants, Drainage Report for ... Route 80 From the Yerba Buena Tunnel to 1.3 km East of the Yerba Buena Tunnel, May 2002.

Rainfall Info:

Apply rainfall to the entire area of the upper deck and to a reduced area of the lower deck equal to 45 degrees of rainfall entering from both sides (as requested by Caltrans).

Assume zero incoming flow from the existing bridge onto the TBS (as requested by Caltrans).

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Job Title	Bay Bridge - TBS	IAI Job Number	1295	Sheet
Subject	Deck Drainage			of
Designed By	J. Holman	Date	11/28/05	Total Sheet
Checked By		Date		of

Overall Assumptions (cont'd)

Rainfall Info (cont'd):

Rainfall intensity from Manna report is used.

$I_{10} = 0.8128 (D^{-0.4977})$

$I_{25} = 0.9774 (D^{-0.4977})$

Using $D = 10$ minutes $= \frac{1}{6}$ hr.

$I_{10} = 1.983$ in/hr. $=$ 50.36 mm/hr.

$I_{25} = 2.384$ in/hr. $=$ 60.56 mm/hr.

Per Caltrans request, calculations are provided using both 10-year and 25-year intensities.

Manning's Coefficient:

According to Juan Gray (C.C. Myers), contractor plans to use a smooth asphalt on the viaduct and East Tie-In, and a medium textured concrete finish on the West Tie-In.

Given the guidance for choosing "n" in the BDA's 1989 p. 17-3:

Asphalt: $n = 0.013$

Concrete: $n = \frac{1}{2}(0.016 + 0.014) = 0.015$

(0.016: broom finish; 0.014: float finish)

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Designed By	J. Holman	Date	11/28/05	Total Sheet
Checked By		Date		of

Overall Assumptions (cont'd)

Depressed Scuppers:

Per Caltrans request, depressed scuppers are incorporated into the drainage design. Caltrans requested that we use an "a" dimension of 38 mm and a "W" dimension of 0.300m. (See HEC 22, Figure 4-13)

These dimensions result in a difference in slope from the cross-slope of 12.7% in the area of the depression.

Encroachment Into Traveled Way:

Caltrans has requested that Imbsen use as many drains and scuppers as are structurally feasible.

This strategy does not prevent encroachment of water into the traveled way.

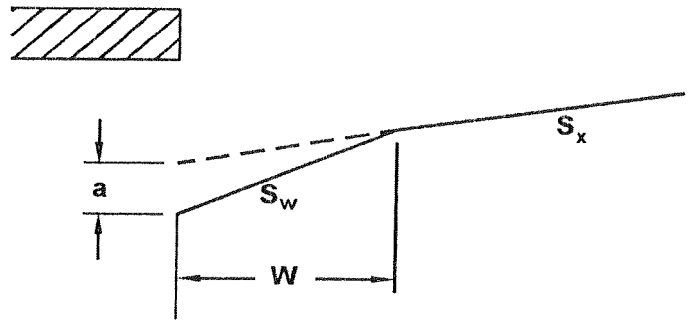

Figure 4-13. Depressed curb opening inlet.

As seen from chart 7, the length of curb opening required for total interception can be significantly reduced by increasing the cross slope or the equivalent cross slope. The equivalent cross slope can be increased by use of a continuously depressed gutter section or a locally depressed gutter section.

Using the equivalent cross slope, S_e, equation 4-22 becomes:
where:

$$L_T = K_T\, Q^{0.42}\, S_L^{0.3} \left(\frac{1}{n\, S_e} \right)^{0.6} \qquad (4\text{-}25)$$

K_T = 0.817 (0.6 in English Units)

Equation 4-23 is applicable with either straight cross slopes or composite cross slopes. Charts 7 and 8 are applicable to depressed curb-opening inlets using S_e rather than S_x.

Equation 4-24 uses the ratio, E_o, in the computation of the equivalent cross slope, S_e. Example 4-9a demonstrates the procedure to determine spread and then the example uses chart 2 to determine E_o. Example 4-9b demonstrates the use of these relationships to design length of a curb opening inlet.

Example 4-9a

Given: *A curb-opening inlet with the following characteristics:*

S_L = *0.01 m/m (ft/ft)*
S_x = *0.02 m/m (ft/ft)*
Q = *0.05 m^3/s (1.77 ft^3/s)*
n = *0.016*

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Job Title	Bay Bridge - TBS	IAI Job Number 1295	Sheet
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Designed By	J. Holman	Date 11/28/05	Total Sheet
Checked By		Date	of

Overall Assumptions (cont'd)

Drain and Scupper Locations:

Per Caltrans request, we have located the drains and scuppers so that as many are used as is structurally feasible.

Caltrans Bridge Design Specifications article 3.24.5.2 on Railing Loads says that the effective length of slab resisting collision loadings = 10 ft. (~3.0 m)

Based on this article and engineering judgment, Imbsen recommends that drains be spaced no less than 3.0m apart, scuppers be spaced no less than 3.0m apart, and that a scupper should be no closer than 1.5 m to a drain.

Special details will be designed at a later time to provide additional reinforcement at drain and scupper openings.

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A TRC Company

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Job Title	Bay Bridge - TBS	IAI Job Number 1295	Sheet
Subject	Deck Drainage		of
Designed By	J. Holman	Date 11/28/05	Total Sheet
Checked By		Date	of

Overall Assumptions (cont'd)

Drain and Scupper Locations (cont'd):

In locating the drains, the first priority was to avoid locations in which a drain would conflict with a structural element:

Locations of Conflicts:

West Tie-In:

- Existing Viaduct - holes should not be made in existing deck.
- Edge Beam - reinforcement in this area is very dense and is a vital part of TBS connection to existing viaduct.
- Cap Beams - dense concentration of reinforcement and prestressing ducts.
- Hinge/Expansion Joint - a reasonable distance is kept so as not to interfere with joint mechanisms, block-outs, etc.

Viaduct:

- Expansion Joints - see above
- Floorbeams - downspout conflicts with floorbeams
- Stringers - drains conflict with shear studs on stringers.

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Job Title	Bay Bridge - TBS	IAI Job Number 1295	Sheet
Subject	Deck Drainage		of
Designed By	J. Holman	Date 11/28/05	Total Sheet
Checked By		Date	of

Overall Assumptions (cont'd)

Drain and Scupper Locations (cont'd):

Locations of Conflict (cont'd):

East Tie-In:

- Expansion Joints - see above
- Stringers - see above
- Existing Truss and Deck

Scupper locations:

Scuppers are located between drains at 3.0m min. spacing, and at least 1.5m from a drain. Expansion Joints are avoided.

Roadway Geometry

All geometry is according to Contract Plans, including changes to contract plans. See attached information.

Shoulders: WD1, ED1 } 0.3m on both North and South sides
WDR1, EDR1 } 0.6 m on North side and 2.4 m on South side.

IMBSEN & ASSOCIATES, INC.
Engineering Consultants
A TRC Company

October 5, 2005 #1295-320

IAI Letter #: 155

Mr. Bob Coupe
C.C. Myers, Inc.
3286 Fitzgerald Road
Rancho Cordova, CA 95742

Subject: TBS Deck Drainage

Dear Mr. Coupe:

This letter is in reference to our meeting on Friday September 30, 2005 at Caltrans field office and in response to State Letter 05.03.01-000567, dated September 13, 2005. Based on our meeting, it is our understanding that we are to ignore State Letter 05.03.01-000567, and provide a drainage proposal based on the discussions in our Friday meeting.

Based on our meeting, it is our understanding that Caltrans agrees that the drainage criteria provided in the contract is not adequate for the proper bridge drainage design of the TBS structure. It is also our understanding that Caltrans would want us to provide a drainage proposal based on the following criteria:

- Provide the maximum number of Type D drainage inlets that can be incorporated on the TBS without affecting the structural integrity of the structure.

- Provide deck drainage scuppers in the bridge barrier railings. The spacing of scuppers should be dictated by the maximum number of scuppers that can be provided in the barrier without affecting the structural integrity of the barrier. The contract documents do not provide procedures and details for the design of deck drainage scuppers. We are to use Bridge Design Aids 17-1, dated January 1999 for the proposed scupper design.

- Caltrans wants us to provide depressed curb openings at each scupper location. We are to use the FHWA "Urban Drainage Design Manual-Hydraulics Engineering Circular No. 22" dated November 1996, for the design of depressed curb openings. The gutter depression (dimension a) shall be 1 ½ inches.

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- The drainage flow from the scuppers can be disposed of by free fall (Class II) directly under the drain. The contract documents state that the drainage for the TBS is Class I.
- We are to assume zero incoming flow from the existing bridge onto the TBS.
- Assume 45 degrees of rainfall from both sides of the structure onto the lower deck.
- Calculation for 10-year and 25-year rainfall intensity shall be provided.

We assume that this is the direction that we need to proceed with unless we are notified otherwise by October 12, 2005.

Please feel free to contact me at (916) 366-0632 should you have any questions.

Sincerely,

for: michael Imbsen

Roy A. Imbsen, P.E., D.Engr.
Project Manager

cc: IAI File, EA, MV, RI

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cc. Roy Mchrdacl

FILE COPY

OCT 2 4 2005 Eli

Project #

C.C. MYERS INC.

CCM Job # 215: Temporary Bypass Structure
San Francisco/Oakland Bay Bridge
(415) 399-0175 Fax: (415) 399-0587

51 MACALLA ROAD
SAN FRANCISCO, CA 94130

FAX

Date: 24-Oct-2005

Document #: 215-FAX.00623

To: Dr. Roy Imbsen
Imbsen & Associates, Inc.

Fax#: 916-366-1501

From: Juan Gray

Fax#: 916-635-8961
Phone#: 916-635-9370

Subject: TBS Deck Drainage

Message:

Please see attached letter from Caltrans SL # 602, regarding deck drainage.

cc: RW.C

file:215-201

Total pages sent including this one: 3 Original to follow: no

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor
DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program
333 Burma Rd.
Oakland, CA 94607
(510) 622-5660, (510) 286-05[illegible]a

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OCT 20 2005
CC MYERS, INC.
JOB 215 TEMP. BYPASS STRUCTURE

IC · 02607
25-103
215-9909

RC
JG
AC
IAI (Fax)

CC Myers - YBI
51 Macalla Road
San Francisco, CA 94130

Attn: Mr. Bob Coupe

Ref: 215-STT.00423

October 19, 2005

Contract No. 04-0120R4
04-SF-80-12.6, 13.2
South – South Detour

Letter No. 05.03.01-000602

Subject: TBS Deck Drainage 215-STT.00423

Dear Mr. Coupe,

The Department has received your letter 215-STT.00423 on October 13, 2005. We would like to clarify that the purpose of the meeting on September 30, 2005 was to explain the suggestions brought forth in State Letters No. 545 and 567 (05.03-01-000545, dated 08/25/05 and 05.03.01-000567, dated 09/13/05), and by no means to disregard State Letter No. 567. This explanation was to help resolve the deck drainage issue and answer any questions that the Contractor's designers may have had.

In order to move forward attaining a viable design, the Department suggested, (but by no means directed, also stated in State Letter No. 302, 05.03.01-000302) your designers to look into providing the seven bullets outlined in your latest letter (215-STT.00423). Please note that these were only suggestions by our designers to help you come up with the best drainage solution possible that will accommodate the TBS bridge type and geometry.

The Department suggested seeking design exceptions in order to aid Imbsen and Associates (IAI) to reach a viable design. As stated in State Letters No. 545 and 567, and based on your letter attached in 215-SUB.00082-00, "it was determined that design exceptions may be necessary". As discussed in the September 30, 2005 meeting, the Department will process these design exceptions in an effort to reach a resolution to the deck drainage issue, but in order to get these design exceptions, the designer must provide the best possible design that will accommodate the bridge geometry.

Based on IAI's letter via 215-STT.00423 regarding the meeting, the Department has the following comments on the points of the letter:

- We agree completely with providing the maximum number of Type D drainage inlets that can be incorporated on the TBS without affecting the structural integrity of the structure.
- Scuppers are a possibility if they aid with relieving deck drainage encroachment.
- We would like to maximize the benefit of scuppers as suggested by the depressed curb openings at each scupper location.
- In the meeting IAI stated that it was very hard to comply with the Class I restrictions. The Department said that we would seek a design exception to relieve the Class I restrictions. We are trying to be cooperative and come to a resolution.
- The Department has asked to have zero incoming flow from the existing bridge onto the TBS in State Letters No. 545 and 567.
- The assumption of 45 degrees of rainfall from both sides of the structure onto the lower deck has been made since 215-SUB.00044-02 (received 05/13/05).
- Since IAI noted that there is not much difference between the 10- and 25-year rainfall intensity, we would like to see the data that leads one to that conclusion.

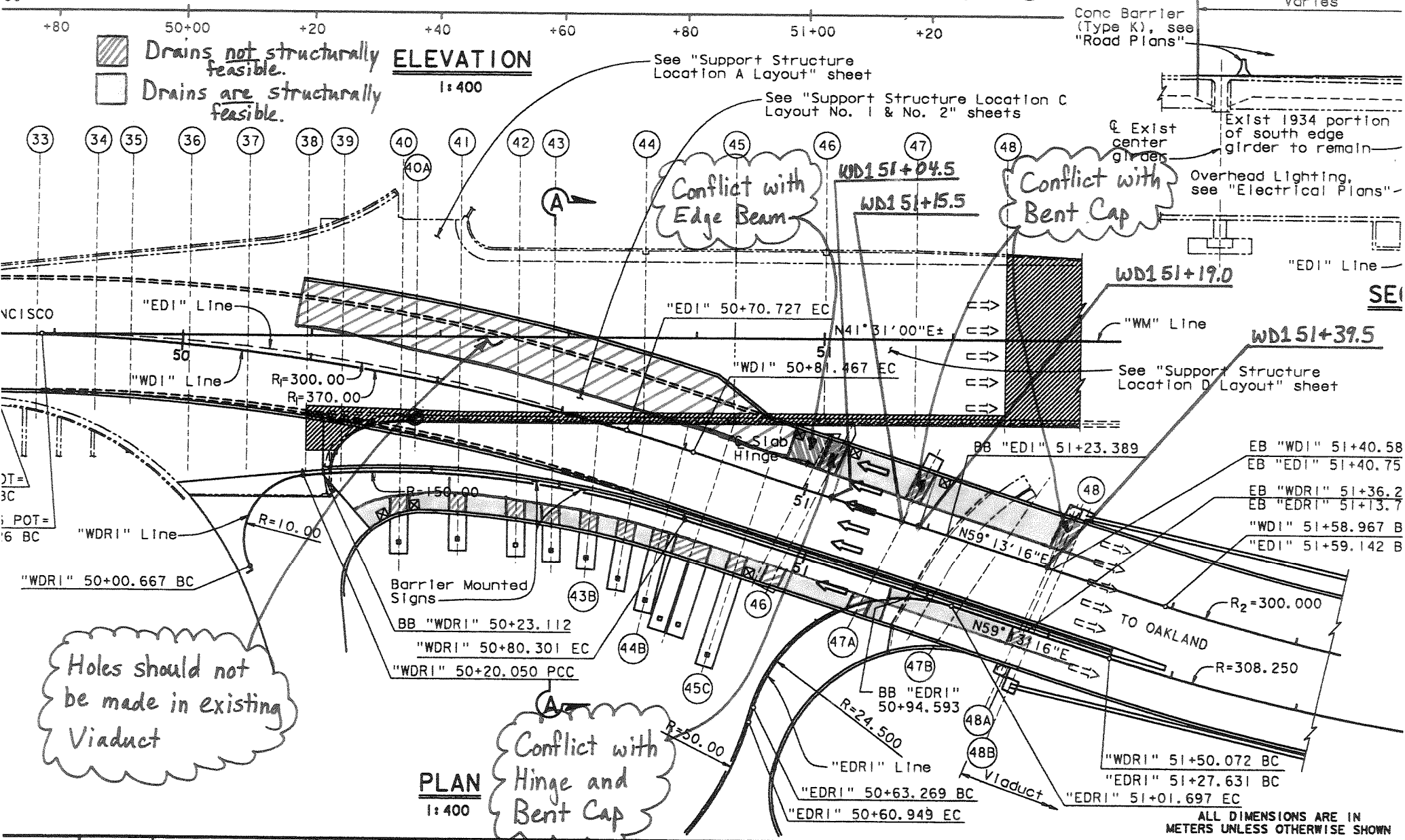
If you have any questions, please contact me at (510) 622-5660.

Sincerely,

Lourdes David
Resident Engineer

cc: G. Lai
T. Lai
D. Adams
M. Ardakanian
A. Yan
A. Bata

file: 05.03.01, 62.02.09



DESIGN	BY T.L./J.R./J.E.	CHECKED J.H./H.S./J.B.	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	ROY IMBSEN PROJECT MANAGER
DETAILS	BY R. CARTER	CHECKED E. ARAMOUNI	LAYOUT	BY T. LAMBERT/J. REINA	CHECKED E. ARAMOUNI		
QUANTITIES	BY C.C. MYERS	CHECKED C.C. MYERS	SPECIFICATIONS	BY E. TYK	PLANS AND SPECS COMPARED		

BRIDGE NO. 34-000 (TEMP)
KP (PM) 12.6

(REV. 3/1/99)
bridge\west tie-in\agp0_wt.dgn

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU
EA 0120R4

DISREGARD EARLIER RE

WESTBOUND

ELEVATION

1:400

PLAN

1:400

SECTION A-A

1:125

Notes:

1. The Contractor shall verif controlling field dimensio ordering or fabricating ar
2. All components are capacit except for the columns whi designed for ductile behav
3. For General Notes, see "Ir
4. For Pile Data Table, see " Footing Data Tables" sheet

LEGEND:

- Indicates Existing S
- Indicates Bridge Rem
- Indicates Point of M
- Indicates Westbound
- Indicates Eastbound
- Indicates Deck Drain
- (XX) Indicates Bent Numbe

FINAL SUBM
Print date: 20 OCT 2005

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

CHECKED J.H./H.S./J.B.	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
CHECKED E. ARAMOUNI	LAYOUT	BY T. LAMBERT/J. REINA / CHECKED E. ARAMOUNI	ROY IMBSEN, PROJECT MANAGER
CHECKED C.C. MYERS	SPECIFICATIONS	BY E.TYK / PLANS AND SPECS COMPARED	BRIDGE NO. 34-0006 (TEMP); KP (PM) 12.6

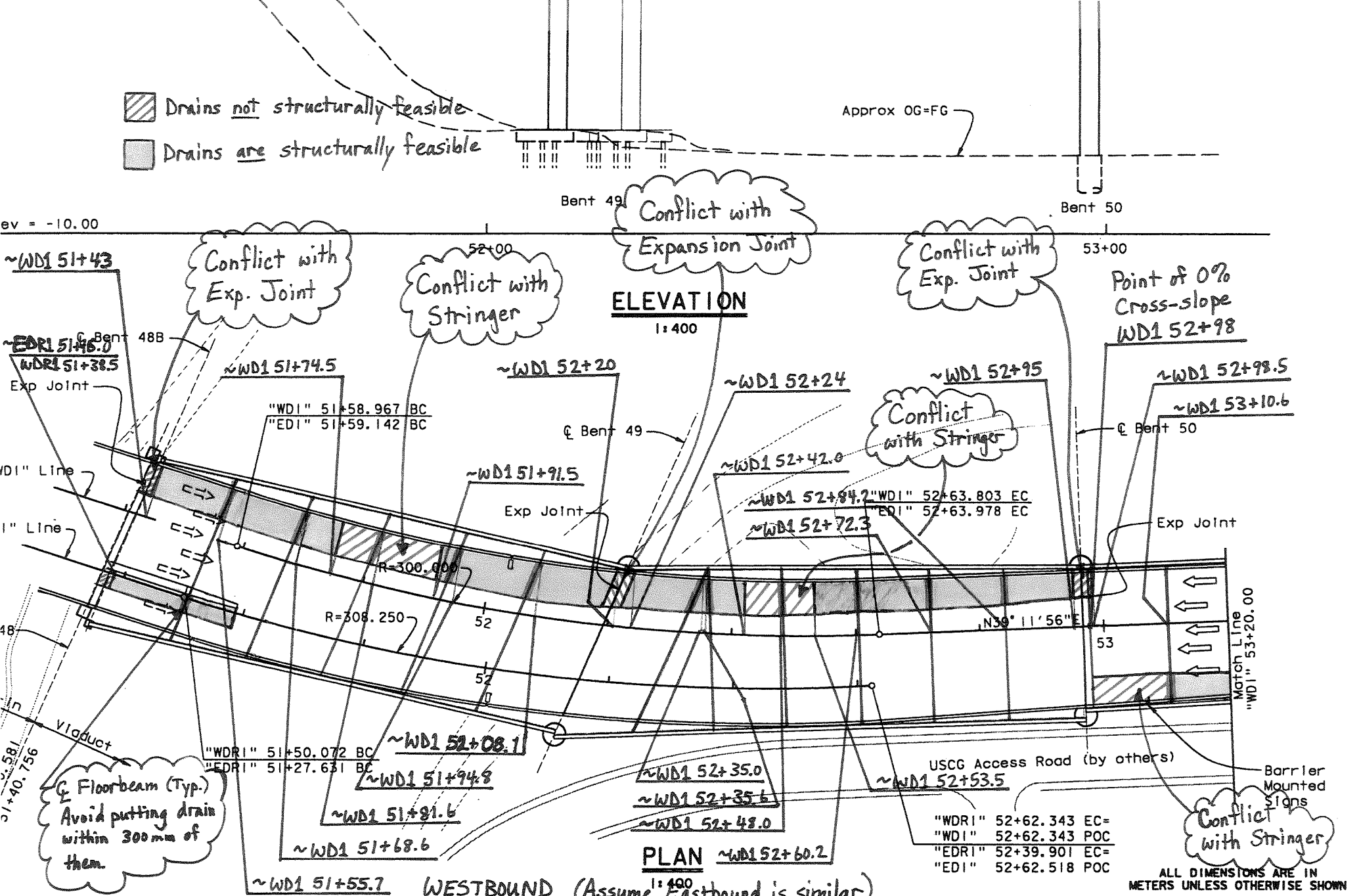
SAN FRANCISCO OAKLA
EAST SPAN SEISMIC S
WEST TI
GENERAL

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU
EA 0120R4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY): 8/28/04 | 10-21-04 | 12-10-04 | 10-06-05 | 10-18-05



DESIGN	BY G. DINI./G. WANG	CHECKED I. YOSHIKUNI/K. LAMCZAK	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY G. IMBSEN	CHECKED G. DINI	ROY A. IMBSEN, PROJECT MANAGER
QUANTITIES	BY C.C. MYERS	CHECKED C.C. MYERS	

BRIDGE NO. 34-000 (TEMP)
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ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

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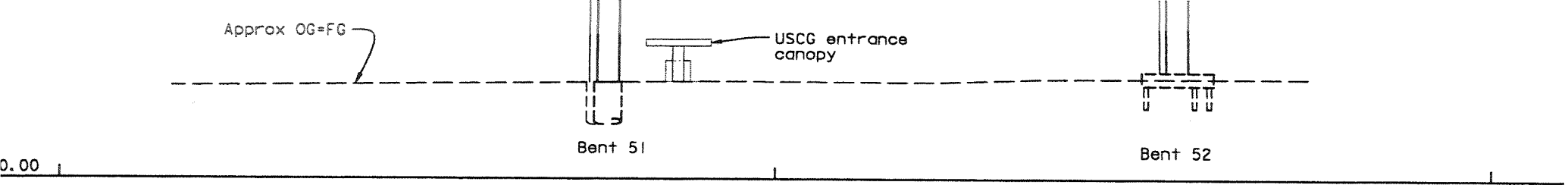
DISREGARD EARLIER R

FILE => $REQUEST

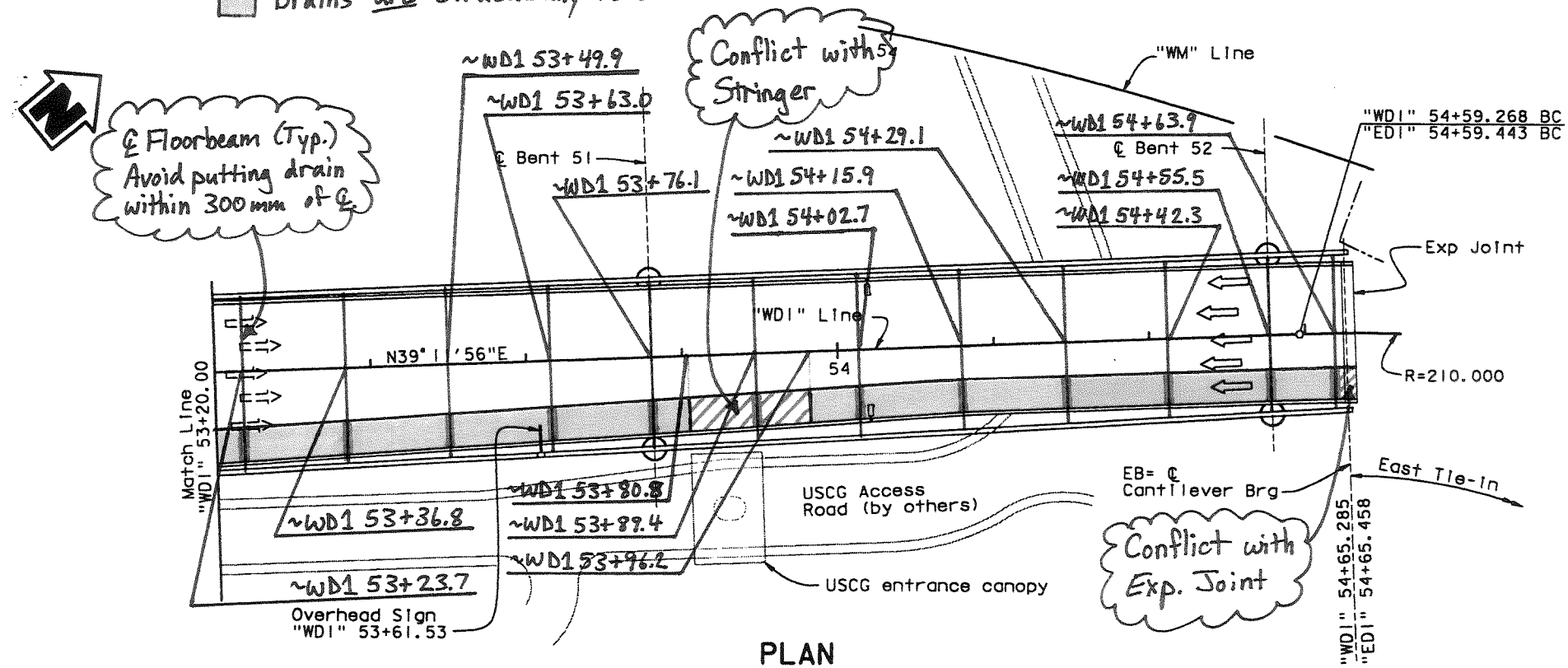


Drains not structurally feasible

Drains are structurally feasible

ELEVATION

1:400



PLAN

WESTBOUND (Assume Eastbound is similar)

1:400

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DESIGN	BY G. DINI./G. WANG	CHECKED I.Y./K.L.	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	ROY A. IMBSEN PROJECT MANAGER
DETAILS	BY G. IMBSEN	CHECKED G. DINI		BRIDGE NO. 34-0006 (TEMP)
QUANTITIES	BY C.C. MYERS	CHECKED C.C. MYERS		KILOMETER POST 12.6

idge\viaduct\b-sp02_v1.dgn

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU EA 0120R4

DISREGARD PRINTS EARLIER REVISIONS

FILE =X REQUEST

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	12.6/13.2		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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IMBSEN & ASSOCIATES INC.
9912 Business Park Dr., Suite 130
Sacramento, California 95827

Caltrans Metric

▨ Drains are not structurally feasible.

□ Drains are structurally feasible.

N

Conflict with Exp. Joint

Conflict with Stringer

Holes should not be made in existing viaduct

Conflict with existing truss

WD1 55+01.7

℄ Exist Floor Beam 27
℄ Exist Floor Beam 28
℄ Exist Floor Beam 29
℄ Exist Floor Beam 30
℄ Exist Floor Beam 31 = ℄ Bent 53
℄ Exist Floor Beam 32
℄ Exist Floor Beam 33
℄ Exist Floor Beam 34
℄ Exist Floor Beam 35

℄ Pier YB4
Exist Pier Column
Cross Frame Stringer (See Note 4)
K-Rail (typ)
Existing Stringers (typ)
"EM" Line
Cross Frame Post (typ) (See Note 4)
Edge of Deck
"WD1" Line
℄ Cantilever Brg = ℄ Expansion Joint
Concrete Barrier (Type 732)
℄ Floor Beam U1
Box Girder G
℄ Floor Beam U2
Edge of Deck
℄ Floor Beam U3
Column K
Box Girder H
℄ Bent 53
℄ Floor Beam U5
℄ Floor Beam U6
Box Girder I
Box Girder J
Column L (Below)
℄ Pier E1
Exist Pier Column

~WD1 54+68.1
~WD1 54+87.4
~WD1 55+04.0
WD1 55+08.9
WD1 55+12.6
WD1 55+16.2
WD1 55+18.6
WD1 55+20.2

55

Notes:

1. The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
2. For floor beam and box girder layout, see "Box Girder Layout - Lower Deck" sheet.
3. For stringer layout, see "Stringer Layout - Lower Deck" sheet.
4. For cross frame post layout, see "Cross Frame Layout - Lower Deck" Sheet.

UPPER
PLAN - ~~LOWER~~ DECK
1:125

WESTBOUND (Assume Eastbound is similar)

FINAL STAGE: INFORMATION PACKAGE NOT FOR CONSTRUCTION
Print date: 20 OCT 2005 Time: 13:22:19

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT

EAST TIE-IN

FRAMING PLAN - UPPER DECK

DESIGN OVERSIGHT
SIGN OFF DATE

	BY	CHECKED
DESIGN		
DETAILS	J. VALENTINE	
QUANTITIES	C.C. MYERS	C.C. MYERS

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

ROY A. IMBSEN
PROJECT MANAGER

BRIDGE NO. 34-0006 (TEMP)
KILOMETER POST 12.6

CU EA 0120R4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 11-22-04, 11-29-04, 05-25-05

SHEET 18 OF 125

DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)
20 OCT 2005 3:22:19 h:\bay bridge\east tie-in\gframepln-lay-ud_et.dgn

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

LEVEL AS REQUEST

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	12.6/13.2	2	193

Caltrans Metric

REGISTERED CIVIL ENGINEER 2/28/03

PLANS APPROVAL DATE 3-31-03

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Timothy K. Dougherty, No. C47230, Exp. 12/31/03, CIVIL, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA

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DESIGN OVERSIGHT	CALCULATED/ DESIGNED BY	DATE	REVISED BY	DATE REVISED
Bob Zandipour	K. Gemmill	2/03	KG	4/03
	T. Dougherty	2/03		
	CHECKED BY			

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Caltrans

NOTES:

1. Dimensions of the structural section are subject to the tolerances specified in the Standard Specifications.
2. Superelevation as shown or as directed by the Engineer.
3. Construct pavement transition taper to 25 mm maximum depth or as directed by the Engineer. See Construction Detail Sheets. Cold Planing operation shall not penetrate existing concrete bridge deck.
4. All embankment material shall have an R value of 60 or greater.
5. All Concrete Barrier (Type K) to be doweled if within 0.6 m of structural supports.

LEGEND

[X] - Structural Section Type

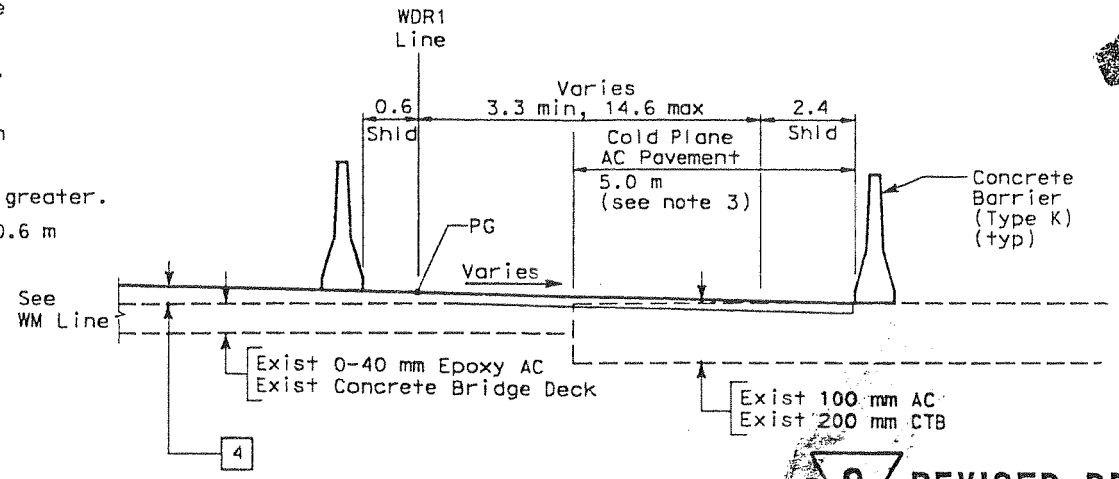
[1] 240 mm AC (Type A)

[2] 50 mm AC (Type A)
200 mm Rapid Strength Concrete

[3] 190 mm AC (Type A)

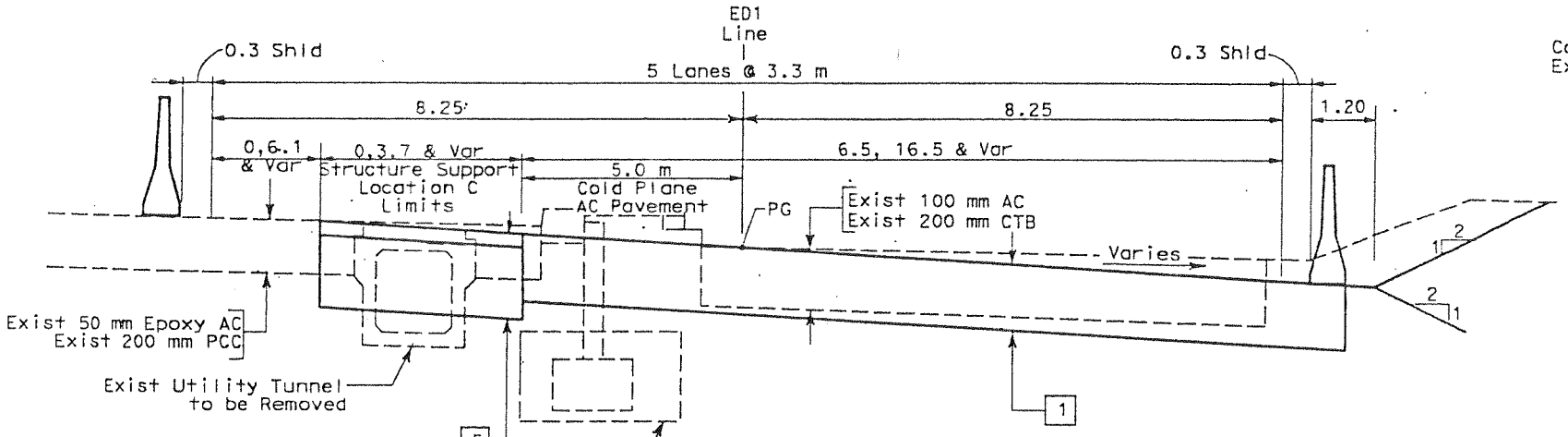
[4] 25-254 mm AC (Type A)

[5] 50 mm AC (Type A)
410mm PCC

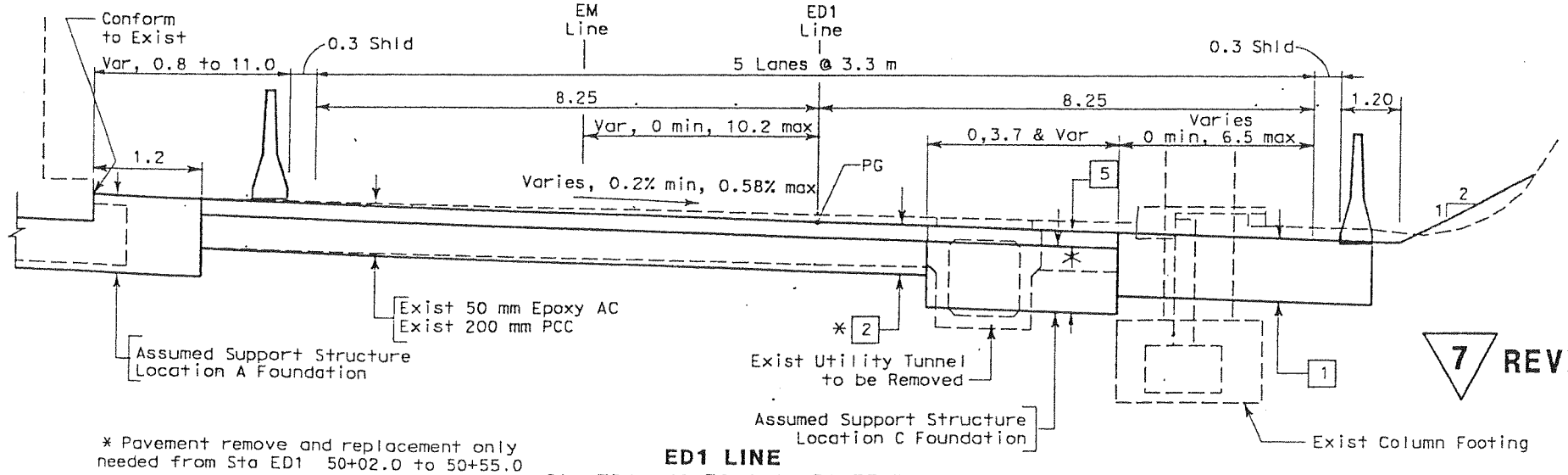


WDR1 LINE
Sta WDR1 50+00 to 50+24.0

7 9 REVISED PER ADDENDUM NO. 9 DATED SEPTEMBER 4, 2003



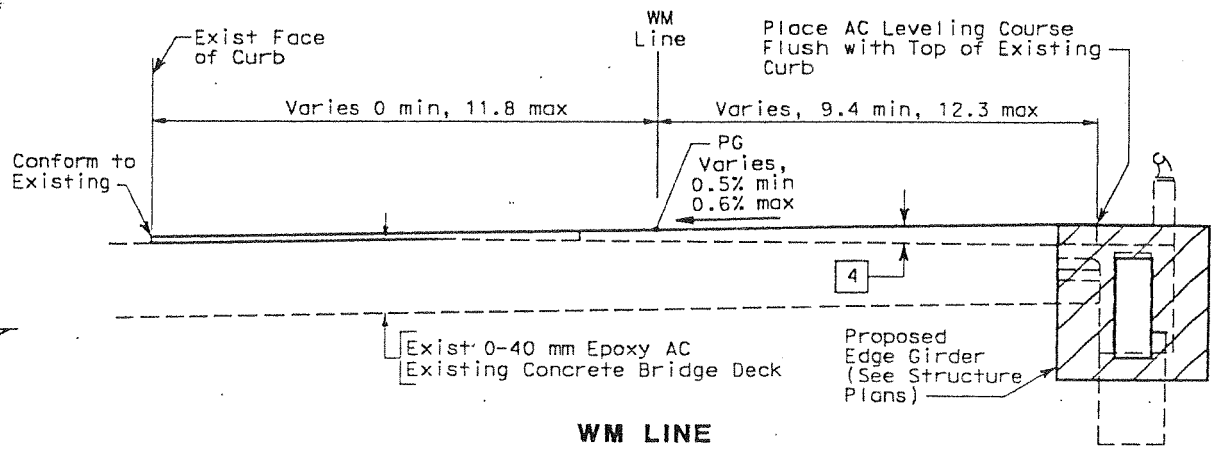
ED1 LINE
Sta ED1 50+55.5 to 51+33.0



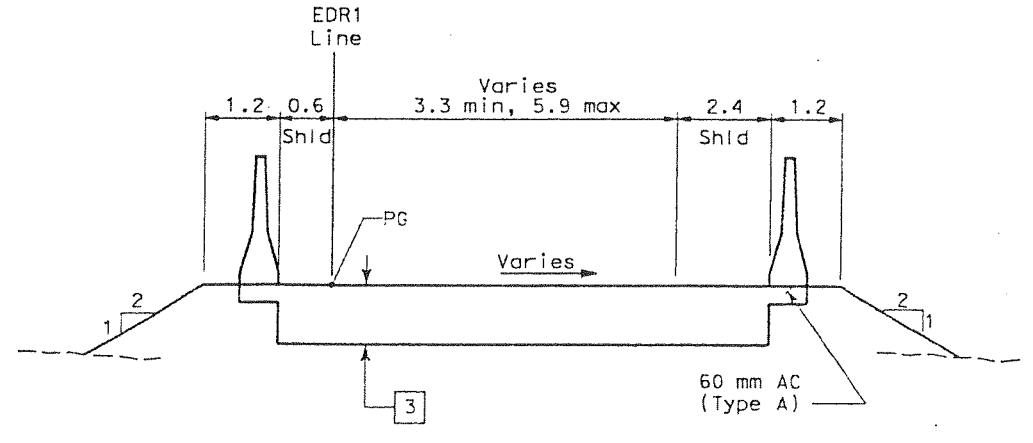
* Pavement remove and replacement only needed from Sta ED1 50+02.0 to 50+55.0

ED1 LINE
Sta ED1 49+78.0 to 50+55.5

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN



WM LINE
Sta WM 49+62.80 to 51+50.80



EDR1 LINE
Sta EDR1 50+55 to 51+08

7 REVISED PER ADDENDUM NO. 7 DATED AUGUST 4, 2003

TYPICAL CROSS SECTIONS

NO SCALE

9 X-1

LAST REVISION 00-00-00 DATE PLOTTED => 02-SEP-2003 TIME PLOTTED => 13:15

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE => 40120rb01.dgn
USERNAME => trstrk

CU 04251 EA 0120R1

9 REVISED PER ADDENDUM NO. 9 DATED SEPTEMBER 4, 2003

Caltrans Metric

04	SF	80	12.6/13.2	5	193

Karen Gemmill 2/28/03
REGISTERED CIVIL ENGINEER

3-31-03
PLANS APPROVAL DATE

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San Francisco, CA 94107-37

5 7 9

ESA3

Caltrans Substation
(By Others)
See contract no. 04-0120G4

R/W

WM 49+67.137 POT=
WD1 49+67.137 BC

WM 49+89.121
BEGIN OVERLAY

WM 50+24.540

WM 50+42.210

WM 49+00.000 POT

WM 51+28.417
END OVERLAY

Concrete Barrier, (Type K) (Typ)
Attached to Bridge Deck.
(See sheet C-6)

Conform

+18.00
12.15 Lt

WD1 50+81.467 EC

Existing San Francisco
Oakland Bay Bridge

WM LINE

+81.47
12.15 Lt

N 41° 31' 00" E

408.620

+91.36
8.55 Lt

49 50 51

+23.53
0.60 Lt

+29
8.55 Rt

Conform

Bridge
Barrier

WDR1 50-20.050 PCC

+01.5
21.25 Rt

WDR1 LINE

WD1 LINE N 59° 13' 16" E
77.500

N 59° 13' 16" E
69.771

See Sheet L-2

R/W

WDR1 50+00.667 BC
Conform

Conform—
Detail A

+31.00
8.27 Rt

TCE
ESA2

+25.44
28 Rt

EC

WDR1 50+80.30

Temporary Bypass Structure
Br No. 34-0006 (Temp)

BB
50+22.041 WM
50+22.823 WDR1

SOUTHGATE ROAD

HILLCREST ROAD

TCE

Yerba Buena Island

NOTES:

1. For complete R/W, and Accurate Access Data, see R/W Record Maps at District Office.
2. Coordinates, distances and bearings are on CCS'83, Zone 3, High Precision Geodetic Network (1991.35 epoch). Divide grid distances shown by 0.9999320 to obtain ground level distances.
3. Elevation is based on 1929 National Geodetic Vertical Datum (NGVD).
4. See structure plans for Temporary Bypass Structure Work and Detail.
5. For ESA limits, see sheet C-1.
7. For details, see C sheets.
8. For pavement conform details, see C sheets

ABBREVIATION:

ESA	Environmentally Sensitive Area
TBS	Temporary Bypass Structure
TCE	Temporary Construction Easement
USCG	United States Coast Guard
	Concrete Barrier (Type K)
	Cold Plane AC Pavement
	Remove AC Pavement
#	Pavement Structural Section (See X Sheet)

CURVE DATA

	NO.	R	Δ	T	L	N	E
WD1	①	370	17°42'16"	57.624	114.330	646 797.792	1 836 073.754
WDR1	②	150	23°00'51"	30.537	60.251	646 978.963	1 835 968.235
WDR1	③	10	111°03'22"	14.565	19.383	647 061.661	1 835 855.270

5 REVISED PER ADDENDUM NO. 5 DATED JUNE 27, 2003

7 REVISED PER ADDENDUM NO. 7 DATED AUGUST 4, 2003

WESTBOUND
LAYOUT
SCALE: 1:500

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DESIGN OVERSIGHT
Bob Zandipour

CALCULATED/ DESIGNED BY	CHECKED BY	DRAWN BY	DATE	REVISED BY	DATE REVISED
K. Gemmill	T. Dougherty		2/03	KG	3/03

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE = b:\0120e01.dgn
USERNAME = s\mguye

CU 04251 EA 0120R1

LAST REVISION DATE PLOTTED = 03 SEP 2003
00-00-00 TIME PLOTTED = 07:31

NOTES:

1. For complete R/W and Accurate Access Data, see R/W Record Maps at District Office.
2. For ESA limits, see sheet C-1.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	12.6/13.2	6	193

Karen Gemmill 2/28/03
REGISTERED CIVIL ENGINEER

3-31-03
PLANS APPROVAL DATE

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		DATE	REVISED BY	DATE REVISED
CALCULATED/ DESIGNED BY	K. Gemmill	2/03	KG	3/03
CHECKED BY	T. Dougherty	2/03		

DESIGN OVERSIGHT: Bob Zandipour

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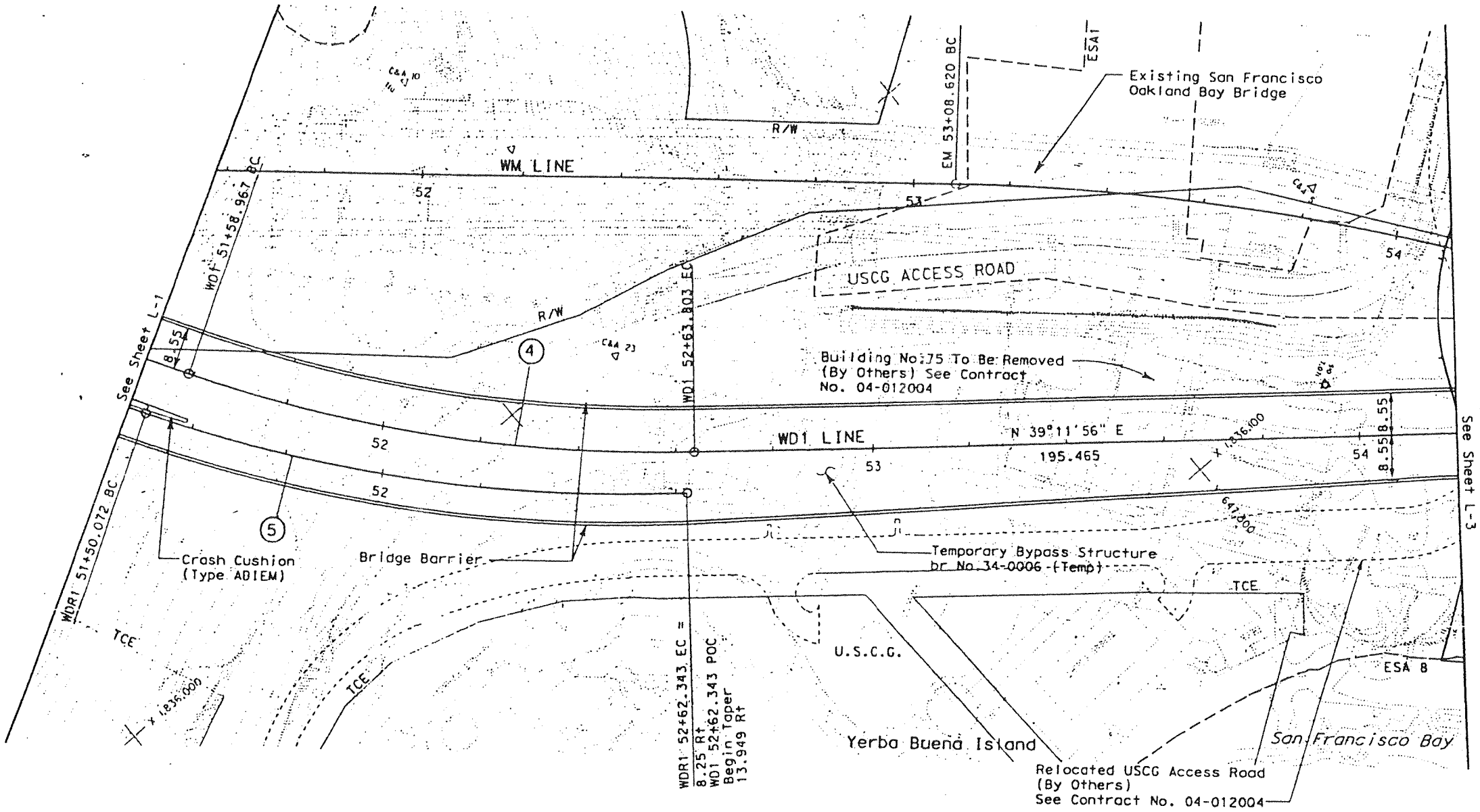

5 REVISED PER ADDENDUM NO. 5 DATED JUNE 27, 2003

WESTBOUND

CURVE DATA

	NO.	R	Δ	T	L	N	E
WD1	④	300	20°01'20"	52.958	104.836	647 413.080	1 835 797.481
WDR1	⑤	308.25	20°52'06"	56.764	112.271	647 408.371	1 835 793.680

For Notes, Abbreviations and/or Legend See Sheet L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE: 1:500

L-2

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE => 40120re02.dgn
USERNAME => trpierce

DATE PLOTTED => 25-JUN-2003
TIME PLOTTED => 13:29

LAST REVISION 00-00-00

CU 04251 EA 0120R1

NOTES:

1. For complete R/W and Accurate Access Data, see R/W Record Maps at District Office.
2. For ESA limits, see sheet C-1.
3. Contractor to maintain access to Torpedo Factory Road and Access Road to existing Sanitary Sewer Lift Pump Station.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	12.6/13.2	7	193

Caltrans Metric

5

Karen Gemmill 2/28/03
REGISTERED CIVIL ENGINEER

3-31-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Karen Gemmill — No. C50173 — Exp. 06/30/04 — CIVIL — STATE OF CALIFORNIA

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CALCULATED/ DESIGNED BY	DATE	REVISED BY	DATE REVISED
K. Gemmill	2/03	KG	3/03
CHECKED BY			
T. Daugherty	2/03		

DESIGN OVERSIGHT
Bob Zandipour

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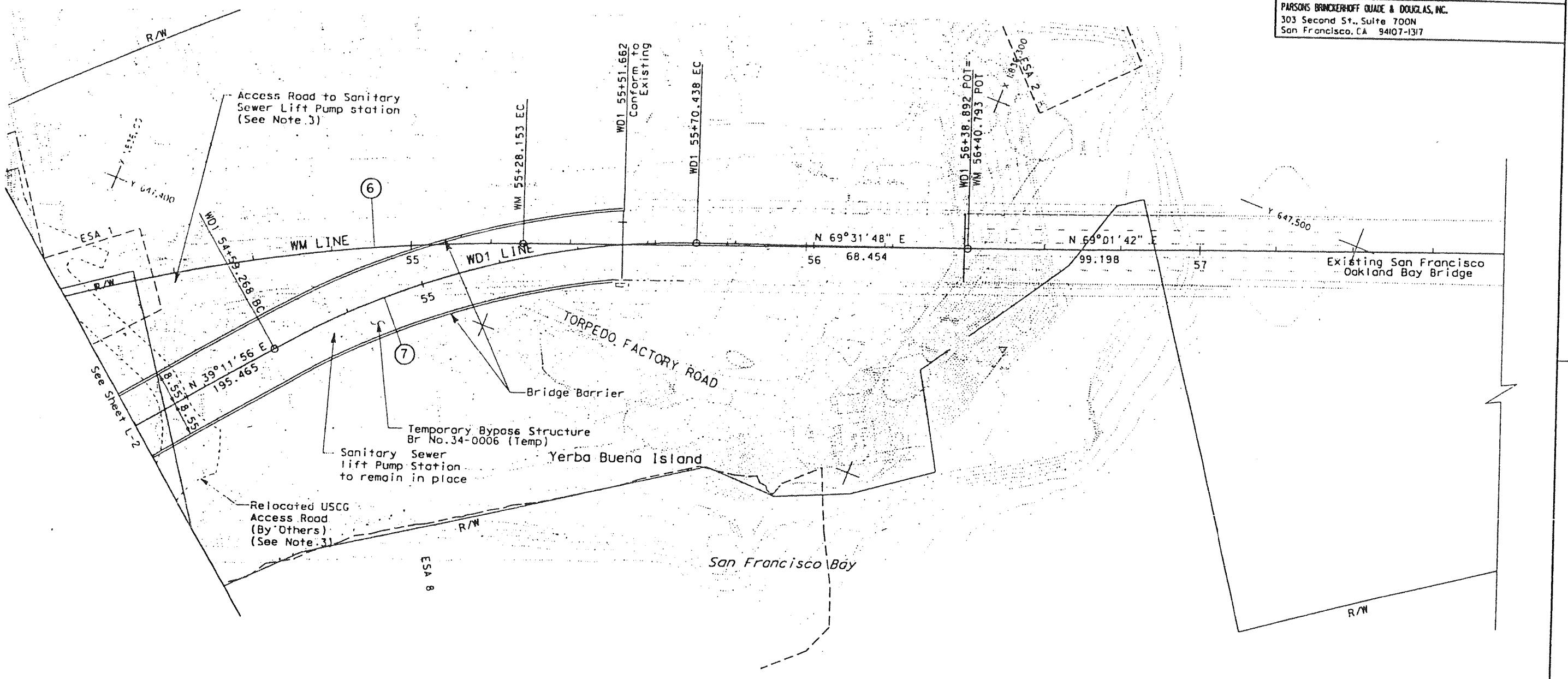
Caltrans



WESTBOUND

5 **REVISED PER ADDENDUM NO. 5 DATED JUNE 27, 2003**

CURVE DATA						
NO.	R	△	T	L	N	E
⑥	457.20	27°30'42"	111.926	219.534	646 995.681	1 836 365.394
⑦	210	30°19'52"	56.920	111.170	647 242.230	1 836 316.246

For Notes, Abbreviations and/or Legend See Sheet L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE: 1:500

L-3

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE => 40120re03.odd
USERNAME => trpierce

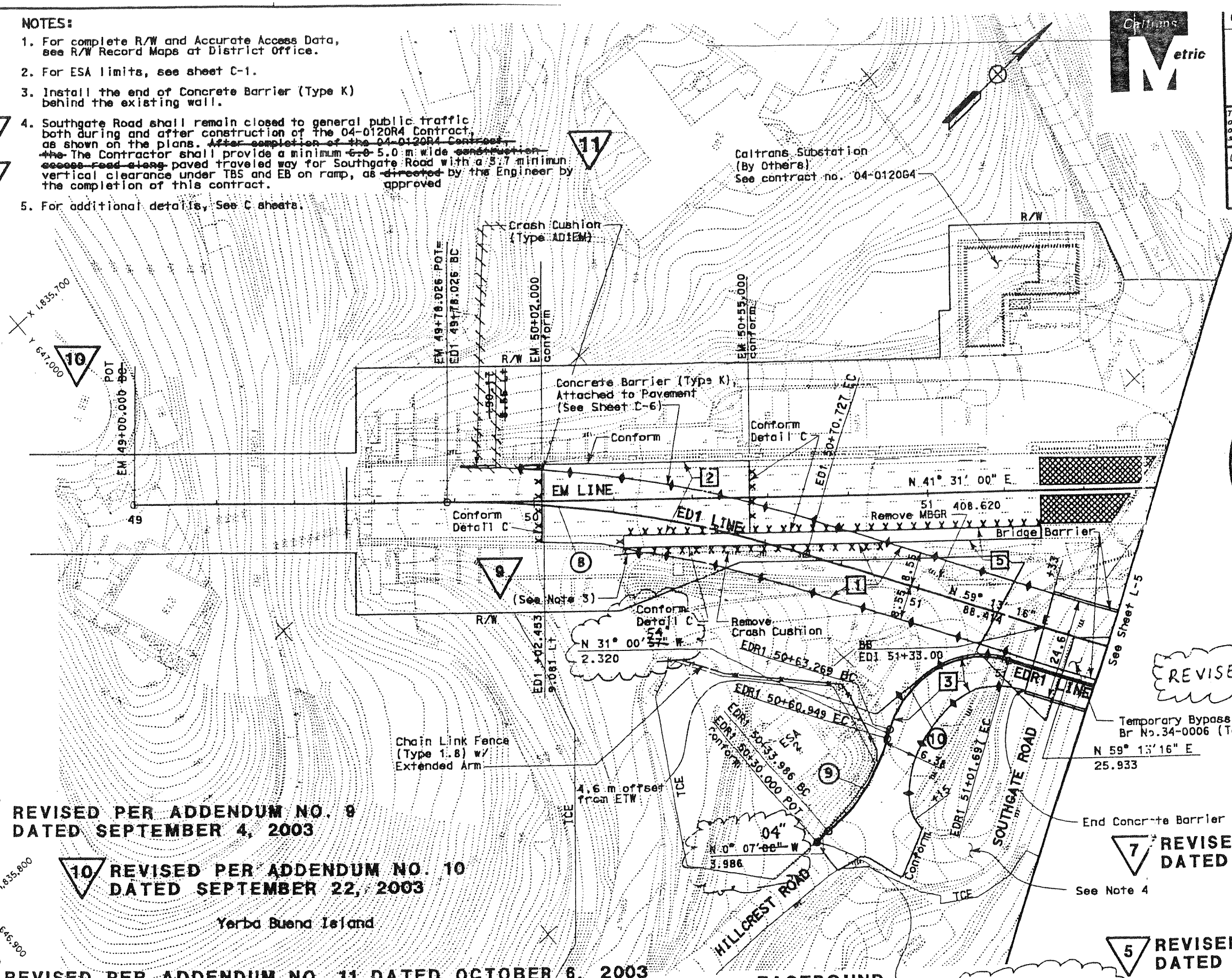
CU 04251

EA 0120R1

LAST REVISION DATE PLOTTED => 25-JUN-2003
00-00-00 TIME PLOTTED => 15:30

NOTES:

1. For complete R/W and Accurate Access Data, see R/W Record Maps at District Office.
2. For ESA limits, see sheet C-1.
3. Install the end of Concrete Barrier (Type K) behind the existing wall.
4. Southgate Road shall remain closed to general public traffic both during and after construction of the 04-0120R4 Contract, as shown on the plans. ~~After completion of the 04-0120R4 Contract, the~~ The Contractor shall provide a minimum ~~6.0~~ 5.0 m wide ~~construction access road along~~ paved traveled way for Southgate Road with a 5.7 minimun vertical clearance under TBS and EB on ramp, as ~~directed~~ approved by the Engineer by the completion of this contract.
5. For additional details, See C sheets.



REVISED JULY 09, 2004

9 REVISED PER ADDENDUM NO. 9 DATED SEPTEMBER 4, 2003

10 REVISED PER ADDENDUM NO. 10 DATED SEPTEMBER 22, 2003

11 REVISED PER ADDENDUM NO. 11 DATED OCTOBER 6, 2003

7 REVISED PER ADDENDUM NO. 7 DATED AUGUST 4, 2003

5 REVISED PER ADDENDUM NO. 5 DATED JUNE 27, 2003

CURVE DATA						
NO.	R	Δ	T	L	N	E
8	300	17°42'17"	46.723	92.071	646 852.347	1 836 028.556
9	50	30°53'~~49"~~ 50"	13.818	26.963	647 068.980	1 835 879.~~056~~ .056
10	~~24.5~~	90°14'~~13"~~	24.501	38.428	647 109.305	1 835 941.~~625~~ .624

For Notes, Abbreviations and/or Legend See Sheet L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE: 1:500

L-4

04	SF	80	12.6/13.2		

page 3 of 3

REGISTERED CIVIL ENGINEER

3-31-03

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Karen Gemmill — No. C60173 — Exp. 09/30/04 — CIVIL — STATE OF CALIFORNIA

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C.C.O. No.: 19
Suppl. No.: 0
Contract No. 04-0120R4
Sheet of
Date: 7-9-04

REGISTERED PROFESSIONAL ENGINEER — TRINH T. LAI — C 63630 — EXP 09/30/06 — CIVIL — STATE OF CALIFORNIA

CALCULATED/DESIGNED BY	K. Gemmill	DATE 2/03	REVISED BY KG
CHECKED BY	T. Dougherty	2/03	DATE REVISED 3/03

DESIGN OVERSIGHT: Bob Zandipour

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

1. For complete R/W and Accurate Access Data, see R/W Record Maps at District Office.
2. For ESA limits, see sheet C-1.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	12.6/13.2	9	193

Karen Gemmill 2/28/03
REGISTERED CIVIL ENGINEER

3-31-03
PLANS APPROVAL DATE

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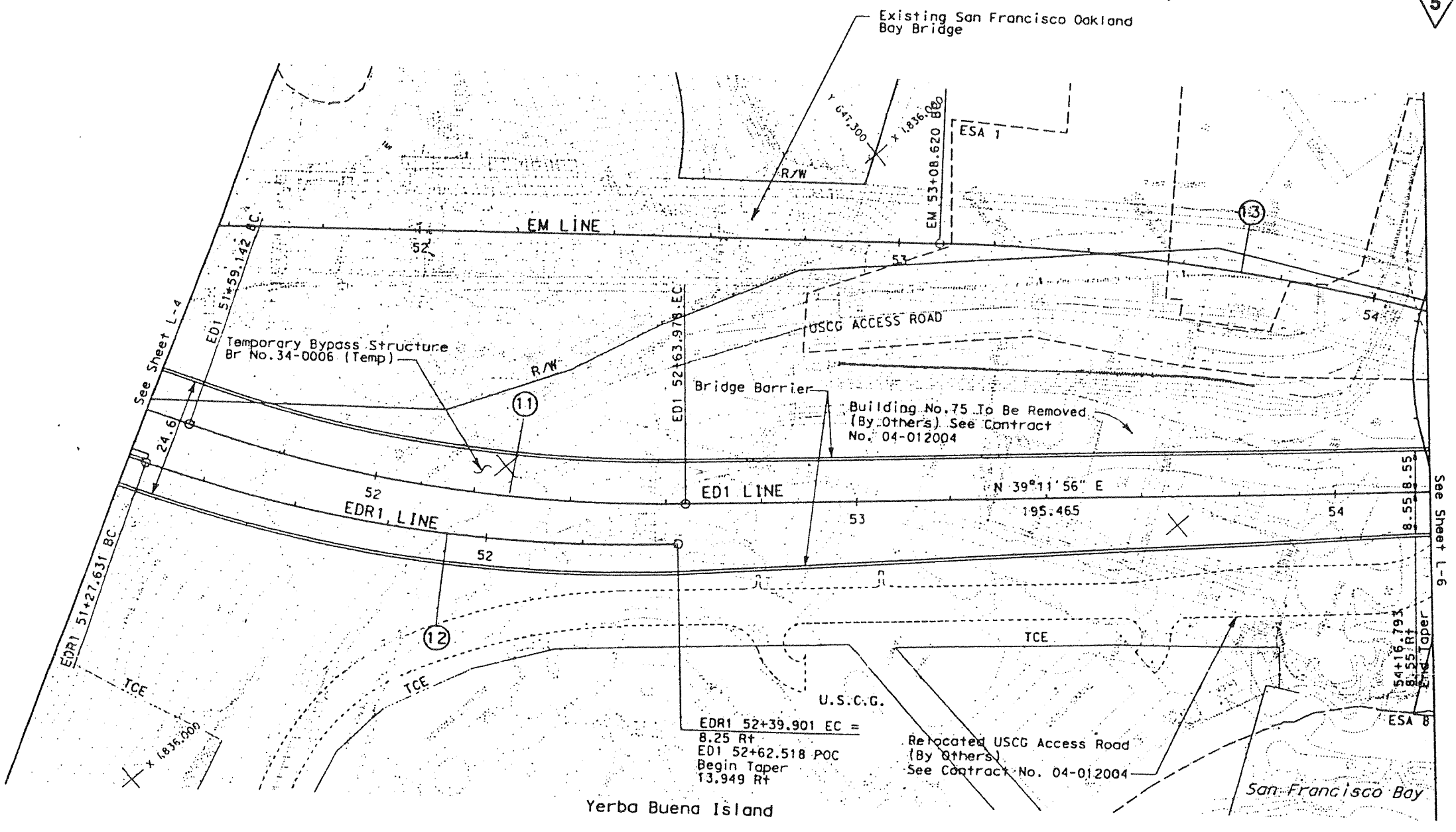
San Francisco, CA 94107-1317

DATE	REVISED BY	DATE REVISED
2/03	K. Gemmill	2/03 T. Daugherty

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
Bob Zandipour

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans



EASTBOUND

	CURVE DATA						
	NO.	R	△	T	L	N	E
EDI	(11)	300	20°01'20"	52.958	104.836	647 413.080	1 835 797.481
EDR1	(12)	308.25	20°52'06"	56.764	112.271	647 408.371	1 835 793.680
	(13)	457.20	27°30'42"	111.926	219.534	646 995.681	1 836 365.394

5 REVISED PER ADDENDUM NO. 5 DATED JUNE 27, 2003

For Notes, Abbreviations and/or Legend See Sheet L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT
SCALE: 1:500

L-5

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE => 40120re05.cdd
USERNAME => trlim

LAST REVISION DATE PLOTTED => 25-JUN-2003
TIME PLOTTED => 14:27

CU 04251 EA 0120R1

NOTES:

1. For complete R/W and Accurate Access Data, see R/W Record Maps at District Office.
2. For ESA limits, see sheet C-1.
3. Contractor to maintain access to Torpedo Factory Road and Access Road to Existing Sanitary Sewer Lift Pump Station.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	12.6/13.2	10	193

Caltrans Metric

REGISTERED CIVIL ENGINEER 2/28/03

3-31-03
PLANS APPROVAL DATE

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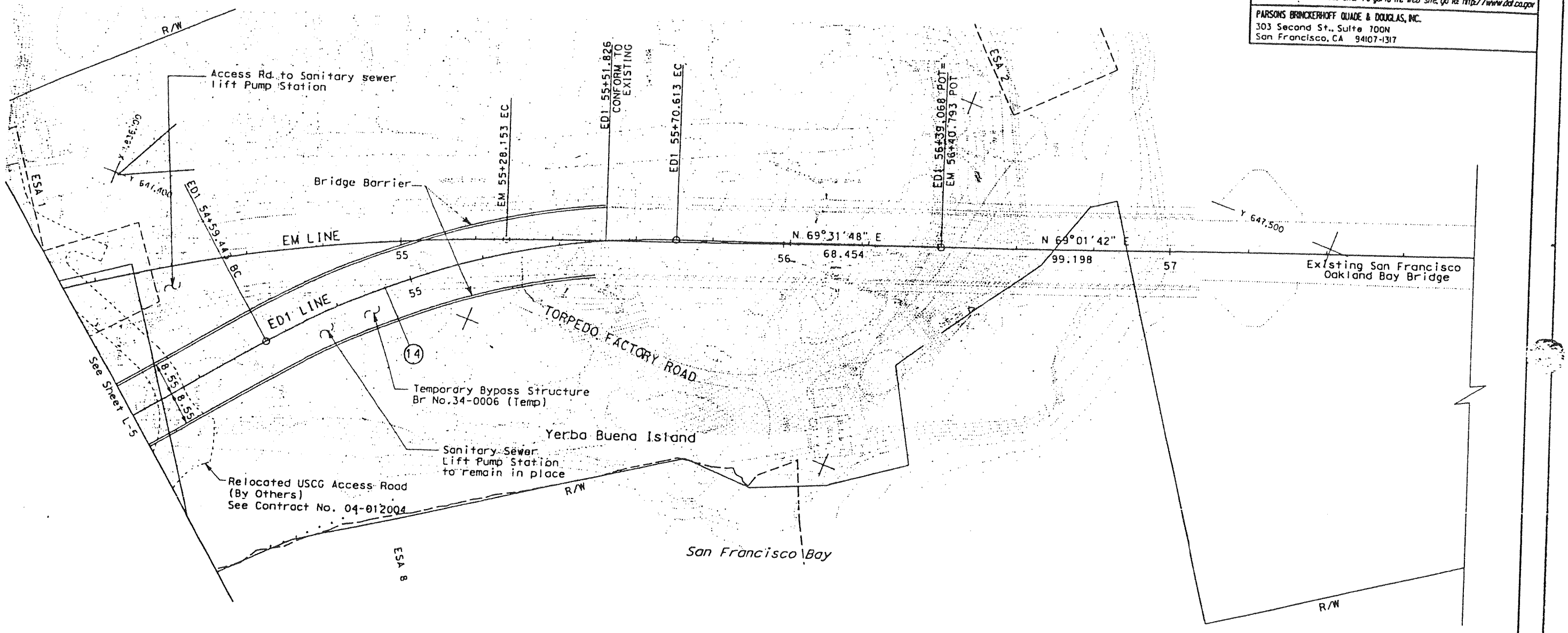

EASTBOUND

5 REVISED PER ADDENDUM NO. 5 DATED JUNE 27, 2003

CURVE DATA						
NO.	R	Δ	T	L	N	E
14	210	30°19'52.27"	56.920	111.170	647 242.230	1 836 316.246

For Notes, Abbreviations and/or Legend See Sheet L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE: 1:500

L-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN OVERSIGHT: Bob Zandipour

CALCULATED/DESIGNED BY: K. Gemmill | DATE: 2/03 | REVISED BY

CHECKED BY: T. Dougherty | 2/03 | DATE REVISED

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE => 40120re06.add
USERNAME => trlim

CU 04251

EA 0120R1

LAST REVISION 00-00-00

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	12.6/13.2	11	193

Caltrans Metric

2/28/03

3-31-03

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
San Francisco, CA 94107-1317

Karen Gammill No. C60173 Exp. 06/30/04 CIVIL STATE OF CALIFORNIA

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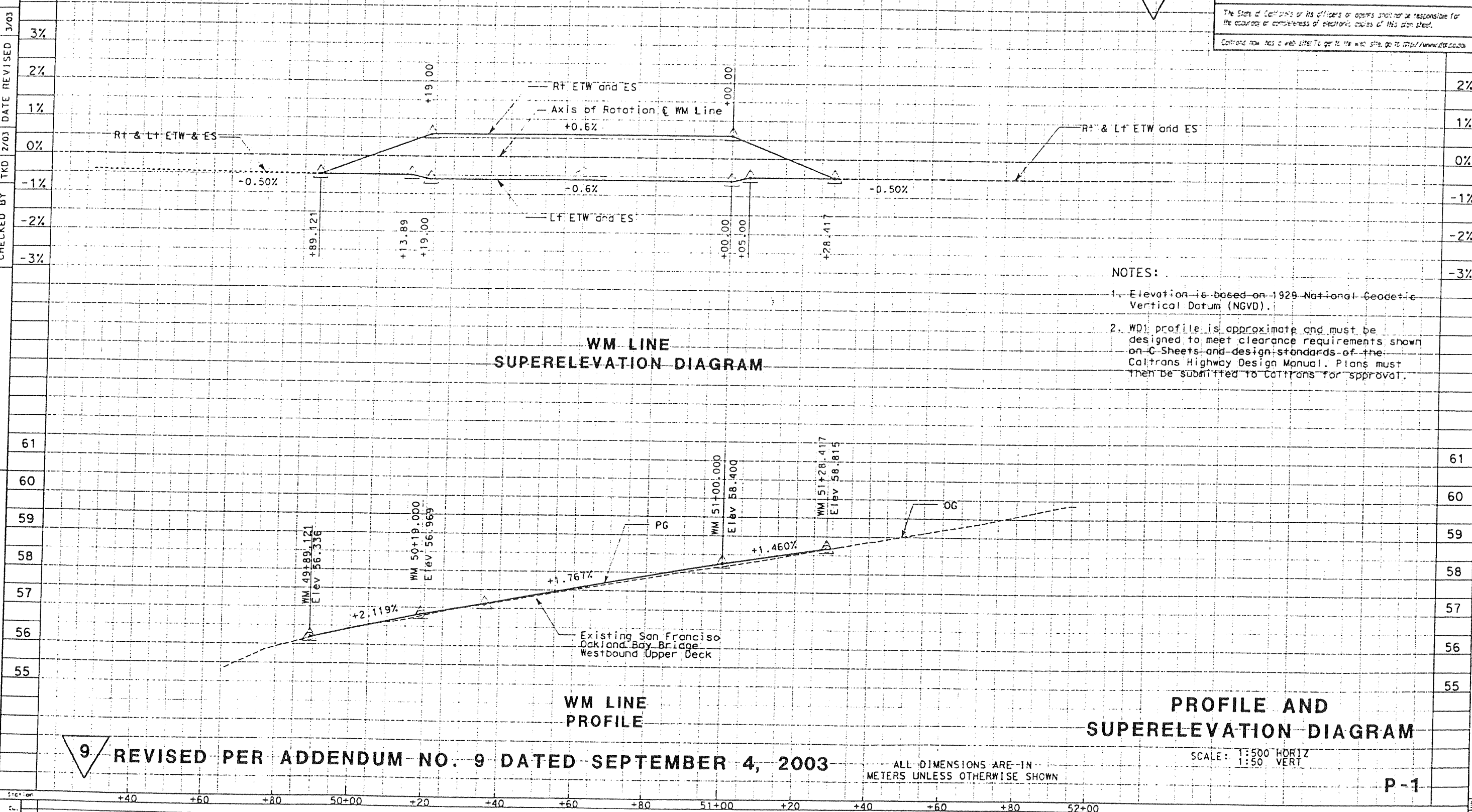

NOTES:

1. Elevation is based on 1929 National Geodetic Vertical Datum (NGVD).
2. WD1 profile is approximate and must be designed to meet clearance requirements shown on C Sheets and design standards of the Caltrans Highway Design Manual. Plans must then be submitted to Caltrans for approval.

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: 1:500 HORIZ
1:50 VERT

9 REVISED PER ADDENDUM NO. 9 DATED SEPTEMBER 4, 2003

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

P-1

CALCULATED/DESIGNED BY	KTG	DATE 2/03	REVISED BY	KG
CHECKED BY	TKD	2/03	DATE REVISED	3/03

DESIGN OVERSIGHT
Bob Zandipour

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => trmartin
DGN FILE => 40120rf01.dgn

CU 04251

EA 0120R1

DATE PLOTTED => 29-AUG-2003
TIME PLOTTED => 08:04
CAT REVISION 00-00-00

Jennifer

DEPARTMENT OF TRANSPORTATION – District 4
Division of Toll Bridge Program
SFOBB Skyway Project
333 Burma Road, Oakland CA 94607
Telephone (510) 622-5660 Facsimile (510) 286-0550

LETTER OF TRANSMITTAL FOR RFI

Date: 12-Apr-2005

To: CC Myers
51 Macala Road
San Francisco, CA 94130

Attn: Bob Coupe
Project Manager

Contract No: 04-0120R4
04-SF-80-12.6-13.2
Job Name: South – South Detour
Document No.: 001588
Critical Path:

Subject: RFI # 215-RFI-001.00034 West Tie-In superelevation
References: 215-RFI-001.00034-00

Request:
Please see attached RFI from Imbsen and Associates

Requested By: Gray, Juan **Due Date:** 15-Apr-2005

Response:

The vertical profile and superelevation for WD1 should start at 51+00.000. Prior to 51+00.000, the vertical profile and superelevation should be controlled by the WM Line. The superelevation for WD1 should be 0.6% at 51+00.000 going to 3.0% at 51+88.500. Please ensure that the profile and superelevation conforms to one another at Sta. 51+00.000 for the WD1 and WM Line.

Answered By: Lourdes David, **Answered On:** 04/21/05

Signed: Lourdes David

File: 56.26

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	12.6/13.2	12	193

Caltrans Metric

Karen Ganswild 2/28/03
REGISTERED ENGINEER — CIVIL — STATE OF CALIFORNIA — DATE

3-31-03
PLANS APPROVAL DATE

Loren Gemmill
No. C60172
Exp. 06/30/04
CIVIL
STATE OF CALIFORNIA

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
San Francisco, CA 94107-37

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9

For Notes, see Sheet P-1

See Sheet P-3

Superelevation controlled by cross slope of WM Line

WD1 51+00.00

Rt. ETW and ES

+88.50

+47.000

+3.0%

300 m Lt

0.6%

Axis of Rotation ℄ WD1 Line

-0.6%

BC +98.967

-3.0%

Lt ETW and ES

+88.50

+47.000

Revised by J. Holman
See Response to RFI
#215-RFI-001.00034-00

WD1 LINE
SUPERELEVATION DIAGRAM

Profile controlled by WM Line

WD1 50+59.760
Elev 57.746
Conform to existing top of curb

WD1 50+72.000
Elev 57.949

WD1 50+94.000
Elev 58.390

PG

OG

+1.659%

+2.003%

+1.711%

WD1 LINE
PROFILE
See Note 2

PROFILE AND SUPERELEVATION DIAGRAM
SCALE: 1:500 HORIZ
1:5 VERT

9 **REVISED PER ADDENDUM NO. 9 DATED SEPTEMBER 4, 2003**

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

P-2

3% 2% 1% 0% -1% -2% -3%

63 62 61 60 59 58 57 56

+80 51+00 +20 +40 +60 +80 52+00 +20 +40 +60

CALCULATED/ DESIGNED BY KG
CHECKED BY TKD
DATE 2/03
REVISED BY KG
DATE REVISED 3/03

DESIGN OVERSIGHT Bob Zandipour

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => trmartin
DGN FILE => 40120rf02.dgn

CU 04251 EA 0120R1

LAST REVISION 00-00-00 00:00:00
PLOT DATE > 29-AUG-2003 08:30

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	12.6/13.2	13	193

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — EXP. — CIVIL — STATE OF CALIFORNIA

IMBSEN & ASSOCIATES INC.
9912 Business Park Dr., Suite 130
Sacramento, California 95827

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Caltrans Metric

Lt Superelevation controlled by existing grade @ conform line existing deck

Superelevation controlled by existing cross slope WM line

WD1 54+71.620 9.150 Lt Conform to existing +3.5%± +3.0%±

WD1 54+95.410 +0.400

Lt ETW and ES

+32.000

+24.040

R=210 m Rt

Assume same as right side. See following deck contours -J. Holman

Axis of Rotation ℄ WD1 Line

+0.20%±

-0.85%±

Rt ETW and ES

EC +63.803

+93.803

+97.770

BC +59.268

+24.040

+32.000

-3.5%±

+0.400

+3.5%±

WD1 55+51.662 Conform to existing

+95.410

+71.620

See Sheet P-2

WD1 LINE SUPERELEVATION DIAGRAM

60 m VC 60 m VC

WD1 53+60.000 BVC Elev 62.942

WD1 53+90.000 Elev 63.455

WD1 54+20.000 PRVC Elev 62.573 63.638

WD1 54+50.000 Elev 63.696 63.820

WD1 54+70.000 Elev 64.030

WD1 54+80.000 EVC Elev 64.410 64.500

WD1 54+95.410 Elev 64.780 64.850 Conform to existing

WD1 55+50.000 EVC Elev 65.772

WD1 55+51.662 EVC Elev 65.782 Conform to existing

PG

+1.711%

+1.694%

WD1 53+90.800 BVC Elev 63.483 63.469

PG

+1.167%

OG

+2.467%

+2.27%

OG

160 m VC

For Notes, see Sheet P-1

WD1 LINE PROFILE

See Note 2

REVISED PROFILE AND SUPERELEVATION 9-21-04

9 REVISED PER ADDENDUM NO. 9 DATED SEPTEMBER 4, 2003

7 REVISED PER ADDENDUM NO. 7 DATED AUGUST 4, 2003

PROFILE AND SUPERELEVATION DIAGRAM

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SCALE: 1:500 HORIZ 1:50 VERT

P-3

Station +60 +80 53+00 +20 +40 +60 +80 54+00 +20 +40 +60 +80 55+00 +20 +40 +60 +80

Cu.

M. Exc. 0

Emb. 0

3% 2% 1% 0% -1% -2% -3%

1% 0% -1% -2% -3%

63 62 61 60 59

66 65 64 63 62 61 60 59

DATE	REVISED BY
2/03	CALCULATED/ DESIGNED BY
2/03	DATE REVISED 5/04
	CHECKED BY

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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DGN FILE =>$REQUEST

CU 04251

EA 0120R1

LAST REVISION 00-00-00 DATE PLOTTED => $DATE TIME PLOTTED => $TIME

04	SF	80	12.6/13.2		

Metric

Roy A. Imbsen
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ROY A. IMBSEN — No. 16133 — Exp. 06-30-07 — CIVIL — STATE OF CALIFORNIA

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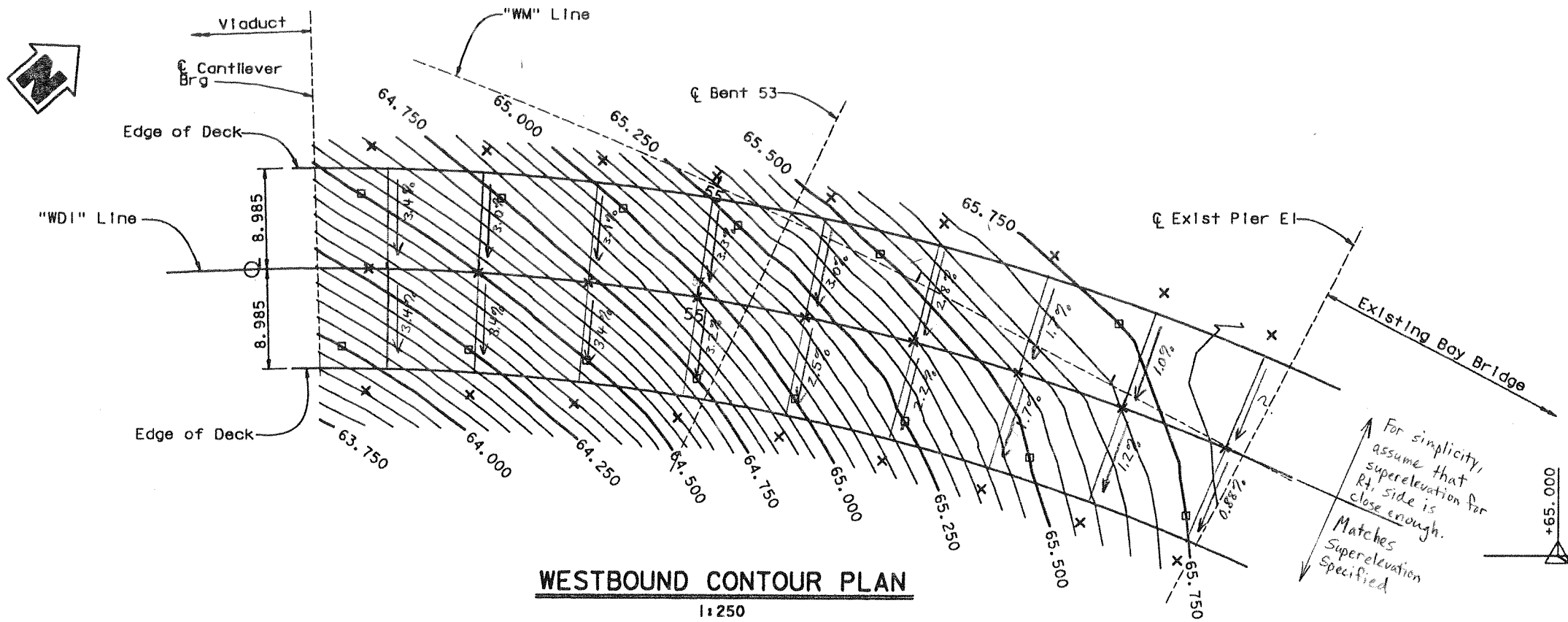
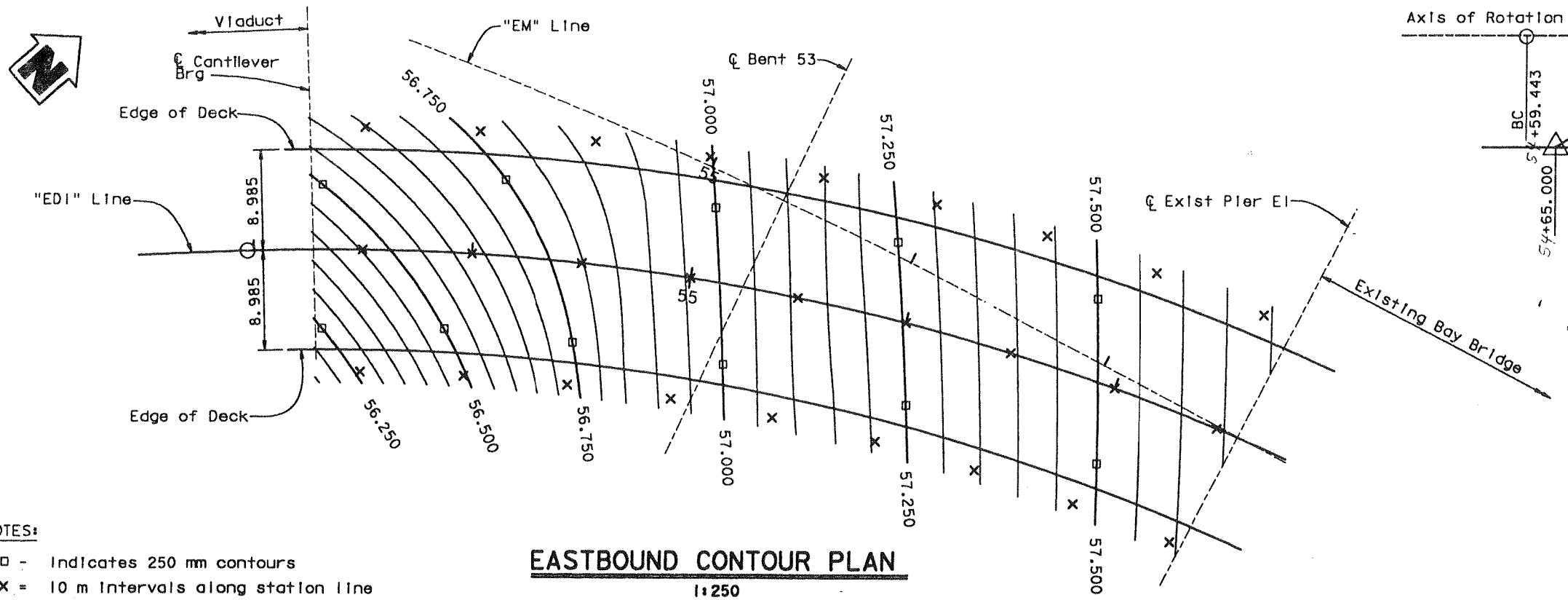
IMBSEN & ASSOCIATES INC.
9912 Business Park Dr., Suite 130
Sacramento, California 95827



WESTBOUND CONTOUR PLAN

1:250

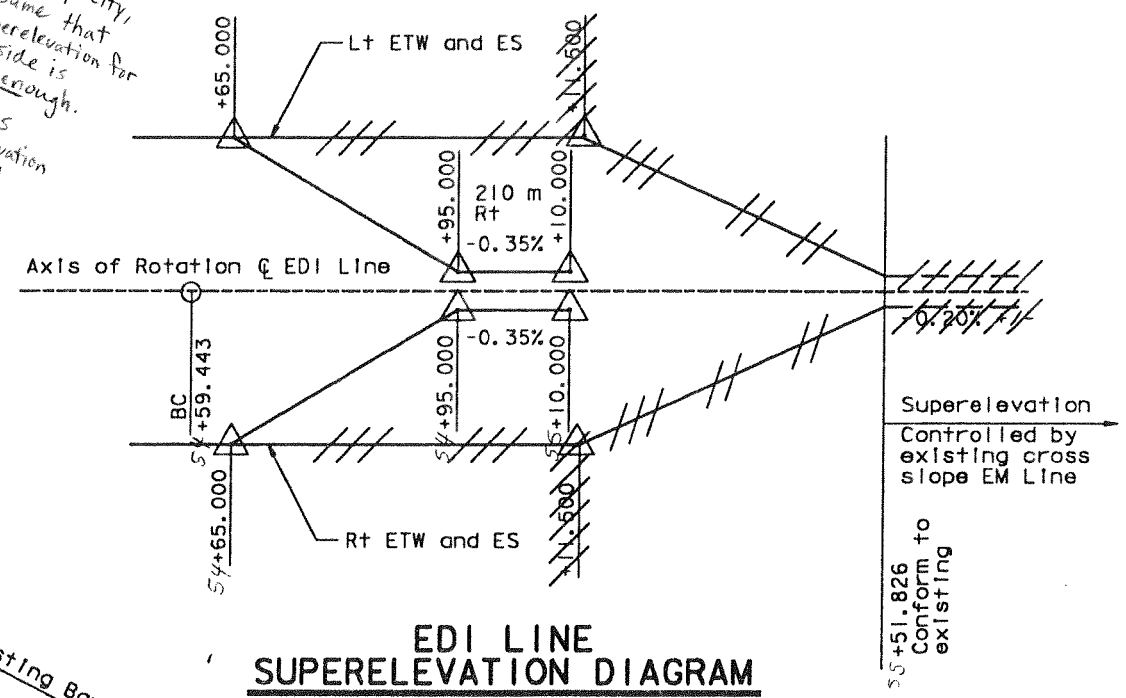


EASTBOUND CONTOUR PLAN

1:250

NOTES:

- □ - Indicates 250 mm contours
- × = 10 m intervals along station line
- Contours do not include camber
- Contour interval = 50 mm



EDI LINE SUPERELEVATION DIAGRAM

No Scale

Notes:

1. The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

FINAL SUBSTRUCTURE SUBMITTAL
Print date: 20 OCT 2005 Time: 14:42:54

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT

EAST TIE-IN
DECK CONTOURS

	BY	CHECKED
DESIGN	J. GOMEZ	M. SARRAF
DETAILS	G. IMBSEN	M. SARRAF
QUANTITIES	C.C. MYERS	C.C. MYERS

DESIGN OVERSIGHT

SIGN OFF DATE

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ROY A. IMBSEN
PROJECT MANAGER

BRIDGE NO. 34-0006 (TEMP)
KILOMETER POST 12.6

CU
EA 0120R4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 01-14-04 | 05-25-04 | 05-27-04 | 08-30-04 | 11-29-04 | 08-30-05 | 09-28-05 | 10-20-05

SHEET 3 OF 125

DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)
20 OCT 2005 4:42:54 h:\bay bridge\east tie-in\bdko_et.dgn

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

FILE => $REQUEST

04	SF	80	12.6/13.2	14	193

Caltrans Metric

REGISTERED CIVIL ENGINEER 2/28/03 DATE

3-31-03
PLANS APPROVAL DATE

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
San Francisco, CA 94107-317

Karen Gemmill No. C60173 Exp. 06/30/04 CIVIL

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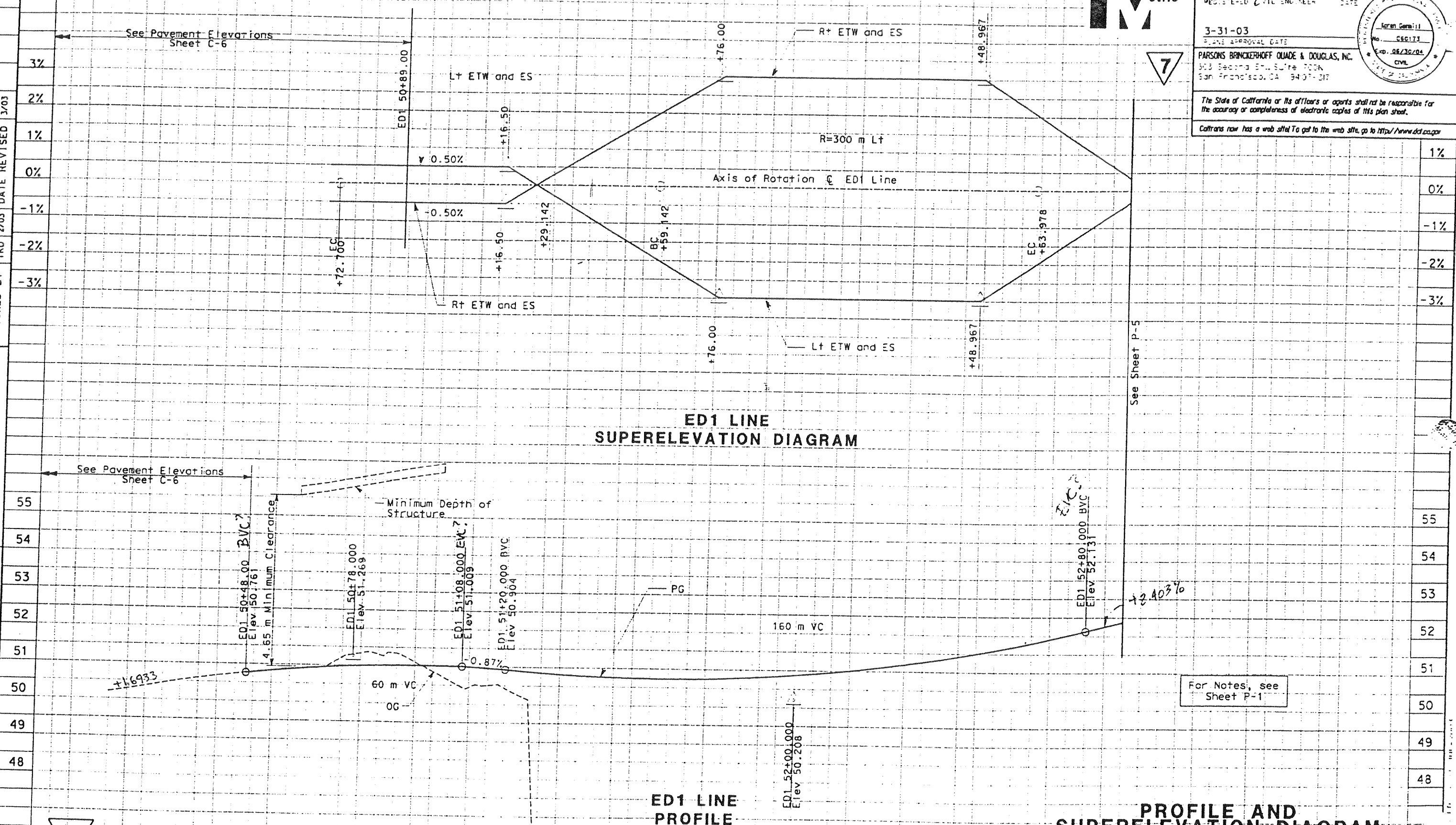

7 REVISED PER ADDENDUM NO. 7 DATED AUGUST 4, 2003

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: 1:500 HORIZ
1:50 VERT

P-4

CALCULATED/ DESIGNED BY	KTG	DATE 2/03	REVISED BY	KG
CHECKED BY	TKD	2/03	DATE REVISED	3/03

DESIGN OVERSIGHT
Bob Zandipour

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FILE COPY

SEP 2 1 2005

TRANSMITTAL

Project #_____

To: **Imbsen & Associates**
9912 Business Park Drive
Suite 130
Sacramento, CA 95827

Attention: **Eli Aramouni**

cc: Eli

From:

David Ovadia
SEQUEIRA INFRASTRUCTURE ASSOCIATES, A *TRC Company*
21 Technology Drive East
Irvine, California 92618

Date: **September 20, 2005**

Items Transmitted

Quantity	Description
1	Revisions to ED1 Line Profile and Superelevation Diagram Sheet P-5 (Bay Bridge Temporary Bypass Structure Roadway Plans) – dated 9/19/05
1	Construction Detail Exhibit 1 – dated 9/20/05

Please contact us at (949) 341-7437 if items received are not as indicated above

Eli,

Enclosed are the final revisions to the Bay Bridge Temporary Bypass Structure Roadway Plans for the ED1 Line geometry.

The geometry has been revised in order to match the proposed East Tie-In Structure profile and cross slope to the existing Oakland Bay Bridge Cantilever truss at station ED1 55+51.826. No updates to the existing Fact Sheets are required for these changes.

Our understanding is that no additional work for this task is required. Please let us know if you need further information.

c: 20035 Out Cat. 510
K. Chapman
J. Su

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	12.6/13.2	15	193

REGISTERED CIVIL ENGINEER 2/28/03 DATE

3-31-03
PLANS APPROVAL DATE

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
San Francisco, CA 94107-1317

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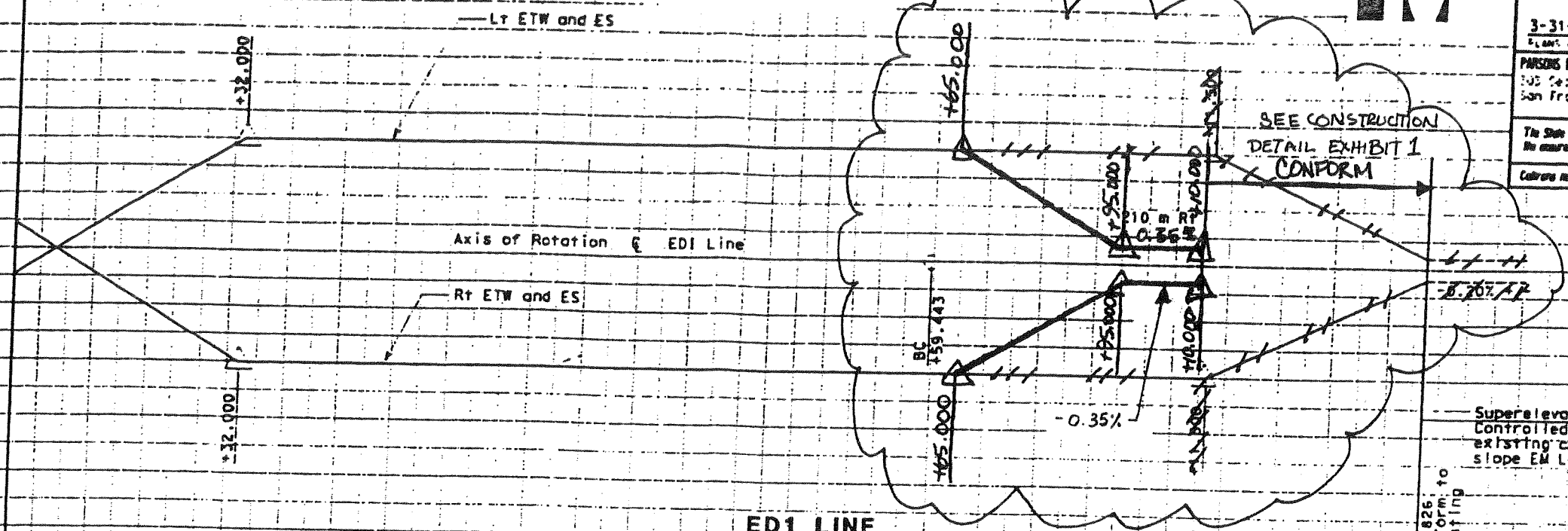
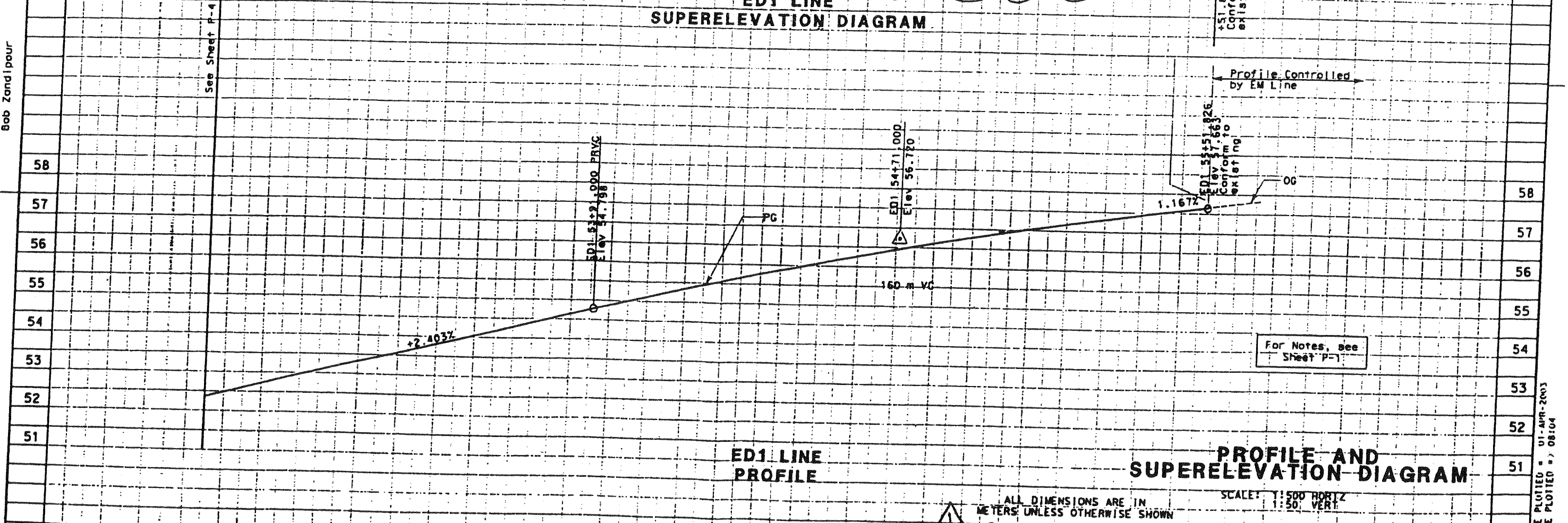
David Ovadia
DAVID OVADIA

REVISED SEPTEMBER 19, 2005

Metric



ED1 LINE SUPERELEVATION DIAGRAM



For Notes, see Sheet P-1

ED1 LINE PROFILE

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: 1:500 HORIZ
1:50 VERT

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

P-5

CALCULATED/DESIGNED BY	KTG	DATE 2/03	REVISED BY	KG
CHECKED BY	TKD	2/03	DATE REVISED	3/03

DESIGN OVERSIGHT
Bob Zandipour

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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USERNAME = trienard
DGN FILE = 40120rf05.dgn

CU 04251

EA 0120R1

DATE PLOTTED = 01-APR-2003
TIME PLOTTED = 08:04

00-00-00

NOTES:
1. CALLOUTS ARE SHOWN AT 10 m INTERVALS ALONG "ED1" STATION LINE AND FACE OF BARRIER
2. CALCULATIONS BASED ON SURVEYS DATED 04/22/04 AND 03/14/05.

X XX.XXX	PROPOSED DECK ELEVATION
(XX.XXX)	EXISTING DECK ELEVATION
+X.XXX	OVERLAY THICKNESS FROM EXISTING DECK TO PROPOSED DECK ELEVATION
-X.XXX	GRINDING DEPTH FROM EXISTING DECK TO PROPOSED DECK ELEVATION

SCALE 1:250

"ED1" 55+52.453
(57.679)
CONFORM
0.018m / 8.55m = 0.21%

57.558
(57.567)
-0.009

"ED1" 55+51.826
(57.661)
CONFORM

0.076m / 17.1m = 0.44%

0.025m / 8.55m = 0.29%

57.429
(57.454)
-0.025

55+40

0.076m / 17.1m = 0.44%

57.520
(57.498)
+0.022

"ED1" 55+51.144
(57.636)
CONFORM

57.294
(57.306)
-0.012

57.140
(57.144)
-0.004

0.077m / 17.1m = 0.45%

57.391
(57.360)
+0.031

55+20

57.255
(57.224)
+0.031

57.482

55

0.060m / 17.1m = 0.35%

57.353

56.988
(56.966)
+0.022

57.110
(57.102)
+0.008

0.060m / 17.1m = 0.35%

57.217

55+00

56.851
(56.810)
+0.041

56.958
(56.976)
-0.018

57.080

"EM" LINE

0.12%

56.798

55+10.000

56.731
(56.691)
+0.040

1.2%

56.928

54+80

56.630

56.745

SEE P-5 - 09/19/05 REVISION FOR SUPERELEVATION DIAGRAM

TANK

"ED1" LINE

56.530

PREPARED BY: David Ovadia
DAVID OVADIA
DATE: 9/22/05

BAY BRIDGE TEMPORARY BYPASS STRUCTURE

EAST TIE-IN CONFORM TO EXISTING SAN FRANCISCO OAKLAND BAY BRDIGE CANTILEVER TRUSS

CONSTRUCTION DETAIL EXHIBIT 1

SEPTEMBER 20, 2005

East_tie-in_Exhibit1_050920.dgn

cc: Roy
Lance
Mehrdad
Ray
Mark
Eli

FILE COPY

1 5 2005

Project #_____

C.C. MYERS INC.

51 Macalla Road
(415) 399-0175

San Francisco, CA 94130
Fax (415) 399-0587

February 14, 2005

Document No.: 215-LET.00126

Imbsen & Associates, Inc.
9912 Business Park Drive, Suite 130
Sacramento, CA 95827

Temporary Bypass Structure
Contract No. 04-0120R4
CCM Job # 215

Attn: Dr. Roy Imbsen
President

Re: Contract Change Order No. 19

Dear Dr. Imbsen,

Attached please find a copy of the above noted change order that was transmitted to us by the State on February 3, 2004. Please verify that the change order has been modified to address your concerns expressed previously via your letter dated January 20, 2005. If the change order is now acceptable, please provide your written approval so that it can be processed. Note that the change order as written will provide no additional compensation to Imbsen & Associates, Inc.

Very Truly Yours,
C. C. Myers, Inc.

Robert W. Coupe
Project Manager

cc: MO
JG

File: 215-201, 215-9019

DEPARTMENT OF TRANSPORTATION – District 4 Toll Bridge Program
333 Burma Rd.
Oakland, CA 94607
Telephone (510) 622-5660 Fax (510) 286-0550

RECEIVED
FEB 03 2005
CC MYERS, INC.

LETTER OF TRANSMITTAL

To: CC Myers
51 Macalla Road
San Francisco CA 94130

Attn: Bob Coupe

Date: 03-Feb-2005
Contract No: 04-0120R4
04-SF-80-12.6-13.2
Job Name: Temporary Bypass Structure
Transmittal No.: 05.03.02-000289

JOB 215 TEMP. BYPASS STRUCTURE
IC - 1443
215-103
RC
IMBSAJ

Subject : CCO 19

Enclosed please find the following items:

[ ]	Shop Drawings	[X]	Change Order	[ ]	Submittal(s)
[ ]	WSWD Report(s)	[ ]	Plans	[ ]	Other
[ ]	Daily Extra Work Reports	[ ]	Progress Payment		
[ ]	RFI Responses	[ ]	Dept. Letter		

Item	Date	Copies	Sheets	Description
1	03-Feb-2005	1	1	CCO 19
2	03-Feb-2005	1	2	CCO 19 Plan Sheets

These Are Transmitted As Checked Below:

[ ]	For Approval or Action	[ ]	Approved as Submitted	[ ]	Resubmit	___	Copies for approval
[ ]	For Your Use	[ ]	Approved as Noted	[ ]	Submit	___	Copies for distribution
[ ]	As Requested	[ ]	Returned for Corrections	[ ]	Return	___	Corrected prints
[ ]	For Review & Comment	[ ]	Other	[X]	Sign and Return		

Remarks:

Signed:

Anthony Diaz

Copy To: G. Lai
L. David
C. Moreno
A. Yan
S. Morrison

File: 05.03.02, 49.19.02

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 19	Suppl. No. 0	Contract No. 04 - 0120R4	Road SF-80-12.6/13.2	FED. AID LOC.: ACBRIM-080-1(097)N

To: CC MYERS INC

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Adjustment of Compensation at Lump Sum:

Modify the EDR 1 Line alignment as shown on Sheets 2 and 3 of this contract change order.

For this work the contractor will be paid the agreed lump sum of $0.00. This sum constitutes full compensation, including markups, for this change.

Total cost of Adjustment of Compensation at Agreed Lump Sum Price $0.00

Estimated Cost: **Increase** ☐ **Decrease** ☐ **$0.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature	Resident Engineer: LOURDES DAVID	Date
Lourdes David		1-5-05

Approval Recommended by

Signature	Construction Engineer: LOURDES DAVID	Date
Lourdes David		1-5-05

Engineer Approval by

Signature	(Print name and title)	Date
	LOURDES DAVID - Construction Engineer	

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

04	SF	80	12.6/13.2	16	193

REGISTERED CIVIL ENGINEER — DATE

3-31-03
PLANS APPROVAL DATE

Karen Cowgill
No. C60173
Exp. 06/30/04
CIVIL
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
San Francisco, CA 94107-1317

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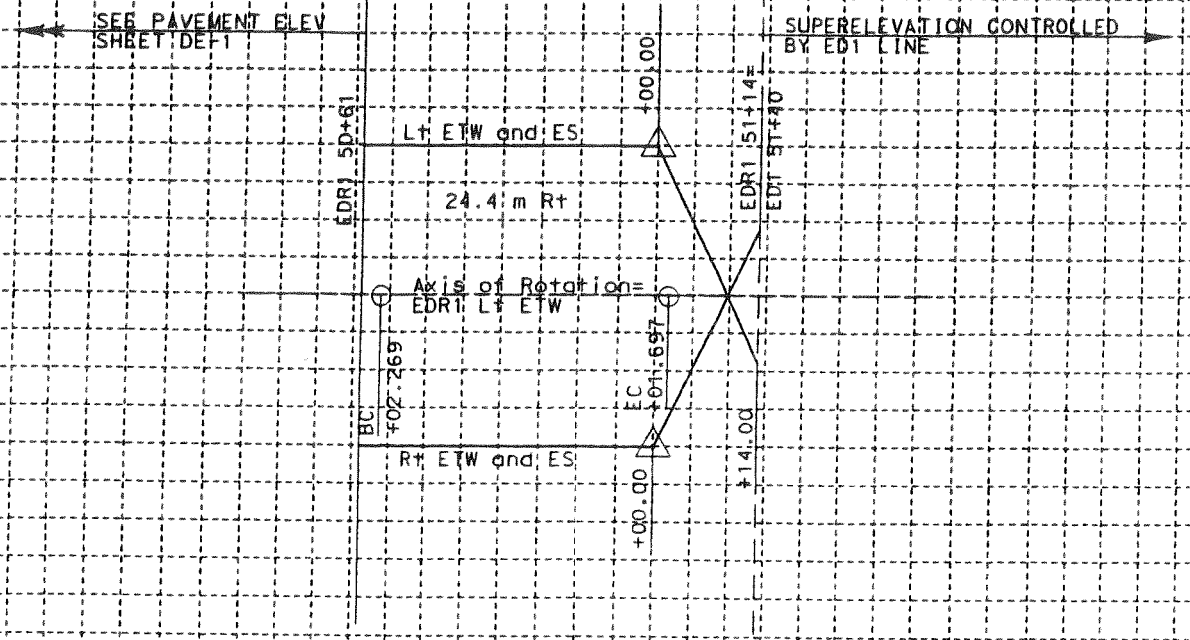
Caltrans Metric

CALCULATED/ DESIGNED BY	DATE	REVISED BY	
CHECKED BY	2/03	DATE REVISED	3/03
TKD	2/03	KG	
KTG			

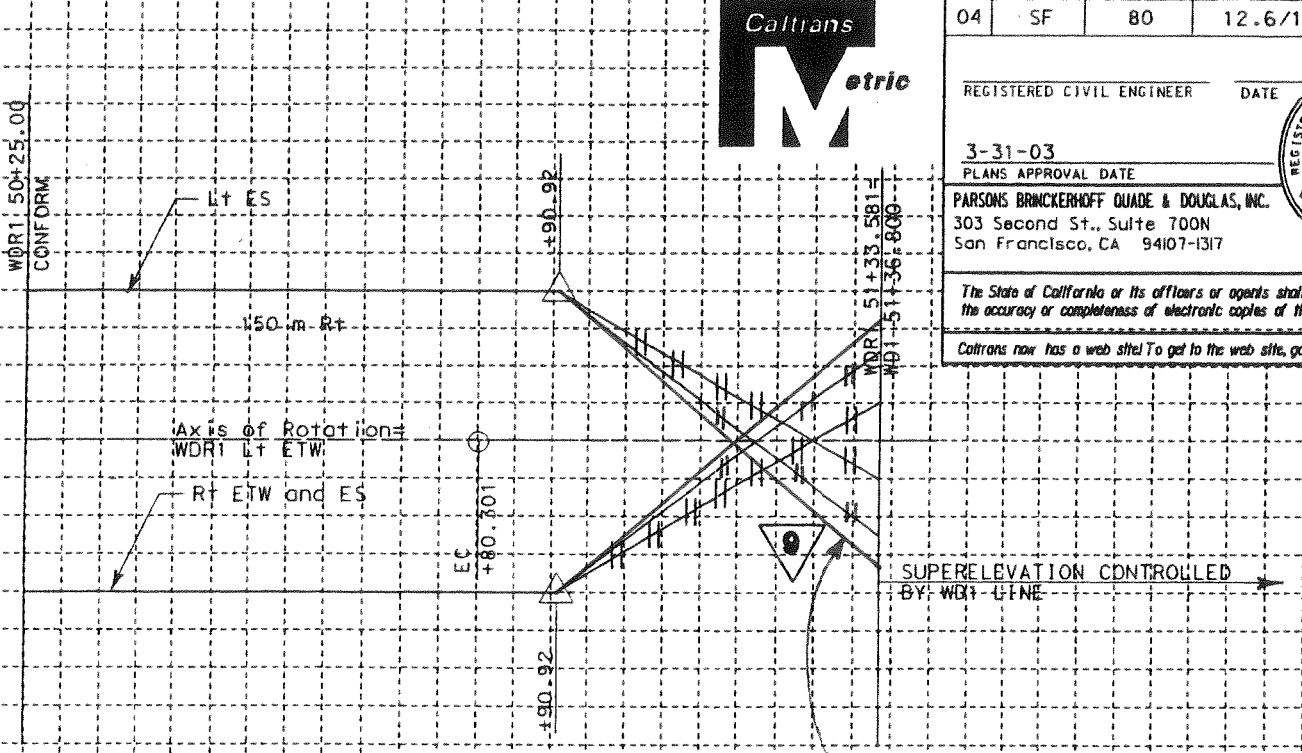
DESIGN OVERSIGHT — Bob Zandipour

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

EDR1 LINE SUPERELEVATION DIAGRAM



WDR1 LINE SUPERELEVATION DIAGRAM



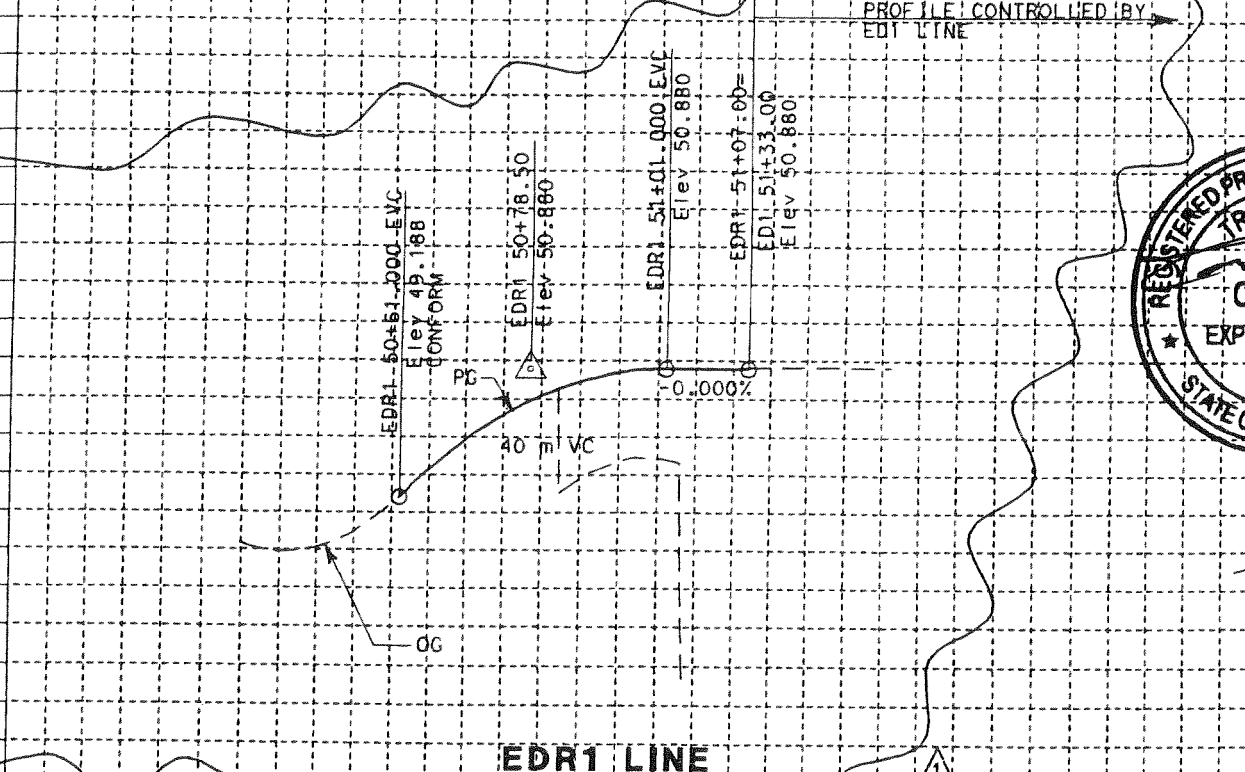
Revised by J. Holman.
See Response to RFI
#215-RFI-001.00034-00.

MARK	DATE	DESCRIPTIONS	REV	CK	CCO #
		REVISIONS			
1	11/23/04	Revised EDR1 Line Profile	TTL	JU	

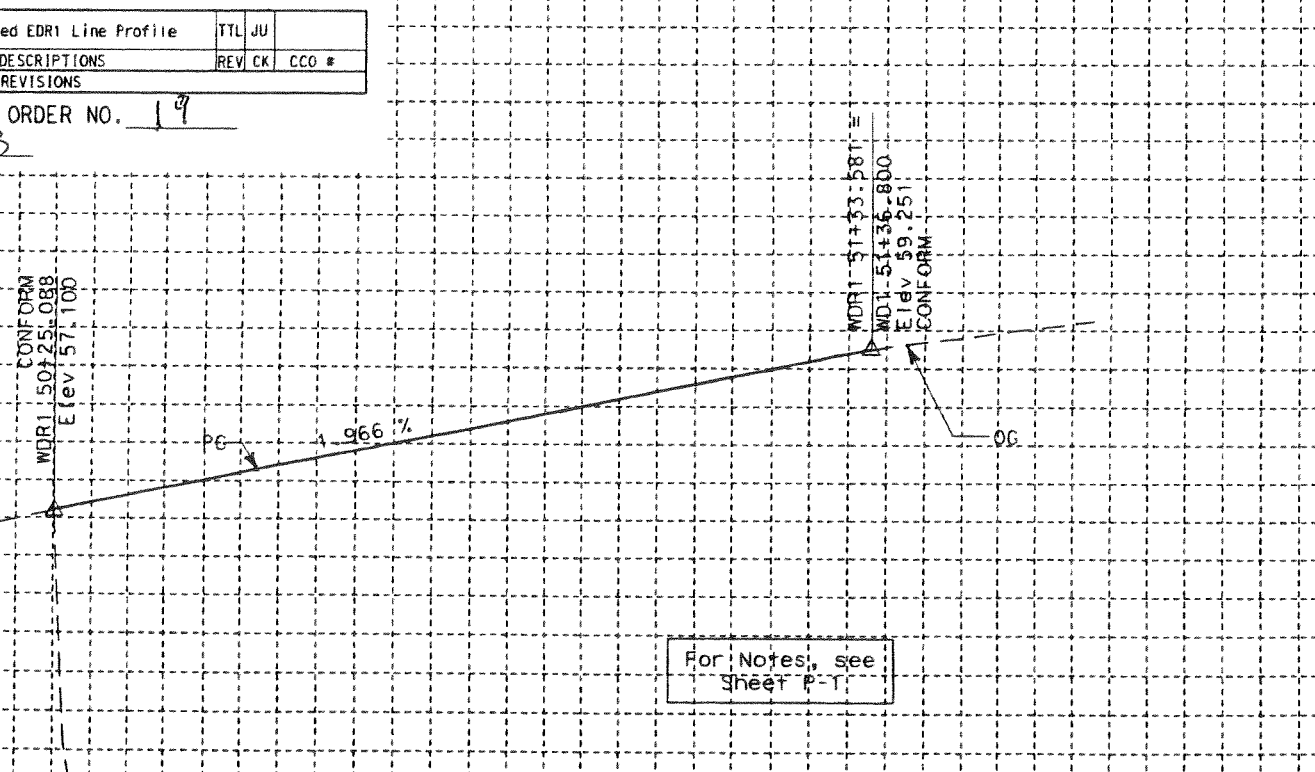
CONTRACT CHANGE ORDER NO. 19
SHEET 2 OF 3

REGISTERED PROFESSIONAL ENGINEER
TRINH T. LAI
C63630
EXP 9/30/06
CIVIL
STATE OF CALIFORNIA

EDR1 LINE PROFILE



WDR1 LINE PROFILE



For Notes, see Sheet P-1

9 REVISED PER ADDENDUM NO. 9 DATED SEPTEMBER 4, 2003

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: 1:500 HORIZ
1:50 VERT

P-6

Station: +20 +40 +60 +80 51+00 +20 +40 +60 +80 51+00 +20 +40 +60

Cu. / M. Exc. / Emb.

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS — 0 20 40 60 80

USERNAME =>$USER
DGN FILE =>$REQUEST

CU 04251 | EA 0120R1

LAST REVISION DATE PLOTTED => $DATE

NOTES:

1. For complete R/W and Accurate Access Data, see R/W Record Maps at District Office.
2. For ESA limits, see sheet C-1.
3. Install the end of Concrete Barrier (Type K) behind the existing wall.
4. Southgate Road shall remain closed to general public traffic both during and after construction of the 04-0120R4 Contract, as shown on the plans. ~~After completion of the 04-0120R4 Contract, the~~ The Contractor shall provide a minimum ~~6.0~~ 5.0 m wide ~~construction access road along~~ paved traveled way for Southgate Road with a 5.7 minimum vertical clearance under TBS and EB on ramp, as ~~directed~~ approved by the Engineer by the completion of this contract.
5. For additional details, See C sheets.

Caltrans Substation
(By Others)
See contract no. 04-0120G4

Crash Cushion
(Type ADIEM)

EM 49+78.026 POT=
ED1 49+78.026 BC

EM 50+02.000
conform

EM 50+55.000
conform

R/W

X 1,835,700
Y 647,000

POT
EM 49+00.000 BC

Concrete Barrier (Type K)
Attached to Pavement
(See Sheet C-6)

Conform

Conform
Detail C

EDI 50+70.727 EC

N 41° 31' 00" E
51 408.620

EM LINE

ED1 LINE

Remove MBGR

Bridge Barrier

Conform
Detail C

50

49

(See Note 3)

Conform
Detail C

Remove
Crash Cushion

N 31° 00' ~~57~~" W
2.320

BB
ED1 51+33.00

EDR1 50+63.269 BC

EDR1 50+60.949 EC

EDR1 LINE

See Sheet L-5

N 59° 13' 16" E
88.414

Temporary Bypass Structure
Br No.34-0006 (Temp)

N 59° 13' 16" E
25.933

Chain Link Fence
(Type 1.8) w/
Extended Arm

4.6 m offset
from ETW

TCE

EDR1 50+33.986 BC

EDR1 50+30.000 POT

EDR1 51+01.697 EC

SOUTHGATE ROAD

End Concrete Barrier (Type K)

See Note 4

HILLCREST ROAD

X 1,835,600
Y 646,900

Yerba Buena Island

EASTBOUND

N 647065.098
E 1835929.065

CURVE DATA						
NO.	R	Δ	T	L	N	E
(8)	300	17°42'17"	46.723	92.071	646 852.347	1 836 028.556
(9)	50	30°53'~~49~~" 50"	13.818	26.963	647 068.980	1 835 879.~~959~~ .056
(10)	~~24.5~~ 24.4	90°14'~~13~~" 10"	24.501	38.428	647 109.305	1 835 941.~~625~~ .624

RELATIVE BORDER SCALE IS IN MILLIMETERS

0 20 40 60 80

For Notes, Abbreviations and/or Legend See Sheet L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

9 REVISED PER ADDENDUM NO. 9 DATED SEPTEMBER 4, 2003

10 REVISED PER ADDENDUM NO. 10 DATED SEPTEMBER 22, 2003

11 REVISED PER ADDENDUM NO. 11 DATED OCTOBER 6, 2003

7 REVISED PER ADDENDUM NO. 7 DATED AUGUST 4, 2003

5 REVISED PER ADDENDUM NO. 5 DATED JUNE 27, 2003

REVISED JULY 09, 2004

LAYOUT

SCALE: 1:500

L-4

REGISTERED CIVIL ENGINEER

3-31-03
PLANS APPROVAL DATE

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Caltrans now has a web site! To get to the web site, go to: http://www.dot.ca.gov

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
San Francisco, CA 94107-1317

REGISTERED PROFESSIONAL ENGINEER
TRINH T. LAI
C 63630
EXP 09/30/06
CIVIL
STATE OF CALIFORNIA

C.C.O. No.: 19
Suppl. No.: 0
Contract No. 04-0120R4
Sheet of
Date: 7-9-04

DESIGN OVERSIGHT	CALCULATED/ DESIGNED BY	DATE	REVISED BY	KG
Bob Zandipour	K. Gemmill	2/03	DATE REVISED	3/03
	T. Dougherty	2/03		
	CHECKED BY			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DGN FILE => 40120re04.dgn
USERNAME => tlai

CU 04251

EA 0120R1

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A TRC Company

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Job Title	Bay Bridge - TBS	IAI Job Number	1295	Sheet
Subject	Deck Drainage			of
Designed By	J. Holman	Date	11/28/05	Total Sheet
Checked By		Date		of

Example Calculations from the Spreadsheets

Scupper 1 on ED1 line (depressed scupper, 25 yr. intensity):

Assume flow tributary area begins at beginning of bridge, ED1 55+51.837.

Location of first drain is ED1 55+45.00.

Calculate Demand Flow:

$Q = 0.28CiA$ (BDA 1/99 EQ. (1))

C = 1.0 for bridge decks
i = 60.56 mm/hr.
A = (5551.837 - 5545.00)(13.84 m)
= 94.624 m^2
= 0.0000946 km^2

↑ Tributary Width -see attached calcs.

$Q = 0.28(1.00)(60.56\ mm/hr)(0.0000946\ km^2)$
$= 0.00160\ m^3/s$

Calculate Flow at Depressed Scupper When T = 0.3m:
(See HEC 22, Chapter 4)

$S_x = 0.0044$ (Usually this is calculated from the superelevation diagrams in the Contract Plans, but in this region it is based on spot elevations - see 9/19/05 revision attached.)

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Subject	Deck Drainage		of
Designed By	J. Holman	Date 11/28/05	Total Sheet
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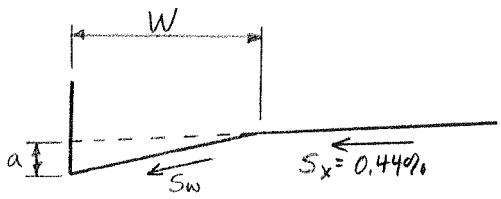
Example Calculations from the Spreadsheets (cont'd)

Scupper 1 on ED1 line (cont'd):



$S_w = S_x + a/W$
$= 0.0044 + 0.038m / 0.300m$
$= 0.13107$

$a = 0.038m$ $W = 0.300m$

$S_L = 0.01167 + [(5551 - 5545)/160m](0.02403 - 0.01167)$
$= 0.012133$

Calculate Flow at Depressed Scupper when T = 0.3m

$Q = \frac{K}{n} S_w^{5/3} S_L^{1/2} T^{8/3}$ (BDA 1/99)

$K = 0.375$ (metric)
$n = 0.013$ (asphalt)

$Q = \left(\frac{0.375}{0.013}\right)(0.13107)^{5/3}(0.012133)^{1/2}(0.3m)^{8/3}$
$= 0.00433\ m^3/s > 0.00160\ m^3/s$

Since capacity of the shoulder is greater than the demand, no iterations are required (see HEC 22 Ch. 4)

$T = 0.207m$ when $Q = 0.00160\ m^3/s$

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Example Calculations from the Spreadsheets (cont'd)

Scupper 1 on ED1 line (cont'd):

A more accurate representation of the maximum flow width near the scupper can be calculated by checking a station a little uphill from the scupper and using S_x instead of S_w.

Check T at 0.2 m uphill from scupper:

$$Q_{demand} = 0.28\,(1.0)(60.56)(5551.837 - 5545.2)(13.84\,m)/10^6$$
$$= \underline{0.001558\ m^3/s}$$

$T = \underline{1.706\ m}$ when $Q = 0.001558\ m^3/s$

$(S_x = 0.0044,\ S_L = 0.01212)$

Depth of water at edge of lane at ED1 55+45.2:

$$d = (T - 0.3m)S_x = (1.706m - 0.3m)(0.0044) = \underline{0.006\ m}$$

*According to HEC 22 4.2.1, hydroplaning can occur at speeds of 55 mph and 2 mm depth.

Scupper Efficiency: (BDA 1/99 "Scupper on Grade")

$$L_T = KQ^{0.42}S_L^{0.3}\left(\frac{1}{nS_w}\right)^{0.6}$$
$$= (0.817)(0.00160\ m^3/s)^{0.42}(0.012133)^{0.3}\left(\frac{1}{(0.013)(0.13107)}\right)^{0.6}$$
$$= \underline{0.667\ m}$$

$$E = 1 - \left(1 - \frac{0.3m}{0.667m}\right)^{1.8} = \underline{0.659}$$

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Subject	Deck Drainage			of
Designed By	J. Holman	Date	11/28/05	Total Sheet
Checked By		Date		of

Example Calculations from the Spreadsheets (cont'd)

Scupper 1 on ED1 Line (cont'd):

Flow Intercepted, q:

$$q = QE = (0.00160\ m^3/s)(0.659) = \underline{0.00105\ m^3/s}$$

Bypass Flow:

$$Q - q = 0.00160\ m^3/s - 0.00105\ m^3/s$$
$$= \underline{0.00055\ m^3/s}$$

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Example Calculations from the Spreadsheets (cont'd)

Drain 1 on ED1 line (depressed scupper, 25 yr. intensity):

Bypass flow from Scupper 9 at ED1 55+21 = 0.00023 m^3/s

Calculate Demand Flow:

$$A = (5521 - 5519.5)(13.84\ m) = 20.76\ m^2 = 2.076 \times 10^{-5}\ km^2$$

↑ Trib. width - see attached calcs.

$$Q = 0.28CiA + 0.00023\ m^3/s$$
$$= 0.28(1.0)(60.56\ mm/hr.)(0.00002076\ km^2) + 0.00023$$
$$= \underline{0.000582\ m^3/s}$$

Calculate Width of Flow, T, at Drain:

$$Q = \frac{K}{n} S_x^{5/3} S_L^{1/2} T^{8/3}$$

$S_x = \underline{0.0035}$ (Usually this is calculated from the superelevation diagrams in the Contract Plans, but in this region it is based on spot elevations - see 9/19/05 revision attached.)

$$S_L = 0.01167 + [(5551 - 5519.5)/160\ m](0.02403 - 0.01167)$$
$$= \underline{0.01410}$$

$$0.000582\ m^3/s = \frac{0.375}{0.013}(0.0035)^{5/3}(0.0141)^{1/2} T^{8/3}$$

$$\underline{T = 1.322\ m}$$

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Subject	Deck Drainage		of
Designed By	J. Holman	Date 11/29/05	Total Sheet
Checked By		Date	of

Example Calculations from the Spreadsheets (cont'd)

Drain 1 (cont'd):

Calculate Depth of Flow at Edge of Lane:

$$d = (T - 0.3m)\,S_x = (1.322m - 0.3m)(0.0035)$$
$$= \underline{0.004\ m}$$

*According to HEC 22 4.2.1, hydroplaning can occur at speeds of 55 mph and 2mm depth.

Calculate Bypass Flow:

$$Q_b = \frac{K}{n} S_x^{5/3} S_L^{1/2} (T - 0.3m)^{8/3}$$
$$= \frac{0.375}{0.013}(0.0035)^{5/3}(0.0141)^{1/2}(1.322m - 0.3m)^{8/3}$$
$$= \underline{0.000293\ m^3/s}$$

Calculate Flow Intercepted:

$$Q_i = 0.000582\ m^3/s - 0.000293\ m^3/s$$
$$= \underline{0.000289\ m^3/s}$$

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Designed By	J. Holman	Date 11/30/05	Total Sheet
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Check Scupper 116 at Low Point of ED1 Line

Scupper 116 is located at station ED1 51+76.0.

Total flow into scupper:
(see ED1 spreadsheets)

Case	Intensity	Depressed?	Total Flow
①	25 yr.	Yes	0.00140 m^3/s
②	10 yr.	Yes	0.00116 m^3/s
③	25 yr.	No	0.00244 m^3/s
④	10 yr.	No	0.00202 m^3/s

Assume flow width, T, equals shoulder width.

$T = 0.300\ m$

Calculate depth of water at curb:

$d_① = TS_w = (0.300\ m)(0.1567) = 0.047\ m$

$d_② = TS_w = (0.300\ m)(0.1567) = 0.047\ m$

$d_③ = TS_x = (0.300\ m)(0.03) = 0.009\ m$

$d_④ = TS_x = (0.300\ m)(0.03) = 0.009\ m$

$d < 0.075\ m$ ∴ operates as a weir.

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Check Scupper 116 at Low Point of ED1 Line (cont'd)

Scupper flow capacity: (BDA p. 17-5)

$$q_{①②} = 1.25 L d^{1.5} = 1.25(0.300m)(0.047_m)^{1.5} = 0.00382\ m^3/s$$

Use F.S. = 2 $\Rightarrow$ $q_{@②} = 0.00191\ m^3/s > 0.00140\ m^3/s$

$\therefore$ no encroachment

$$q_{③④} = 1.25(0.300m)(0.009\,m)^{1.5} = 0.00032\ m^3/s$$

Use F.S. = 2 $\Rightarrow$ $q_{③④} = 0.00016\ m^3/s < 0.00244\ m^3/s$

$\therefore$ Encroachment occurs for cases ③ & ④.

Calculate flow width for case ③:

$$0.00244\ m^3/s = 1.25(0.300m)(T \times 0.03)^{1.5}/2$$

$$T_③ = 1.844\ m$$

Calculate flow width for case ④:

$$0.00202\ m^3/s = 1.25(0.300m)(T \times 0.03)^{1.5}/2$$

$$T_④ = 1.626\ m$$

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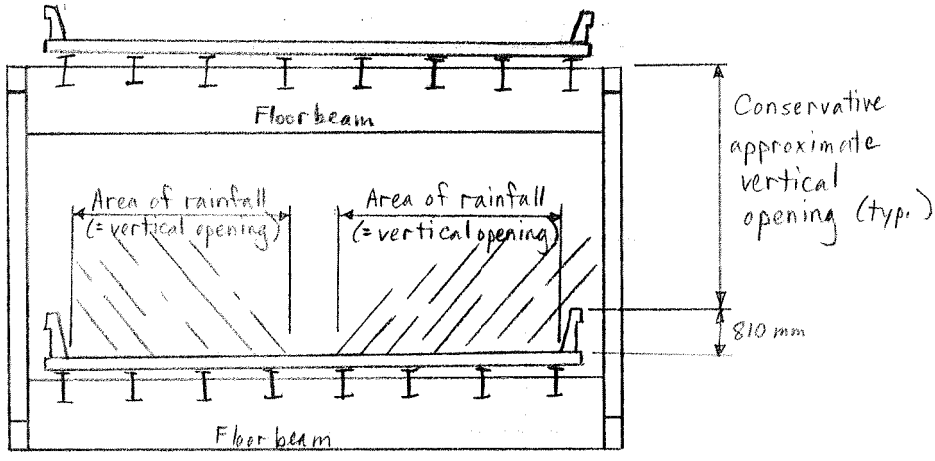
Subject	Drainage Design		of
Designed By	J. Holman	Date 11/29/05	Total Sheet
Checked By		Date	of

Rainfall Assumptions for Lower Deck

Viaduct:

Assume that rainfall is applied to a reduced area that is equal to 45° of rainfall from both sides, as shown below:



Bent 49: ("ED1" 52+19.505)

Right side: clearance from bot. of floor beam to top of deck = 6.260m (see plans)
subtract barrier: 5.450m
add floorbeam depth: ~2.3m + 5.450m = 7.750m
(see plans)

Left side: Add diff. in elev. from cross-slope (3%)
Width of travel ≅ 22.7m (see drainage spreadsheet-WD1)
Trib. width = 7.750m + 0.03(22.7m) = 8.431m

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Subject	Drainage Design			of
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Rainfall Assumptions for Lower Deck (cont'd)

Viaduct (cont'd):

Bent 50: ("ED1" 52+96.835)

Left side:

Clearance = 6.664m (see plans)
Subtract barrier: 6.664m − 0.810m = 5.854m
Add floorbeam depth: 5.854m + ~2.30m = 8.154m
↑ (see plans)

Right side:

Cross-slope is ~0%, therefore use same width = 8.154m

Bent 51: ("ED1" 53+76.255)

Left side:

Clearance = 5.808m (see plans)
Subtract barrier: 5.808m − 0.810m = 4.998m
Add floorbeam depth: 4.998m + ~2.285m = 7.283m

Right side:

Add diff. in elev. from cross-slope (2%)
Width of travel ≈ 17.1m
Trib. width = 7.283m + (0.02)(17.1m) = 7.625m

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Subject	Drainage Design		of
Designed By	J. Holman	Date 11/29/05	Total Sheet
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Rainfall Assumptions for Lower Deck (cont'd)

Viaduct (cont'd):

Bent 52: ("ED1" 54+55.675)

Left side:

Clearance = 5.279 m (see plans)
Subtract barrier: 5.279m - 0.810m = 4.469 m
Add floorbeam depth: 4.469 m + ~2.280m = 6.749 m

Right side:

Add diff. in elev. from cross-slope (2%)
Width of travel ≈ 17.1 m
Trib. width = 6.749m + (0.02)(17.1m) = 7.091 m

At each bent, use sum of the two widths:

Bent	Width
49	16.181 m
50	16.308 m
51	14.908 m
52	13.840 m

For East Tie-In, assume the same tributary width as at Bent 52 (13.84m). At Bent 48B, assume same width as Bent 49 (16.181 m).

Between bents 49-52, interpolate between widths.

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Rainfall Assumptions for Lower Deck (cont'd)

West Tie - In:

Bent 48A:

ED1 Line: ("ED1" 51+41.138)

Left Side: (Assume same for right side since ramp drops down)

Use distance between bottom of box beams and top of barrier.

Profile grade at WD1 = 59.175 m

Profile grade at ED1 = 50.772 m

Depth of boxes = 1.300m

Trib. width = (59.175 - 50.772) - 1.3 m - 0.810m barrier
= 6.293m

EDR1 Line:

Assume full rain intensity.

Eastbound Slab Bridge:

Assume same tributary width as at Bent 48A.

WD1 Line Drainage

Drains and Depressed Scuppers - 25 Year Intensity

Use Drain Type D-3, modified to 300 mm width. Use minimum drain spacing of 3.0 m.

Place 300mm long scuppers between drains at minimum spacing of 3.0 m on center, and at least 1.5 m from a drain.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "WD1" 52+98 5. The amount of flow crossing the deck is 0.00163 m^3/s.
BDA p.17-3 advises allowing a maximum of 0.003 m^3/s to flow across deck. Therefore, this configuration is more than adequate.

Drains:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	WD1 5551.662	1.00	60.56	17.100	0.000000	0.00000	0.375	0.013	0.008500	0.02270	n/a	0.300	**0.000**	**0.000**	0.00000	n/a
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
1	WD1 5519.500	1.00	60.56	17.100	0.000026	0.00095	0.375	0.013	0.023651	0.02270	32.2	0.300	**0.439**	**0.003**	0.00004	0.00090
(Scupper)																
2	WD1 5516.000	1.00	60.56	17.100	0.000034	0.00064	0.375	0.013	0.025300	0.02270	3.5	0.300	**0.365**	**0.002**	0.00001	0.00064
(Scupper)																
3	WD1 5513.000	1.00	60.56	17.100	0.000026	0.00049	0.375	0.013	0.026713	0.02270	3.0	0.300	**0.317**	**0.000**	0.00000	0.00048
(Scupper)																
4	WD1 5508.000	1.00	60.56	17.100	0.000043	0.00088	0.375	0.013	0.029069	0.02270	5.0	0.300	**0.376**	**0.002**	0.00001	0.00087
(Scupper)																
5	WD1 5505.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	0.030482	0.02270	3.0	0.300	**0.292**	**0.000**	0.00000	0.00048
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
6	WD1 5487.000	1.00	60.56	17.100	0.000026	0.00086	0.375	0.013	0.035000	0.02270	18.0	0.300	**0.332**	**0.001**	0.00000	0.00086
(Scupper)																
7	WD1 5484.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	0.035000	0.02270	3.0	0.300	**0.266**	**0.000**	0.00000	0.00048
(Scupper)																
8	WD1 5481.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	0.035000	0.02270	3.0	0.300	**0.265**	**0.000**	0.00000	0.00048
(Scupper)																
9	WD1 5478.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	0.035000	0.02213	3.0	0.300	**0.267**	**0.000**	0.00000	0.00048
(Scupper)																
10	WD1 5475.000	1.00	60.56	17.100	0.000026	0.00047	0.375	0.013	0.035000	0.02130	3.0	0.300	**0.269**	**0.000**	0.00000	0.00047
(Scupper)																
11	WD1 5472.000	1.00	60.56	17.100	0.000026	0.00047	0.375	0.013	0.035000	0.02047	3.0	0.300	**0.270**	**0.000**	0.00000	0.00047
(Scupper)																
12	WD1 5469.000	1.00	60.56	17.100	0.000026	0.00047	0.375	0.013	0.034174	0.01964	3.0	0.300	**0.276**	**0.000**	0.00000	0.00047
(Scupper)																
13	WD1 5462.500	1.00	60.56	17.100	0.000026	0.00090	0.375	0.013	0.032125	0.01784	6.5	0.300	**0.373**	**0.002**	0.00001	0.00089
(Scupper)																

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	WD1 5545.20	-	1.00	60.56	17.100	0.000111	0.00187	0.375	0.013	0.01154	0.02270	-	-	-	-	-	**0.889**	**0.007**	-	-	-	-	-	-
1	WD1 5545.00	-	1.00	60.56	17.100	0.000114	0.00193	0.375	0.013	0.01164	0.02270	0.038	0.300	0.1383	0.00648	YES	0.191	0.000	0.817	0.844	0.300	0.546	0.00088	0.00106
-	WD1 5542.20	-	1.00	60.56	17.100	0.000048	0.00169	0.375	0.013	0.01296	0.02270	-	-	-	-	-	**0.796**	**0.006**	-	-	-	-	-	-
2	WD1 5542.00	3.000	1.00	60.56	17.100	0.000051	0.00175	0.375	0.013	0.01305	0.02270	0.038	0.300	0.1397	0.00659	YES	0.182	0.000	0.817	0.804	0.300	0.569	0.00075	0.00099
-	WD1 5539.20	-	1.00	60.56	17.100	0.000048	0.00156	0.375	0.013	0.01437	0.02270	-	-	-	-	-	**0.725**	**0.006**	-	-	-	-	-	-
3	WD1 5539.00	3.000	1.00	60.56	17.100	0.000051	0.00162	0.375	0.013	0.01446	0.02270	0.038	0.300	0.1411	0.00671	YES	0.176	0.000	0.817	0.775	0.300	0.586	0.00067	0.00095
-	WD1 5536.20	-	1.00	60.56	17.100	0.000048	0.00148	0.375	0.013	0.01578	0.02270	-	-	-	-	-	**0.670**	**0.006**	-	-	-	-	-	-
4	WD1 5536.00	3.000	1.00	60.56	17.100	0.000051	0.00154	0.375	0.013	0.01588	0.02270	0.038	0.300	0.1425	0.00682	YES	0.172	0.000	0.817	0.754	0.300	0.599	0.00062	0.00092
-	WD1 5533.20	-	1.00	60.56	17.100	0.000048	0.00143	0.375	0.013	0.01720	0.02270	-	-	-	-	-	**0.626**	**0.006**	-	-	-	-	-	-
5	WD1 5533.00	3.000	1.00	60.56	17.100	0.000051	0.00149	0.375	0.013	0.01729	0.02270	0.038	0.300	0.1440	0.00693	YES	0.169	0.000	0.817	0.738	0.300	0.609	0.00058	0.00091
-	WD1 5530.20	-	1.00	60.56	17.100	0.000048	0.00139	0.375	0.013	0.01861	0.02270	-	-	-	-	-	**0.591**	**0.005**	-	-	-	-	-	-
6	WD1 5530.00	3.000	1.00	60.56	17.100	0.000051	0.00145	0.375	0.013	0.01870	0.02270	0.038	0.300	0.1454	0.00705	YES	0.166	0.000	0.817	0.727	0.300	0.617	0.00056	0.00090
-	WD1 5527.20	-	1.00	60.56	17.100	0.000048	0.00137	0.375	0.013	0.02002	0.02270	-	-	-	-	-	**0.560**	**0.005**	-	-	-	-	-	-
7	WD1 5527.00	3.000	1.00	60.56	17.100	0.000051	0.00143	0.375	0.013	0.02012	0.02270	0.038	0.300	0.1468	0.00716	YES	0.164	0.000	0.817	0.717	0.300	0.623	0.00054	0.00089
-	WD1 5524.20	-	1.00	60.56	17.100	0.000048	0.00135	0.375	0.013	0.02144	0.02270	-	-	-	-	-	**0.534**	**0.005**	-	-	-	-	-	-
8	WD1 5524.00	3.000	1.00	60.56	17.100	0.000051	0.00141	0.375	0.013	0.02153	0.02270	0.038	0.300	0.1482	0.00727	YES	0.162	0.000	0.817	0.709	0.300	0.629	0.00052	0.00088
-	WD1 5521.20	-	1.00	60.56	17.100	0.000048	0.00133	0.375	0.013	0.02285	0.02270	-	-	-	-	-	**0.511**	**0.005**	-	-	-	-	-	-
9	WD1 5521.00	3.000	1.00	60.56	17.100	0.000051	0.00139	0.375	0.013	0.02294	0.02270	0.038	0.300	0.1496	0.00739	YES	0.160	0.000	0.817	0.702	0.300	0.634	0.00051	0.00088
(DRAIN)																								
-	WD1 5518.20	-	1.00	60.56	17.100	0.000022	0.00042	0.375	0.013	0.02426	0.02270	-	-	-	-	-	**0.319**	**0.000**	-	-	-	-	-	-
10	WD1 5518.00	3.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	0.02436	0.02270	0.038	0.300	0.1510	0.00751	YES	0.107	0.000	0.817	0.446	0.300	0.866	0.00006	0.00042
(DRAIN)																								
-	WD1 5514.70	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.02591	0.02270	-	-	-	-	-	**0.296**	**0.000**	-	-	-	-	-	-
11	WD1 5514.50	3.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.02601	0.02270	0.038	0.300	0.1527	0.00754	YES	0.103	0.000	0.817	0.428	0.300	0.886	0.00005	0.00039
(DRAIN)																								
-	WD1 5510.70	-	1.00	60.56	17.100	0.000039	0.00067	0.375	0.013	0.02780	0.02270	-	-	-	-	-	**0.349**	**0.001**	-	-	-	-	-	-
12	WD1 5510.50	4.000	1.00	60.56	17.100	0.000043	0.00073	0.375	0.013	0.02789	0.02270	0.038	0.300	0.1546	0.00780	YES	0.123	0.000	0.817	0.523	0.300	0.784	0.00016	0.00057
(DRAIN)																								
-	WD1 5506.70	-	1.00	60.56	17.100	0.000022	0.00039	0.375	0.013	0.02968	0.02270	-	-	-	-	-	**0.273**	**0.000**	-	-	-	-	-	-
13	WD1 5506.50	4.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.02978	0.02270	0.038	0.300	0.1564	0.00796	YES	0.102	0.000	0.817	0.424	0.300	0.891	0.00005	0.00040
(DRAIN)																								
-	WD1 5500.70	-	1.00	60.56	17.100	0.000074	0.00125	0.375	0.013	0.03251	0.02270	-	-	-	-	-	**0.400**	**0.003**	-	-	-	-	-	-
14	WD1 5500.50	6.000	1.00	60.56	17.100	0.000077	0.00130	0.375	0.013	0.03260	0.02270	0.038	0.300	0.1593	0.00820	YES	0.151	0.000	0.817	0.658	0.300	0.666	0.00044	0.00087
-	WD1 5497.70	-	1.00	60.56	17.100	0.000048	0.00125	0.375	0.013	0.03392	0.02270	-	-	-	-	-	**0.389**	**0.003**	-	-	-	-	-	-
15	WD1 5497.50	3.000	1.00	60.56	17.100	0.000051	0.00131	0.375	0.013	0.03402	0.02270	0.038	0.300	0.1607	0.00832	YES	0.150	0.000	0.817	0.654	0.300	0.669	0.00043	0.00087
-	WD1 5494.70	-	1.00	60.56	17.100	0.000048	0.00124	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.381**	**0.003**	-	-	-	-	-	-
16	WD1 5494.50	3.000	1.00	60.56	17.100	0.000051	0.00130	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.149	0.000	0.817	0.651	0.300	0.671	0.00043	0.00087
-	WD1 5491.70	-	1.00	60.56	17.100	0.000048	0.00124	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.381**	**0.003**	-	-	-	-	-	-
17	WD1 5491.50	3.000	1.00	60.56	17.100	0.000051	0.00130	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.149	0.000	0.817	0.650	0.300	0.672	0.00043	0.00087
-	WD1 5488.70	-	1.00	60.56	17.100	0.000048	0.00124	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.381**	**0.003**	-	-	-	-	-	-
18	WD1 5488.50	3.000	1.00	60.56	17.100	0.000051	0.00130	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.149	0.000	0.817	0.650	0.300	0.672	0.00043	0.00087
(DRAIN)																								
-	WD1 5485.70	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.244**	**0.000**	-	-	-	-	-	-
19	WD1 5485.50	3.000	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.099	0.000	0.817	0.411	0.300	0.905	0.00004	0.00040
(DRAIN)																								
-	WD1 5482.70	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.244**	**0.000**	-	-	-	-	-	-
20	WD1 5482.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.099	0.000	0.817	0.411	0.300	0.905	0.00004	0.00039
(DRAIN)																								
-	WD1 5479.70	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.03500	0.02260	-	-	-	-	-	**0.244**	**0.000**	-	-	-	-	-	-
21	WD1 5479.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03500	0.02255	0.038	0.300	0.1617	0.00838	YES	0.099	0.000	0.817	0.410	0.300	0.906	0.00004	0.00039
(DRAIN)																								
-	WD1 5476.70	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.03500	0.02177	-	-	-	-	-	**0.246**	**0.000**	-	-	-	-	-	-
22	WD1 5476.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03500	0.02172	0.038	0.300	0.1617	0.00823	YES	0.100	0.000	0.817	0.405	0.300	0.912	0.00004	0.00040
(DRAIN)																								
-	WD1 5473.70	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.03500	0.02094	-	-	-	-	-	**0.247**	**0.000**	-	-	-	-	-	-
23	WD1 5473.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03500	0.02089	0.038	0.300	0.1617	0.00807	YES	0.100	0.000	0.817	0.401	0.300	0.917	0.00004	0.00040
(DRAIN)																								
-	WD1 5470.50	-	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03465	0.02006	-	-	-	-	-	**0.265**	**0.000**	-	-	-	-	-	-
24	WD1 5470.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03465	0.02006	0.038	0.300	0.1613	0.00788	YES	0.101	0.000	0.817	0.396	0.300	0.922	0.00003	0.00040
(DRAIN)																								
-	WD1 5464.20	-	1.00	60.56	17.100	0.000082	0.00139	0.375	0.013	0.03266	0.01831	-	-	-	-	-	**0.432**	**0.004**	-	-	-	-	-	-
25	WD1 5464.00	6.500	1.00	60.56	17.100	0.000086	0.00145	0.375	0.013	0.03260	0.01826	0.038	0.300	0.1593	0.00736	YES	0.163	0.000	0.817	0.644	0.300	0.677	0.00047	0.00098
(DRAIN)																								
-	WD1 5461.20	-	1.00	60.56	17.100	0.000022	0.00039	0.375	0.013	0.03172	0.01748	-	-	-	-	-	**0.275**	**0.000**	-	-	-	-	-	-
26	WD1 5461.00	3.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.03165	0.01743	0.038	0.300	0.1583	0.00712	YES	0.106	0.000	0.817	0.389	0.300	0.930	0.00003	0.00042

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
14	WD1 5459.500	1.00	60.56	17.100	0.000026	0.00047	0.375	0.013	0.031179	0.01701	3.0	0.300	**0.299**	**0.000**	0.00000	0.00047
(Scupper)																
15	WD1 5456.500	1.00	60.56	17.100	0.000026	0.00046	0.375	0.013	0.030233	0.01618	3.0	0.300	**0.307**	**0.000**	0.00000	0.00046
(Scupper)																
16	WD1 5453.000	1.00	60.56	17.100	0.000030	0.00055	0.375	0.013	0.029130	0.01521	3.5	0.300	**0.339**	**0.001**	0.00000	0.00055
(Scupper)																
17	WD1 5449.500	1.00	60.56	17.100	0.000030	0.00055	0.375	0.013	0.028026	0.01424	3.5	0.300	**0.351**	**0.001**	0.00000	0.00054
(Scupper)																
18	WD1 5446.500	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.027081	0.01341	3.0	0.300	**0.339**	**0.001**	0.00000	0.00045
(Scupper)																
19	WD1 5443.500	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.026135	0.01258	3.0	0.300	**0.350**	**0.001**	0.00000	0.00045
(Scupper)																
20	WD1 5440.500	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.025189	0.01175	3.0	0.300	**0.362**	**0.002**	0.00000	0.00045
(Scupper)																
21	WD1 5437.500	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.024243	0.01092	3.0	0.300	**0.375**	**0.002**	0.00001	0.00044
(Scupper)																
22	WD1 5434.500	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.023298	0.01009	3.0	0.300	**0.389**	**0.002**	0.00001	0.00044
(Scupper)																
23	WD1 5431.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.022352	0.00926	3.0	0.300	**0.405**	**0.002**	0.00001	0.00043
(Scupper)																
24	WD1 5428.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.021406	0.00843	3.0	0.300	**0.423**	**0.003**	0.00002	0.00042
(Scupper)																
25	WD1 5425.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.020460	0.00760	3.0	0.300	**0.443**	**0.003**	0.00002	0.00042
(Scupper)																
26	WD1 5422.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.020000	0.00677	3.0	0.300	**0.458**	**0.003**	0.00003	0.00041
(Scupper)																
27	WD1 5419.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.020000	0.00617	3.0	0.300	**0.466**	**0.003**	0.00003	0.00041
(Scupper)																
28	WD1 5416.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.020000	0.00673	3.0	0.300	**0.458**	**0.003**	0.00003	0.00041
(Scupper)																
29	WD1 5413.000	1.00	60.56	17.100	0.000030	0.00052	0.375	0.013	0.020000	0.00737	3.5	0.300	**0.480**	**0.004**	0.00004	0.00048
(Scupper)																
30	WD1 5409.500	1.00	60.56	17.100	0.000030	0.00052	0.375	0.013	0.020000	0.00801	3.5	0.300	**0.475**	**0.003**	0.00004	0.00049
(Scupper)																
31	WD1 5406.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.020000	0.00856	3.0	0.300	**0.441**	**0.003**	0.00002	0.00042
(Scupper)																
32	WD1 5403.500	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.020000	0.00911	3.0	0.300	**0.436**	**0.003**	0.00002	0.00042
(Scupper)																
33	WD1 5400.000	1.00	60.56	17.100	0.000030	0.00053	0.375	0.013	0.020000	0.00976	3.5	0.300	**0.460**	**0.003**	0.00003	0.00050
(Scupper)																
34	WD1 5396.500	1.00	60.56	17.209	0.000030	0.00054	0.375	0.013	0.020000	0.01040	3.5	0.300	**0.458**	**0.003**	0.00003	0.00051
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
35	WD1 5380.500	1.00	60.56	17.709	0.000035	0.00089	0.375	0.013	0.020000	0.01334	16.0	0.300	**0.526**	**0.005**	0.00009	0.00079
(Scupper)																
36	WD1 5377.500	1.00	60.56	17.803	0.000027	0.00050	0.375	0.013	0.020000	0.01389	3.0	0.300	**0.423**	**0.002**	0.00002	0.00049
(Scupper)																
37	WD1 5374.500	1.00	60.56	17.897	0.000027	0.00049	0.375	0.013	0.020000	0.01444	3.0	0.300	**0.415**	**0.002**	0.00002	0.00047
(Scupper)																
38	WD1 5371.500	1.00	60.56	17.991	0.000027	0.00049	0.375	0.013	0.020000	0.01500	3.0	0.300	**0.414**	**0.002**	0.00002	0.00048

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept Flow m^3/s
(DRAIN)																								
-	WD1 5458.20	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.03077	0.01665	-	-	-	-	-	**0.280**	**0.000**	-	-	-	-	-	-
27	WD1 5458.00	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03071	0.01660	0.038	0.300	0.1574	0.00688	YES	0.107	0.000	0.817	0.380	0.300	0.939	0.00003	0.00041
(DRAIN)																								
-	WD1 5454.95	-	1.00	60.56	17.100	0.000027	0.00045	0.375	0.013	0.02974	0.01575	-	-	-	-	-	**0.309**	**0.000**	-	-	-	-	-	-
28	WD1 5454.75	3.250	1.00	60.56	17.100	0.000030	0.00051	0.375	0.013	0.02968	0.01570	0.038	0.300	0.1563	0.00661	YES	0.115	0.000	0.817	0.400	0.300	0.917	0.00004	0.00047
(DRAIN)																								
-	WD1 5451.45	-	1.00	60.56	17.100	0.000027	0.00045	0.375	0.013	0.02864	0.01478	-	-	-	-	-	**0.320**	**0.001**	-	-	-	-	-	-
29	WD1 5451.25	3.500	1.00	60.56	17.100	0.000030	0.00051	0.375	0.013	0.02858	0.01473	0.038	0.300	0.1552	0.00633	YES	0.117	0.000	0.817	0.395	0.300	0.923	0.00004	0.00047
(DRAIN)																								
-	WD1 5448.20	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.02762	0.01388	-	-	-	-	-	**0.311**	**0.000**	-	-	-	-	-	-
30	WD1 5448.00	3.250	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.02755	0.01383	0.038	0.300	0.1542	0.00607	YES	0.112	0.000	0.817	0.365	0.300	0.955	0.00002	0.00042
(DRAIN)																								
-	WD1 5445.20	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.02667	0.01305	-	-	-	-	-	**0.321**	**0.001**	-	-	-	-	-	-
31	WD1 5445.00	3.000	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.02661	0.01300	0.038	0.300	0.1533	0.00582	YES	0.114	0.000	0.817	0.359	0.300	0.961	0.00002	0.00042
(DRAIN)																								
-	WD1 5442.20	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.02573	0.01222	-	-	-	-	-	**0.333**	**0.001**	-	-	-	-	-	-
32	WD1 5442.00	3.000	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.02566	0.01217	0.038	0.300	0.1523	0.00558	YES	0.115	0.000	0.817	0.354	0.300	0.966	0.00001	0.00042
(DRAIN)																								
-	WD1 5439.20	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.02478	0.01139	-	-	-	-	-	**0.345**	**0.001**	-	-	-	-	-	-
33	WD1 5439.00	3.000	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.02472	0.01134	0.038	0.300	0.1514	0.00533	YES	0.118	0.000	0.817	0.348	0.300	0.971	0.00001	0.00043
(DRAIN)																								
-	WD1 5436.20	-	1.00	60.56	17.100	0.000022	0.00038	0.375	0.013	0.02383	0.01056	-	-	-	-	-	**0.360**	**0.001**	-	-	-	-	-	-
34	WD1 5436.00	3.000	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.02377	0.01051	0.038	0.300	0.1504	0.00508	YES	0.120	0.000	0.817	0.342	0.300	0.977	0.00001	0.00043
(DRAIN)																								
-	WD1 5433.20	-	1.00	60.56	17.100	0.000022	0.00039	0.375	0.013	0.02289	0.00973	-	-	-	-	-	**0.376**	**0.002**	-	-	-	-	-	-
35	WD1 5433.00	3.000	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.02282	0.00968	0.038	0.300	0.1495	0.00482	YES	0.123	0.000	0.817	0.336	0.300	0.982	0.00001	0.00044
(DRAIN)																								
-	WD1 5430.20	-	1.00	60.56	17.100	0.000022	0.00039	0.375	0.013	0.02194	0.00890	-	-	-	-	-	**0.393**	**0.002**	-	-	-	-	-	-
36	WD1 5430.00	3.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.02188	0.00885	0.038	0.300	0.1485	0.00456	YES	0.126	0.000	0.817	0.330	0.300	0.987	0.00001	0.00044
(DRAIN)																								
-	WD1 5427.20	-	1.00	60.56	17.100	0.000022	0.00039	0.375	0.013	0.02100	0.00807	-	-	-	-	-	**0.414**	**0.002**	-	-	-	-	-	-
37	WD1 5427.00	3.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.02093	0.00802	0.038	0.300	0.1476	0.00429	YES	0.129	0.000	0.817	0.322	0.300	0.992	0.00000	0.00045
(DRAIN)																								
-	WD1 5424.20	-	1.00	60.56	17.100	0.000022	0.00040	0.375	0.013	0.02005	0.00724	-	-	-	-	-	**0.437**	**0.003**	-	-	-	-	-	-
38	WD1 5424.00	3.000	1.00	60.56	17.100	0.000026	0.00046	0.375	0.013	0.02000	0.00719	0.038	0.300	0.1467	0.00402	YES	0.133	0.000	0.817	0.315	0.300	0.996	0.00000	0.00045
(DRAIN)																								
-	WD1 5421.20	-	1.00	60.56	17.100	0.000022	0.00040	0.375	0.013	0.02000	0.00641	-	-	-	-	-	**0.449**	**0.003**	-	-	-	-	-	-
39	WD1 5421.00	3.000	1.00	60.56	17.100	0.000026	0.00046	0.375	0.013	0.02000	0.00636	0.038	0.300	0.1467	0.00378	YES	0.136	0.000	0.817	0.305	0.300	0.999	0.00000	0.00046
(DRAIN)																								
-	WD1 5418.20	-	1.00	60.56	17.100	0.000022	0.00040	0.375	0.013	0.02000	0.00641	-	-	-	-	-	**0.450**	**0.003**	-	-	-	-	-	-
40	WD1 5418.00	3.000	1.00	60.56	17.100	0.000026	0.00046	0.375	0.013	0.02000	0.00645	0.038	0.300	0.1467	0.00381	YES	0.136	0.000	0.817	0.306	0.300	0.999	0.00000	0.00046
(DRAIN)																								
-	WD1 5414.95	-	1.00	60.56	17.100	0.000027	0.00048	0.375	0.013	0.02000	0.00701	-	-	-	-	-	**0.470**	**0.003**	-	-	-	-	-	-
41	WD1 5414.75	3.250	1.00	60.56	17.100	0.000030	0.00053	0.375	0.013	0.02000	0.00705	0.038	0.300	0.1467	0.00398	YES	0.141	0.000	0.817	0.334	0.300	0.984	0.00001	0.00052
(DRAIN)																								
-	WD1 5411.45	-	1.00	60.56	17.100	0.000027	0.00049	0.375	0.013	0.02000	0.00765	-	-	-	-	-	**0.467**	**0.003**	-	-	-	-	-	-
42	WD1 5411.25	3.500	1.00	60.56	17.100	0.000030	0.00055	0.375	0.013	0.02000	0.00769	0.038	0.300	0.1467	0.00416	YES	0.140	0.000	0.817	0.346	0.300	0.973	0.00001	0.00053
(DRAIN)																								
-	WD1 5408.20	-	1.00	60.56	17.100	0.000022	0.00041	0.375	0.013	0.02000	0.00825	-	-	-	-	-	**0.433**	**0.003**	-	-	-	-	-	-
43	WD1 5408.00	3.250	1.00	60.56	17.100	0.000026	0.00047	0.375	0.013	0.02000	0.00829	0.038	0.300	0.1467	0.00432	YES	0.131	0.000	0.817	0.333	0.300	0.984	0.00001	0.00046
(DRAIN)																								
-	WD1 5405.20	-	1.00	60.56	17.100	0.000022	0.00040	0.375	0.013	0.02000	0.00880	-	-	-	-	-	**0.421**	**0.002**	-	-	-	-	-	-
44	WD1 5405.00	3.000	1.00	60.56	17.100	0.000026	0.00046	0.375	0.013	0.02000	0.00884	0.038	0.300	0.1467	0.00446	YES	0.128	0.000	0.817	0.335	0.300	0.983	0.00001	0.00045
(DRAIN)																								
-	WD1 5401.95	-	1.00	60.56	17.100	0.000027	0.00047	0.375	0.013	0.02000	0.00940	-	-	-	-	-	**0.443**	**0.003**	-	-	-	-	-	-
45	WD1 5401.75	3.250	1.00	60.56	17.100	0.000030	0.00053	0.375	0.013	0.02000	0.00944	0.038	0.300	0.1467	0.00461	YES	0.133	0.000	0.817	0.363	0.300	0.957	0.00002	0.00050
(DRAIN)																								
-	WD1 5398.45	-	1.00	60.56	17.148	0.000027	0.00048	0.375	0.013	0.02000	0.01004	-	-	-	-	-	**0.442**	**0.003**	-	-	-	-	-	-
46	WD1 5398.25	3.500	1.00	60.56	17.155	0.000030	0.00054	0.375	0.013	0.02000	0.01008	0.038	0.300	0.1467	0.00476	YES	0.133	0.000	0.817	0.374	0.300	0.946	0.00003	0.00051
(DRAIN)																								
-	WD1 5394.70	-	1.00	60.56	17.266	0.000031	0.00056	0.375	0.013	0.02000	0.01073	-	-	-	-	-	**0.461**	**0.003**	-	-	-	-	-	-
47	WD1 5394.50	3.750	1.00	60.56	17.272	0.000035	0.00062	0.375	0.013	0.02000	0.01077	0.038	0.300	0.1467	0.00492	YES	0.138	0.000	0.817	0.403	0.300	0.914	0.00005	0.00056
-	WD1 5391.70	-	1.00	60.56	17.359	0.000049	0.00088	0.375	0.013	0.02000	0.01128	-	-	-	-	-	**0.541**	**0.005**	-	-	-	-	-	-
48	WD1 5391.50	3.000	1.00	60.56	17.366	0.000052	0.00094	0.375	0.013	0.02000	0.01132	0.038	0.300	0.1467	0.00505	YES	0.159	0.000	0.817	0.488	0.300	0.821	0.00017	0.00077
-	WD1 5388.70	-	1.00	60.56	17.453	0.000049	0.00100	0.375	0.013	0.02000	0.01183	-	-	-	-	-	**0.562**	**0.005**	-	-	-	-	-	-
49	WD1 5388.50	3.000	1.00	60.56	17.459	0.000052	0.00106	0.375	0.013	0.02000	0.01187	0.038	0.300	0.1467	0.00517	YES	0.165	0.000	0.817	0.520	0.300	0.787	0.00023	0.00083
-	WD1 5385.70	-	1.00	60.56	17.547	0.000049	0.00106	0.375	0.013	0.02000	0.01239	-	-	-	-	-	**0.570**	**0.005**	-	-	-	-	-	-
50	WD1 5385.50	3.000	1.00	60.56	17.553	0.000053	0.00112	0.375	0.013	0.02000	0.01242	0.038	0.300	0.1467	0.00529	YES	0.167	0.000	0.817	0.540	0.300	0.767	0.00026	0.00086
-	WD1 5382.70	-	1.00	60.56	17.641	0.000049	0.00110	0.375	0.013	0.02000	0.01294	-	-	-	-	-	**0.573**	**0.005**	-	-	-	-	-	-
51	WD1 5382.50	3.000	1.00	60.56	17.647	0.000053	0.00116	0.375	0.013	0.02000	0.01297	0.038	0.300	0.1467	0.00541	YES	0.168	0.000	0.817	0.556	0.300	0.753	0.00029	0.00087
(DRAIN)																								
-	WD1 5379.20	-	1.00	60.56	17.750	0.000023	0.00048	0.375	0.013	0.02000	0.01358	-	-	-	-	-	**0.418**	**0.002**	-	-	-	-	-	-
52	WD1 5379.00	3.500	1.00	60.56	17.756	0.000027	0.00055	0.375	0.013	0.02000	0.01362	0.038	0.300	0.1467	0.00554	YES	0.126	0.000	0.817	0.411	0.300	0.905	0.00005	0.00049
(DRAIN)																								
-	WD1 5376.20	-	1.00	60.56	17.844	0.000023	0.00041	0.375	0.013	0.02000	0.01413	-	-	-	-	-	**0.391**	**0.002**	-	-	-	-	-	-
53	WD1 5376.00	3.000	1.00	60.56	17.850	0.000027	0.00047	0.375	0.013	0.02000	0.01417	0.038	0.300	0.1467	0.00565	YES	0.118	0.000	0.817	0.392	0.300	0.927	0.00003	0.00044
(DRAIN)																								
-	WD1 5373.20	-	1.00	60.56	17.938	0.000023	0.00041	0.375	0.013	0.02000	0.01468	-	-	-	-	-	**0.388**	**0.002**	-	-	-	-	-	-
54	WD1 5373.00	3.000	1.00	60.56	17.944	0.000027	0.00047	0.375	0.013	0.02000	0.01472	0.038	0.300	0.1467	0.00576	YES	0.117	0.000	0.817	0.396	0.300	0.922	0.00004	0.00044
(DRAIN)																								
-	WD1 5370.20	-	1.00	60.56	18.031	0.000023	0.00041	0.375	0.013	0.02000	0.01524	-	-	-	-	-	**0.386**	**0.002**	-	-	-	-	-	-

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km²	Q m³/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m³/s	Intercept Flow m³/s
(Scupper)																
39	WD1 5368.500	1.00	60.56	18.084	0.000027	0.00050	0.375	0.013	0.020000	0.01555	3.0	0.300	**0.412**	**0.002**	0.00002	0.00048
(Scupper)																
40	WD1 5365.500	1.00	60.56	18.178	0.000027	0.00050	0.375	0.013	0.020000	0.01610	3.0	0.300	**0.411**	**0.002**	0.00002	0.00049
(Scupper)																
41	WD1 5362.500	1.00	60.56	18.272	0.000027	0.00051	0.375	0.013	0.020000	0.01665	3.0	0.300	**0.410**	**0.002**	0.00002	0.00049
(Scupper)																
42	WD1 5359.500	1.00	60.56	18.366	0.000028	0.00052	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.410**	**0.002**	0.00002	0.00050
(Scupper)																
43	WD1 5356.500	1.00	60.56	18.459	0.000028	0.00052	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.411**	**0.002**	0.00002	0.00050
(Scupper)																
44	WD1 5353.500	1.00	60.56	18.553	0.000028	0.00052	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.412**	**0.002**	0.00002	0.00051
(Scupper)																
45	WD1 5350.500	1.00	60.56	18.647	0.000028	0.00053	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.413**	**0.002**	0.00002	0.00051
(Scupper)																
46	WD1 5347.000	1.00	60.56	18.756	0.000033	0.00063	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.443**	**0.003**	0.00003	0.00060
(Scupper)																
47	WD1 5343.500	1.00	60.56	18.866	0.000033	0.00064	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.446**	**0.003**	0.00003	0.00061
(Scupper)																
48	WD1 5340.500	1.00	60.56	18.959	0.000028	0.00054	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.417**	**0.002**	0.00002	0.00052
(Scupper)																
49	WD1 5337.500	1.00	60.56	19.053	0.000029	0.00054	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.417**	**0.002**	0.00002	0.00052
(Scupper)																
50	WD1 5334.000	1.00	60.56	19.163	0.000034	0.00065	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.448**	**0.003**	0.00003	0.00062
(Scupper)																
51	WD1 5330.500	1.00	60.56	19.272	0.000034	0.00066	0.375	0.013	0.019118	0.01711	3.5	0.300	**0.463**	**0.003**	0.00004	0.00062
(Scupper)																
52	WD1 5327.500	1.00	60.56	19.366	0.000029	0.00056	0.375	0.013	0.017353	0.01711	3.0	0.300	**0.462**	**0.003**	0.00003	0.00053
(Scupper)																
53	WD1 5324.500	1.00	60.56	19.459	0.000029	0.00056	0.375	0.013	0.015588	0.01711	3.0	0.300	**0.495**	**0.003**	0.00005	0.00052
(Scupper)																
54	WD1 5321.000	1.00	60.56	19.569	0.000034	0.00069	0.375	0.013	0.013529	0.01711	3.5	0.300	**0.582**	**0.004**	0.00010	0.00059
(Scupper)																
55	WD1 5318.000	1.00	60.56	19.663	0.000029	0.00060	0.375	0.013	0.011765	0.01711	3.0	0.300	**0.604**	**0.004**	0.00010	0.00050
(Scupper)																
56	WD1 5315.000	1.00	60.56	19.756	0.000030	0.00060	0.375	0.013	0.010000	0.01711	3.0	0.300	**0.670**	**0.004**	0.00012	0.00048
(Scupper)																
57	WD1 5312.000	1.00	60.56	19.850	0.000030	0.00062	0.375	0.013	0.008235	0.01711	3.0	0.300	**0.764**	**0.004**	0.00016	0.00045
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
58	WD1 5294.000	1.00	60.56	20.413	0.000031	0.00121	0.375	0.013	-0.002353	0.01711	18.0	0.300	**2.153**	**0.004**	0.00081	0.00040
(Scupper)																
59	WD1 5291.000	1.00	60.56	20.506	0.000031	0.00100	0.375	0.013	-0.004118	0.01711	3.0	0.300	**1.410**	**0.005**	0.00053	0.00047
(Scupper)																
60	WD1 5288.000	1.00	60.56	20.600	0.000031	0.00084	0.375	0.013	-0.005882	0.01711	3.0	0.300	**1.059**	**0.004**	0.00035	0.00050
(Scupper)																
61	WD1 5285.000	1.00	60.56	20.694	0.000031	0.00075	0.375	0.013	-0.007647	0.01711	3.0	0.300	**0.861**	**0.004**	0.00024	0.00051
(Scupper)																
62	WD1 5282.000	1.00	60.56	20.788	0.000031	0.00070	0.375	0.013	-0.009412	0.01711	3.0	0.300	**0.737**	**0.004**	0.00017	0.00053

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km²	Q m³/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m³/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m³/s	Intercept Flow m³/s
55	WD1 5370.00	3.000	1.00	60.56	18.038	0.000027	0.00047	0.375	0.013	0.02000	0.01527	0.038	0.300	0.1467	0.00596	YES	0.117	0.000	0.817	0.401	0.300	0.916	0.00004	0.00043
(DRAIN)																								
-	WD1 5367.20	-	1.00	60.56	18.125	0.000024	0.00042	0.375	0.013	0.02000	0.01579	-	-	-	-	-	**0.384**	**0.002**	-	-	-	-	-	-
56	WD1 5367.00	3.000	1.00	60.56	18.131	0.000027	0.00048	0.375	0.013	0.02000	0.01582	0.038	0.300	0.1467	0.00597	YES	0.116	0.000	0.817	0.406	0.300	0.911	0.00004	0.00043
(DRAIN)																								
-	WD1 5364.20	-	1.00	60.56	18.219	0.000024	0.00042	0.375	0.013	0.02000	0.01634	-	-	-	-	-	**0.382**	**0.002**	-	-	-	-	-	-
57	WD1 5364.00	3.000	1.00	60.56	18.225	0.000027	0.00048	0.375	0.013	0.02000	0.01637	0.038	0.300	0.1467	0.00607	YES	0.116	0.000	0.817	0.411	0.300	0.905	0.00005	0.00043
(DRAIN)																								
-	WD1 5361.20	-	1.00	60.56	18.313	0.000024	0.00042	0.375	0.013	0.02000	0.01689	-	-	-	-	-	**0.380**	**0.002**	-	-	-	-	-	-
58	WD1 5361.00	3.000	1.00	60.56	18.319	0.000027	0.00048	0.375	0.013	0.02000	0.01693	0.038	0.300	0.1467	0.00617	YES	0.115	0.000	0.817	0.416	0.300	0.899	0.00005	0.00043
(DRAIN)																								
-	WD1 5358.20	-	1.00	60.56	18.406	0.000024	0.00042	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.380**	**0.002**	-	-	-	-	-	-
59	WD1 5358.00	3.000	1.00	60.56	18.413	0.000028	0.00048	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.115	0.000	0.817	0.418	0.300	0.897	0.00005	0.00043
(DRAIN)																								
-	WD1 5355.20	-	1.00	60.56	18.500	0.000024	0.00042	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.381**	**0.002**	-	-	-	-	-	-
60	WD1 5355.00	3.000	1.00	60.56	18.506	0.000028	0.00049	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.115	0.000	0.817	0.419	0.300	0.896	0.00005	0.00044
(DRAIN)																								
-	WD1 5352.20	-	1.00	60.56	18.594	0.000024	0.00043	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.382**	**0.002**	-	-	-	-	-	-
61	WD1 5352.00	3.000	1.00	60.56	18.600	0.000028	0.00049	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.116	0.000	0.817	0.420	0.300	0.895	0.00005	0.00044
(DRAIN)																								
-	WD1 5348.95	-	1.00	60.56	18.695	0.000029	0.00051	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.408**	**0.002**	-	-	-	-	-	-
62	WD1 5348.75	3.250	1.00	60.56	18.702	0.000033	0.00057	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.123	0.000	0.817	0.449	0.300	0.863	0.00008	0.00049
(DRAIN)																								
-	WD1 5345.45	-	1.00	60.56	18.805	0.000029	0.00053	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.413**	**0.002**	-	-	-	-	-	-
63	WD1 5345.25	3.500	1.00	60.56	18.811	0.000033	0.00059	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.124	0.000	0.817	0.455	0.300	0.857	0.00008	0.00050
(DRAIN)																								
-	WD1 5342.20	-	1.00	60.56	18.906	0.000025	0.00045	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.389**	**0.002**	-	-	-	-	-	-
64	WD1 5342.00	3.250	1.00	60.56	18.913	0.000028	0.00051	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.118	0.000	0.817	0.429	0.300	0.885	0.00006	0.00045
(DRAIN)																								
-	WD1 5339.20	-	1.00	60.56	19.000	0.000025	0.00044	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.385**	**0.002**	-	-	-	-	-	-
65	WD1 5339.00	3.000	1.00	60.56	19.006	0.000029	0.00050	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.117	0.000	0.817	0.425	0.300	0.890	0.00006	0.00045
(DRAIN)																								
-	WD1 5335.95	-	1.00	60.56	19.102	0.000030	0.00052	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.411**	**0.002**	-	-	-	-	-	-
66	WD1 5335.75	3.250	1.00	60.56	19.108	0.000033	0.00059	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.124	0.000	0.817	0.453	0.300	0.858	0.00008	0.00050
(DRAIN)																								
-	WD1 5332.45	-	1.00	60.56	19.211	0.000030	0.00054	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.417**	**0.002**	-	-	-	-	-	-
67	WD1 5332.25	3.500	1.00	60.56	19.217	0.000034	0.00060	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.125	0.000	0.817	0.459	0.300	0.851	0.00009	0.00051
(DRAIN)																								
-	WD1 5329.20	-	1.00	60.56	19.313	0.000025	0.00047	0.375	0.013	0.01835	0.01711	-	-	-	-	-	**0.417**	**0.002**	-	-	-	-	-	-
68	WD1 5329.00	3.250	1.00	60.56	19.319	0.000029	0.00053	0.375	0.013	0.01824	0.01711	0.038	0.300	0.1449	0.00608	YES	0.120	0.000	0.817	0.439	0.300	0.874	0.00007	0.00047
(DRAIN)																								
-	WD1 5326.20	-	1.00	60.56	19.406	0.000025	0.00046	0.375	0.013	0.01659	0.01711	-	-	-	-	-	**0.442**	**0.002**	-	-	-	-	-	-
69	WD1 5326.00	3.000	1.00	60.56	19.413	0.000029	0.00053	0.375	0.013	0.01647	0.01711	0.038	0.300	0.1431	0.00596	YES	0.121	0.000	0.817	0.440	0.300	0.872	0.00007	0.00046
(DRAIN)																								
-	WD1 5322.95	-	1.00	60.56	19.508	0.000030	0.00056	0.375	0.013	0.01468	0.01711	-	-	-	-	-	**0.513**	**0.003**	-	-	-	-	-	-
70	WD1 5322.75	3.250	1.00	60.56	19.514	0.000034	0.00063	0.375	0.013	0.01456	0.01711	0.038	0.300	0.1412	0.00583	YES	0.130	0.000	0.817	0.477	0.300	0.832	0.00011	0.00052
(DRAIN)																								
-	WD1 5319.70	-	1.00	60.56	19.609	0.000025	0.00053	0.375	0.013	0.01276	0.01711	-	-	-	-	-	**0.549**	**0.003**	-	-	-	-	-	-
71	WD1 5319.50	3.250	1.00	60.56	19.616	0.000029	0.00060	0.375	0.013	0.01265	0.01711	0.038	0.300	0.1393	0.00570	YES	0.129	0.000	0.817	0.472	0.300	0.838	0.00010	0.00050
(DRAIN)																								
-	WD1 5316.70	-	1.00	60.56	19.703	0.000026	0.00053	0.375	0.013	0.01100	0.01711	-	-	-	-	-	**0.602**	**0.003**	-	-	-	-	-	-
72	WD1 5316.50	3.000	1.00	60.56	19.709	0.000030	0.00060	0.375	0.013	0.01088	0.01711	0.038	0.300	0.1375	0.00558	YES	0.130	0.000	0.817	0.475	0.300	0.834	0.00010	0.00050
(DRAIN)																								
-	WD1 5313.70	-	1.00	60.56	19.797	0.000026	0.00056	0.375	0.013	0.00924	0.01711	-	-	-	-	-	**0.685**	**0.004**	-	-	-	-	-	-
73	WD1 5313.50	3.000	1.00	60.56	19.803	0.000030	0.00063	0.375	0.013	0.00912	0.01711	0.038	0.300	0.1358	0.00546	YES	0.133	0.000	0.817	0.489	0.300	0.820	0.00011	0.00051
(DRAIN)																								
-	WD1 5310.70	-	1.00	60.56	19.891	0.000026	0.00060	0.375	0.013	0.00747	0.01711	-	-	-	-	-	**0.804**	**0.004**	-	-	-	-	-	-
74	WD1 5310.50	3.000	1.00	60.56	19.897	0.000030	0.00067	0.375	0.013	0.00735	0.01711	0.038	0.300	0.1340	0.00534	YES	0.138	0.000	0.817	0.506	0.300	0.801	0.00013	0.00054
-	WD1 5307.70	-	1.00	60.56	19.984	0.000056	0.00108	0.375	0.013	0.00571	0.01711	-	-	-	-	-	**1.185**	**0.005**	-	-	-	-	-	-
75	WD1 5307.50	3.000	1.00	60.56	19.991	0.000060	0.00115	0.375	0.013	0.00559	0.01711	0.038	0.300	0.1323	0.00522	YES	0.170	0.000	0.817	0.640	0.300	0.679	0.00037	0.00078
-	WD1 5304.70	-	1.00	60.56	20.078	0.000056	0.00132	0.375	0.013	0.00394	0.01711	-	-	-	-	-	**1.610**	**0.005**	-	-	-	-	-	-
76	WD1 5304.50	3.000	1.00	60.56	20.084	0.000060	0.00139	0.375	0.013	0.00382	0.01711	0.038	0.300	0.1305	0.00511	YES	0.184	0.000	0.817	0.699	0.300	0.635	0.00051	0.00088
-	WD1 5301.70	-	1.00	60.56	20.172	0.000056	0.00146	0.375	0.013	0.00218	0.01711	-	-	-	-	-	**2.425**	**0.005**	-	-	-	-	-	-
77	WD1 5301.50	3.000	1.00	60.56	20.178	0.000061	0.00153	0.375	0.013	0.00206	0.01711	0.038	0.300	0.1287	0.00499	YES	0.193	0.000	0.817	0.735	0.300	0.611	0.00060	0.00094
-	WD1 5298.70	-	1.00	60.56	20.266	0.000057	0.00156	0.375	0.013	0.00041	0.01711	-	-	-	-	-	**7.028**	**0.003**	-	-	-	-	-	-
78	WD1 5298.50	3.000	1.00	60.56	20.272	0.000061	**0.00163**	0.375	0.013	0.00029	0.01711	0.038	0.300	0.1270	0.00488	YES	0.199	0.000	0.817	0.759	0.300	0.595	0.00066	0.00097
-	WD1 5295.70	-	1.00	60.56	20.359	0.000057	0.00163	0.375	0.013	-0.00135	0.01711	-	-	-	-	-	**3.394**	**0.004**	-	-	-	-	-	-
79	WD1 5295.50	3.000	1.00	60.56	20.366	0.000061	0.00169	0.375	0.013	-0.00147	0.01711	0.038	0.300	0.1281	0.00496	YES	0.201	0.000	0.817	0.768	0.300	0.590	0.00069	0.00100
(DRAIN)																								
-	WD1 5292.70	-	1.00	60.56	20.453	0.000027	0.00126	0.375	0.013	-0.00312	0.01711	-	-	-	-	-	**1.834**	**0.005**	-	-	-	-	-	-
80	WD1 5292.50	3.000	1.00	60.56	20.459	0.000031	0.00133	0.375	0.013	-0.00324	0.01711	0.038	0.300	0.1299	0.00507	YES	0.182	0.000	0.817	0.689	0.300	0.643	0.00048	0.00086
(DRAIN)																								
-	WD1 5289.70	-	1.00	60.56	20.547	0.000027	0.00098	0.375	0.013	-0.00488	0.01711	-	-	-	-	-	**1.259**	**0.005**	-	-	-	-	-	-
81	WD1 5289.50	3.000	1.00	60.56	20.553	0.000031	0.00105	0.375	0.013	-0.00500	0.01711	0.038	0.300	0.1317	0.00519	YES	0.165	0.000	0.817	0.618	0.300	0.697	0.00032	0.00073
(DRAIN)																								
-	WD1 5286.70	-	1.00	60.56	20.641	0.000027	0.00080	0.375	0.013	-0.00665	0.01711	-	-	-	-	-	**0.963**	**0.004**	-	-	-	-	-	-
82	WD1 5286.50	3.000	1.00	60.56	20.647	0.000031	0.00087	0.375	0.013	-0.00676	0.01711	0.038	0.300	0.1334	0.00530	YES	0.152	0.000	0.817	0.567	0.300	0.742	0.00022	0.00065
(DRAIN)																								
-	WD1 5283.70	-	1.00	60.56	20.734	0.000027	0.00070	0.375	0.013	-0.00841	0.01711	-	-	-	-	-	**0.788**	**0.004**	-	-	-	-	-	-
83	WD1 5283.50	3.000	1.00	60.56	20.741	0.000031	0.00077	0.375	0.013	-0.00853	0.01711	0.038	0.300	0.1352	0.00542	YES	0.144	0.000	0.817	0.533	0.300	0.774	0.00017	0.00059
(DRAIN)																								
-	WD1 5280.70	-	1.00	60.56	20.828	0.000027	0.00063	0.375	0.013	-0.01018	0.01711	-	-	-	-	-	**0.675**	**0.004**	-	-	-	-	-	-

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
(Scupper)																
63	WD1 5279.000	1.00	60.56	20.881	0.000031	0.00067	0.375	0.013	-0.011176	0.01711	3.0	0.300	**0.652**	**0.004**	0.00013	0.00054
(Scupper)																
64	WD1 5276.000	1.00	60.56	20.975	0.000031	0.00066	0.375	0.013	-0.012941	0.01711	3.0	0.300	**0.589**	**0.004**	0.00010	0.00056
(Scupper)																
65	WD1 5273.000	1.00	60.56	21.069	0.000032	0.00064	0.375	0.013	-0.014706	0.01711	3.0	0.300	**0.540**	**0.004**	0.00007	0.00057
(Scupper)																
66	WD1 5270.000	1.00	60.56	21.163	0.000032	0.00064	0.375	0.013	-0.016471	0.01711	3.0	0.300	**0.501**	**0.003**	0.00006	0.00058
(Scupper)																
67	WD1 5267.000	1.00	60.56	21.256	0.000032	0.00063	0.375	0.013	-0.018235	0.01711	3.0	0.300	**0.468**	**0.003**	0.00004	0.00059
(Scupper)																
68	WD1 5264.000	1.00	60.56	21.350	0.000032	0.00063	0.375	0.013	-0.020000	0.01711	3.0	0.300	**0.441**	**0.003**	0.00003	0.00060
(Scupper)																
69	WD1 5261.000	1.00	60.56	21.444	0.000032	0.00062	0.375	0.013	-0.021765	0.01711	3.0	0.300	**0.418**	**0.003**	0.00002	0.00060
(Scupper)																
70	WD1 5257.000	1.00	60.56	21.569	0.000043	0.00087	0.375	0.013	-0.024118	0.01711	4.0	0.300	**0.444**	**0.003**	0.00004	0.00083
(Scupper)																
71	WD1 5254.000	1.00	60.56	21.663	0.000032	0.00063	0.375	0.013	-0.025882	0.01711	3.0	0.300	**0.376**	**0.002**	0.00001	0.00062
(Scupper)																
(Scupper)																
(Scupper)																
72	WD1 5240.500	1.00	60.56	22.084	0.000050	0.00139	0.375	0.013	-0.030000	0.01711	13.5	0.300	**0.461**	**0.005**	0.00008	0.00130
(Scupper)																
73	WD1 5237.500	1.00	60.56	22.178	0.000033	0.00066	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.348**	**0.001**	0.00000	0.00065
(Scupper)																
74	WD1 5234.000	1.00	60.56	22.288	0.000039	0.00076	0.375	0.013	-0.030000	0.01711	3.5	0.300	**0.368**	**0.002**	0.00001	0.00075
(Scupper)																
75	WD1 5231.000	1.00	60.56	22.381	0.000034	0.00064	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.345**	**0.001**	0.00000	0.00064
(Scupper)																
76	WD1 5228.000	1.00	60.56	22.475	0.000034	0.00064	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.345**	**0.001**	0.00000	0.00064
(Scupper)																
77	WD1 5225.000	1.00	60.56	22.569	0.000034	0.00064	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.346**	**0.001**	0.00000	0.00064
78	WD1 5219.500	1.00	60.56	22.741	0.000125	0.00212	0.375	0.013	-0.030000	0.01711	5.5	0.300	**0.541**	**0.007**	0.00025	0.00188
(Scupper)																
79	WD1 5216.500	1.00	60.56	22.834	0.000034	0.00074	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.365**	**0.002**	0.00001	0.00073
(Scupper)																
80	WD1 5213.500	1.00	60.56	22.928	0.000034	0.00066	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.348**	**0.001**	0.00000	0.00065
(Scupper)																
81	WD1 5210.500	1.00	60.56	23.022	0.000035	0.00066	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.349**	**0.001**	0.00000	0.00065
(Scupper)																
82	WD1 5207.500	1.00	60.56	23.116	0.000035	0.00066	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.349**	**0.001**	0.00000	0.00066
(Scupper)																
83	WD1 5204.500	1.00	60.56	23.209	0.000035	0.00066	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.350**	**0.001**	0.00000	0.00066
(Scupper)																
84	WD1 5201.500	1.00	60.56	23.303	0.000035	0.00067	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.351**	**0.002**	0.00000	0.00066
(Scupper)																
85	WD1 5198.500	1.00	60.56	23.397	0.000035	0.00067	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.351**	**0.002**	0.00000	0.00067
(Scupper)																
86	WD1 5195.500	1.00	60.56	23.491	0.000035	0.00067	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.352**	**0.002**	0.00000	0.00067
(Scupper)																
87	WD1 5192.000	1.00	60.56	23.600	0.000041	0.00081	0.375	0.013	-0.030000	0.01711	3.5	0.300	**0.377**	**0.002**	0.00001	0.00080
(Scupper)																
(Scupper)																

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
84	WD1 5280.50	3.000	1.00	60.56	20.834	0.000031	0.00070	0.375	0.013	-0.01029	0.01711	0.038	0.300	0.1370	0.00554	YES	0.138	0.000	0.817	0.510	0.300	0.797	0.00014	0.00056
(DRAIN)																								
-	WD1 5277.70	-	1.00	60.56	20.922	0.000027	0.00059	0.375	0.013	-0.01194	0.01711	-	-	-	-	-	**0.596**	**0.004**	-	-	-	-	-	-
85	WD1 5277.50	3.000	1.00	60.56	20.928	0.000031	0.00066	0.375	0.013	-0.01206	0.01711	0.038	0.300	0.1387	0.00566	YES	0.134	0.000	0.817	0.494	0.300	0.814	0.00012	0.00054
(DRAIN)																								
-	WD1 5274.70	-	1.00	60.56	21.016	0.000027	0.00056	0.375	0.013	-0.01371	0.01711	-	-	-	-	-	**0.536**	**0.003**	-	-	-	-	-	-
86	WD1 5274.50	3.000	1.00	60.56	21.022	0.000032	0.00063	0.375	0.013	-0.01382	0.01711	0.038	0.300	0.1405	0.00578	YES	0.131	0.000	0.817	0.481	0.300	0.828	0.00011	0.00052
(DRAIN)																								
-	WD1 5271.70	-	1.00	60.56	21.109	0.000027	0.00054	0.375	0.013	-0.01547	0.01711	-	-	-	-	-	**0.490**	**0.003**	-	-	-	-	-	-
87	WD1 5271.50	3.000	1.00	60.56	21.116	0.000032	0.00061	0.375	0.013	-0.01559	0.01711	0.038	0.300	0.1423	0.00590	YES	0.128	0.000	0.817	0.470	0.300	0.840	0.00010	0.00051
(DRAIN)																								
-	WD1 5268.70	-	1.00	60.56	21.203	0.000028	0.00052	0.375	0.013	-0.01724	0.01711	-	-	-	-	-	**0.452**	**0.003**	-	-	-	-	-	-
88	WD1 5268.50	3.000	1.00	60.56	21.209	0.000032	0.00060	0.375	0.013	-0.01735	0.01711	0.038	0.300	0.1440	0.00602	YES	0.126	0.000	0.817	0.461	0.300	0.849	0.00009	0.00051
(DRAIN)																								
-	WD1 5265.70	-	1.00	60.56	21.297	0.000028	0.00051	0.375	0.013	-0.01900	0.01711	-	-	-	-	-	**0.422**	**0.002**	-	-	-	-	-	-
89	WD1 5265.50	3.000	1.00	60.56	21.303	0.000032	0.00058	0.375	0.013	-0.01912	0.01711	0.038	0.300	0.1458	0.00615	YES	0.124	0.000	0.817	0.454	0.300	0.857	0.00008	0.00050
(DRAIN)																								
-	WD1 5262.70	-	1.00	60.56	21.391	0.000028	0.00050	0.375	0.013	-0.02076	0.01711	-	-	-	-	-	**0.396**	**0.002**	-	-	-	-	-	-
90	WD1 5262.50	3.000	1.00	60.56	21.397	0.000032	0.00057	0.375	0.013	-0.02088	0.01711	0.038	0.300	0.1475	0.00627	YES	0.122	0.000	0.817	0.448	0.300	0.864	0.00008	0.00050
(DRAIN)																								
-	WD1 5259.20	-	1.00	60.56	21.500	0.000039	0.00068	0.375	0.013	-0.02282	0.01711	-	-	-	-	-	**0.418**	**0.003**	-	-	-	-	-	-
91	WD1 5259.00	3.500	1.00	60.56	21.506	0.000043	0.00075	0.375	0.013	-0.02294	0.01711	0.038	0.300	0.1496	0.00642	YES	0.134	0.000	0.817	0.497	0.300	0.811	0.00014	0.00061
(DRAIN)																								
-	WD1 5255.70	-	1.00	60.56	21.609	0.000028	0.00052	0.375	0.013	-0.02488	0.01711	-	-	-	-	-	**0.359**	**0.001**	-	-	-	-	-	-
92	WD1 5255.50	3.500	1.00	60.56	21.616	0.000032	0.00059	0.375	0.013	-0.02500	0.01711	0.038	0.300	0.1517	0.00656	YES	0.122	0.000	0.817	0.447	0.300	0.865	0.00008	0.00051
(DRAIN)																								
-	WD1 5251.95	-	1.00	60.56	21.727	0.000045	0.00076	0.375	0.013	-0.02709	0.01711	-	-	-	-	-	**0.393**	**0.003**	-	-	-	-	-	-
93	WD1 5251.75	3.750	1.00	60.56	21.733	0.000049	0.00084	0.375	0.013	-0.02721	0.01711	0.038	0.300	0.1539	0.00672	YES	0.137	0.000	0.817	0.512	0.300	0.795	0.00017	0.00067
-	WD1 5248.95	-	1.00	60.56	21.820	0.000061	0.00121	0.375	0.013	-0.02885	0.01711	-	-	-	-	-	**0.449**	**0.004**	-	-	-	-	-	-
94	WD1 5248.75	3.000	1.00	60.56	21.827	0.000065	0.00128	0.375	0.013	-0.02897	0.01711	0.038	0.300	0.1556	0.00685	YES	0.160	0.000	0.817	0.608	0.300	0.706	0.00038	0.00091
-	WD1 5245.95	-	1.00	60.56	21.914	0.000061	0.00142	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.465**	**0.005**	-	-	-	-	-	-
95	WD1 5245.75	3.000	1.00	60.56	21.920	0.000066	0.00149	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.169	0.000	0.817	0.645	0.300	0.675	0.00048	0.00101
-	WD1 5242.95	-	1.00	60.56	22.008	0.000062	0.00153	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.478**	**0.005**	-	-	-	-	-	-
96	WD1 5242.75	3.000	1.00	60.56	22.014	0.000066	0.00160	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.173	0.000	0.817	0.665	0.300	0.660	0.00055	0.00106
(DRAIN)																								
-	WD1 5239.20	-	1.00	60.56	22.125	0.000029	0.00057	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.331**	**0.001**	-	-	-	-	-	-
97	WD1 5239.00	3.750	1.00	60.56	22.131	0.000033	0.00065	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.123	0.000	0.817	0.454	0.300	0.857	0.00009	0.00055
(DRAIN)																								
-	WD1 5235.95	-	1.00	60.56	22.227	0.000034	0.00059	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.334**	**0.001**	-	-	-	-	-	-
98	WD1 5235.75	3.250	1.00	60.56	22.233	0.000039	0.00066	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.124	0.000	0.817	0.459	0.300	0.852	0.00010	0.00056
(DRAIN)																								
-	WD1 5232.70	-	1.00	60.56	22.328	0.000029	0.00050	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.315**	**0.000**	-	-	-	-	-	-
99	WD1 5232.50	3.250	1.00	60.56	22.334	0.000034	0.00058	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.118	0.000	0.817	0.433	0.300	0.881	0.00007	0.00051
(DRAIN)																								
-	WD1 5229.70	-	1.00	60.56	22.422	0.000029	0.00050	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.314**	**0.000**	-	-	-	-	-	-
100	WD1 5229.50	3.000	1.00	60.56	22.428	0.000034	0.00057	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.118	0.000	0.817	0.432	0.300	0.882	0.00007	0.00051
(DRAIN)																								
-	WD1 5226.70	-	1.00	60.56	22.516	0.000029	0.00050	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.314**	**0.000**	-	-	-	-	-	-
101	WD1 5226.50	3.000	1.00	60.56	22.522	0.000034	0.00058	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.118	0.000	0.817	0.433	0.300	0.881	0.00007	0.00051
(DRAIN)																								
(DRAIN)																								
-	WD1 5218.20	-	1.00	60.56	22.781	0.000030	0.00075	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.366**	**0.002**	-	-	-	-	-	-
102	WD1 5218.00	8.500	1.00	60.56	22.788	0.000034	0.00083	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.135	0.000	0.817	0.503	0.300	0.804	0.00016	0.00066
(DRAIN)																								
-	WD1 5215.20	-	1.00	60.56	22.875	0.000030	0.00051	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.317**	**0.001**	-	-	-	-	-	-
103	WD1 5215.00	3.000	1.00	60.56	22.881	0.000034	0.00059	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.119	0.000	0.817	0.437	0.300	0.876	0.00007	0.00052
(DRAIN)																								
-	WD1 5212.20	-	1.00	60.56	22.969	0.000030	0.00051	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.317**	**0.001**	-	-	-	-	-	-
104	WD1 5212.00	3.000	1.00	60.56	22.975	0.000034	0.00059	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.119	0.000	0.817	0.436	0.300	0.877	0.00007	0.00052
(DRAIN)																								
-	WD1 5209.20	-	1.00	60.56	23.063	0.000030	0.00051	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.317**	**0.001**	-	-	-	-	-	-
105	WD1 5209.00	3.000	1.00	60.56	23.069	0.000035	0.00059	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.119	0.000	0.817	0.437	0.300	0.876	0.00007	0.00052
(DRAIN)																								
-	WD1 5206.20	-	1.00	60.56	23.156	0.000030	0.00051	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.318**	**0.001**	-	-	-	-	-	-
106	WD1 5206.00	3.000	1.00	60.56	23.163	0.000035	0.00059	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.119	0.000	0.817	0.438	0.300	0.875	0.00007	0.00052
(DRAIN)																								
-	WD1 5203.20	-	1.00	60.56	23.250	0.000030	0.00052	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.318**	**0.001**	-	-	-	-	-	-
107	WD1 5203.00	3.000	1.00	60.56	23.256	0.000035	0.00060	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.120	0.000	0.817	0.439	0.300	0.874	0.00007	0.00052
(DRAIN)																								
-	WD1 5200.20	-	1.00	60.56	23.344	0.000030	0.00052	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.319**	**0.001**	-	-	-	-	-	-
108	WD1 5200.00	3.000	1.00	60.56	23.350	0.000035	0.00060	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.120	0.000	0.817	0.440	0.300	0.873	0.00008	0.00052
(DRAIN)																								
-	WD1 5197.20	-	1.00	60.56	23.438	0.000030	0.00052	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.319**	**0.001**	-	-	-	-	-	-
109	WD1 5197.00	3.000	1.00	60.56	23.444	0.000035	0.00060	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.120	0.000	0.817	0.440	0.300	0.872	0.00008	0.00052
(DRAIN)																								
-	WD1 5193.95	-	1.00	60.56	23.539	0.000036	0.00062	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.342**	**0.001**	-	-	-	-	-	-
110	WD1 5193.75	3.250	1.00	60.56	23.545	0.000041	0.00070	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.127	0.000	0.817	0.470	0.300	0.839	0.00011	0.00059
(DRAIN)																								
-	WD1 5190.70	-	1.00	60.56	23.641	0.000031	0.00053	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.322**	**0.001**	-	-	-	-	-	-
111	WD1 5190.50	3.250	1.00	60.56	23.647	0.000035	0.00061	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.121	0.000	0.817	0.444	0.300	0.868	0.00008	0.00053
-	WD1 5187.70	-	1.00	60.56	23.734	0.000066	0.00121	0.375	0.013	-0.02978	0.01711	-	-	-	-	-	**0.440**	**0.004**	-	-	-	-	-	-
112	WD1 5187.50	3.000	1.00	60.56	23.741	0.000071	0.00129	0.375	0.013	-0.02973	0.01711	0.038	0.300	0.1564	0.00691	YES	0.160	0.000	0.817	0.608	0.300	0.706	0.00038	0.00091

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	Depth 0.3m from Curb m	Bypass Flow m^3/s	Intercept. Flow m^3/s
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
88	WD1 5174.000	1.00	60.56	24.163	0.000036	0.00136	0.375	0.013	-0.026068	0.01711	18.0	0.300	**0.499**	**0.005**	0.00012	0.00124
(Scupper)																
89	WD1 5171.000	1.00	60.56	24.256	0.000036	0.00075	0.375	0.013	-0.025254	0.01711	3.0	0.300	**0.407**	**0.003**	0.00002	0.00073
(Scupper)																
90	WD1 5168.000	1.00	60.56	24.350	0.000037	0.00072	0.375	0.013	-0.024441	0.01711	3.0	0.300	**0.409**	**0.003**	0.00002	0.00069
(Scupper)																
91	WD1 5165.000	1.00	60.56	24.444	0.000037	0.00072	0.375	0.013	-0.023627	0.01711	3.0	0.300	**0.419**	**0.003**	0.00002	0.00070
(Scupper)																
92	WD1 5162.000	1.00	60.56	24.538	0.000037	0.00073	0.375	0.013	-0.022814	0.01711	3.0	0.300	**0.429**	**0.003**	0.00003	0.00070
(Scupper)																
93	WD1 5159.000	1.00	60.56	17.100	0.000026	0.00054	0.375	0.013	-0.022000	0.01711	3.0	0.300	**0.393**	**0.002**	0.00001	0.00053
(Scupper)																
(Scupper)																
94	WD1 5153.000	1.00	60.56	17.100	0.000026	0.00065	0.375	0.013	-0.020373	0.01711	6.0	0.300	**0.442**	**0.003**	0.00003	0.00062
(Scupper)																
95	WD1 5150.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	-0.019559	0.01711	3.0	0.300	**0.405**	**0.002**	0.00001	0.00047
(Scupper)																
96	WD1 5147.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	-0.018746	0.01711	3.0	0.300	**0.414**	**0.002**	0.00002	0.00046
(Scupper)																
97	WD1 5144.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	-0.017932	0.01711	3.0	0.300	**0.426**	**0.002**	0.00002	0.00046
(Scupper)																
98	WD1 5138.000	1.00	60.56	17.100	0.000026	0.00145	0.375	0.015	-0.016305	0.01711	6.0	0.300	**0.723**	**0.007**	0.00035	0.00110
(Scupper)																
99	WD1 5135.000	1.00	60.56	17.100	0.000026	0.00100	0.375	0.015	-0.015492	0.01711	3.0	0.300	**0.649**	**0.005**	0.00019	0.00080
(Scupper)																
100	WD1 5132.000	1.00	60.56	17.100	0.000026	0.00087	0.375	0.015	-0.014678	0.01711	3.0	0.300	**0.639**	**0.005**	0.00016	0.00071
(Scupper)																
101	WD1 5129.000	1.00	60.56	17.100	0.000026	0.00086	0.375	0.015	-0.013864	0.01711	3.0	0.300	**0.657**	**0.005**	0.00017	0.00069
(Scupper)																
102	WD1 5126.000	1.00	60.56	17.100	0.000026	0.00087	0.375	0.015	-0.013051	0.01711	3.0	0.300	**0.686**	**0.005**	0.00019	0.00068
(Scupper)																
103	WD1 5123.000	1.00	60.56	17.100	0.000026	0.00089	0.375	0.015	-0.012237	0.01711	3.0	0.300	**0.721**	**0.005**	0.00021	0.00068
(Scupper)																
104	WD1 5120.000	1.00	60.56	17.100	0.000026	0.00091	0.375	0.015	-0.011424	0.01711	3.0	0.300	**0.761**	**0.005**	0.00024	0.00067
(Scupper)																
105	WD1 5114.500	1.00	60.56	17.100	0.000047	0.00163	0.375	0.015	-0.009932	0.01711	5.5	0.300	**1.030**	**0.007**	0.00065	0.00098
(Scupper)																
106	WD1 5111.500	1.00	60.56	17.100	0.000026	0.00132	0.375	0.015	-0.009119	0.01711	3.0	0.300	**1.005**	**0.006**	0.00051	0.00081
(Scupper)																
107	WD1 5108.500	1.00	60.56	17.100	0.000026	0.00121	0.375	0.015	-0.008305	0.01711	3.0	0.300	**1.030**	**0.006**	0.00048	0.00072
(Scupper)																
108	WD1 5105.500	1.00	60.56	17.100	0.000026	0.00119	0.375	0.015	-0.007492	0.01711	3.0	0.300	**1.092**	**0.006**	0.00050	0.00068
(Scupper)																
(Scupper)																
(Scupper)																
*	WD1 5091.000	1.00	60.56	17.100	0.000120	0.00411	0.375	0.015	-0.006000	0.02003	14.5	-	**1.941**	**0.000**	-	-
**	WD1 5018.000	1.00	60.56	17.100	0.001368	0.02527	0.375	0.015	-0.006000	0.01767	87.5	-	**3.927**	**0.000**	-	-

*Note: Check of flow width at location where shoulder begins transitioning from 0.300m to 3.900m. At this location, the shoulder is 0.300m.
**Note: Check of flow width at end of Type K Barrier. At this location, the shoulder is 3.900m wide

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	WD1 5184.70	-	1.00	60.56	23.828	0.000067	0.00151	0.375	0.013	-0.02897	0.01711	-	-	-	-	-	**0.487**	**0.005**	-	-	-	-	-	-
113	WD1 5184.50	3.000	1.00	60.56	23.834	0.000072	0.00159	0.375	0.013	-0.02892	0.01711	0.038	0.300	0.1556	0.00685	YES	0.174	0.000	0.817	0.666	0.300	0.660	0.00054	0.00105
-	WD1 5181.70	-	1.00	60.56	23.922	0.000067	0.00168	0.375	0.013	-0.02816	0.01711	-	-	-	-	-	**0.515**	**0.006**	-	-	-	-	-	-
114	WD1 5181.50	3.000	1.00	60.56	23.928	0.000072	0.00176	0.375	0.013	-0.02810	0.01711	0.038	0.300	0.1548	0.00679	YES	0.181	0.000	0.817	0.697	0.300	0.637	0.00064	0.00112
-	WD1 5178.70	-	1.00	60.56	24.016	0.000067	0.00178	0.375	0.013	-0.02734	0.01711	-	-	-	-	-	**0.536**	**0.006**	-	-	-	-	-	-
115	WD1 5178.50	3.000	1.00	60.56	24.022	0.000072	0.00186	0.375	0.013	-0.02729	0.01711	0.038	0.300	0.1540	0.00673	YES	0.185	0.000	0.817	0.715	0.300	0.624	0.00070	0.00116
-	WD1 5175.70	-	1.00	60.56	24.109	0.000068	0.00184	0.375	0.013	-0.02653	0.01711	-	-	-	-	-	**0.554**	**0.007**	-	-	-	-	-	-
116	WD1 5175.50	3.000	1.00	60.56	24.116	0.000072	0.00193	0.375	0.013	-0.02647	0.01711	0.038	0.300	0.1531	0.00667	YES	0.188	0.000	0.817	0.728	0.300	0.615	0.00074	0.00119
(DRAIN)																								
-	WD1 5172.70	-	1.00	60.56	24.203	0.000031	0.00065	0.375	0.013	-0.02572	0.01711	-	-	-	-	-	**0.382**	**0.002**	-	-	-	-	-	-
117	WD1 5172.50	3.000	1.00	60.56	24.209	0.000036	0.00073	0.375	0.013	-0.02566	0.01711	0.038	0.300	0.1523	0.00661	YES	0.131	0.000	0.817	0.487	0.300	0.822	0.00013	0.00060
(DRAIN)																								
-	WD1 5169.70	-	1.00	60.56	24.297	0.000032	0.00056	0.375	0.013	-0.02490	0.01711	-	-	-	-	-	**0.368**	**0.002**	-	-	-	-	-	-
118	WD1 5169.50	3.000	1.00	60.56	24.303	0.000036	0.00064	0.375	0.013	-0.02485	0.01711	0.038	0.300	0.1515	0.00655	YES	0.125	0.000	0.817	0.461	0.300	0.849	0.00010	0.00054
(DRAIN)																								
-	WD1 5166.70	-	1.00	60.56	24.391	0.000032	0.00056	0.375	0.013	-0.02409	0.01711	-	-	-	-	-	**0.376**	**0.002**	-	-	-	-	-	-
119	WD1 5166.50	3.000	1.00	60.56	24.397	0.000037	0.00064	0.375	0.013	-0.02403	0.01711	0.038	0.300	0.1507	0.00649	YES	0.126	0.000	0.817	0.463	0.300	0.847	0.00010	0.00054
(DRAIN)																								
-	WD1 5163.70	-	1.00	60.56	24.484	0.000032	0.00056	0.375	0.013	-0.02327	0.01711	-	-	-	-	-	**0.386**	**0.002**	-	-	-	-	-	-
120	WD1 5163.50	3.000	1.00	60.56	24.491	0.000037	0.00065	0.375	0.013	-0.02322	0.01711	0.038	0.300	0.1499	0.00644	YES	0.127	0.000	0.817	0.467	0.300	0.843	0.00010	0.00055
(DRAIN)																								
-	WD1 5160.70	-	1.00	60.56	24.578	0.000032	0.00057	0.375	0.013	-0.02246	0.01711	-	-	-	-	-	**0.396**	**0.002**	-	-	-	-	-	-
121	WD1 5160.50	3.000	1.00	60.56	24.584	0.000037	0.00065	0.375	0.013	-0.02241	0.01711	0.038	0.300	0.1491	0.00638	YES	0.128	0.000	0.817	0.471	0.300	0.839	0.00011	0.00055
(DRAIN)																								
-	WD1 5157.70	-	1.00	60.56	17.100	0.000022	0.00039	0.375	0.013	-0.02165	0.01711	-	-	-	-	-	**0.351**	**0.001**	-	-	-	-	-	-
122	WD1 5157.50	3.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	-0.02159	0.01711	0.038	0.300	0.1483	0.00632	YES	0.111	0.000	0.817	0.402	0.300	0.915	0.00004	0.00041
-	WD1 5154.70	-	1.00	60.56	17.100	0.000048	0.00085	0.375	0.013	-0.02083	0.01711	-	-	-	-	-	**0.482**	**0.004**	-	-	-	-	-	-
123	WD1 5154.50	3.000	1.00	60.56	17.100	0.000051	0.00091	0.375	0.013	-0.02078	0.01711	0.038	0.300	0.1474	0.00626	YES	0.145	0.000	0.817	0.543	0.300	0.765	0.00021	0.00069
(DRAIN)																								
-	WD1 5151.70	-	1.00	60.56	17.100	0.000022	0.00041	0.375	0.013	-0.02002	0.01711	-	-	-	-	-	**0.375**	**0.002**	-	-	-	-	-	-
124	WD1 5151.50	3.000	1.00	60.56	17.100	0.000026	0.00047	0.375	0.013	-0.01997	0.01711	0.038	0.300	0.1466	0.00621	YES	0.114	0.000	0.817	0.412	0.300	0.904	0.00004	0.00042
(DRAIN)																								
-	WD1 5148.70	-	1.00	60.56	17.100	0.000022	0.00039	0.375	0.013	-0.01921	0.01711	-	-	-	-	-	**0.379**	**0.002**	-	-	-	-	-	-
125	WD1 5148.50	3.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	-0.01915	0.01711	0.038	0.300	0.1458	0.00615	YES	0.112	0.000	0.817	0.406	0.300	0.910	0.00004	0.00041
(DRAIN)																								
-	WD1 5145.70	-	1.00	60.56	17.100	0.000022	0.00039	0.375	0.013	-0.01839	0.01711	-	-	-	-	-	**0.390**	**0.002**	-	-	-	-	-	-
126	WD1 5145.50	3.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	-0.01834	0.01711	0.038	0.300	0.1450	0.00609	YES	0.113	0.000	0.817	0.409	0.300	0.908	0.00004	0.00041
(DRAIN)																								
-	WD1 5139.70	-	1.00	60.56	17.100	0.000074	0.00127	0.375	0.015	-0.01677	0.01711	-	-	-	-	-	**0.676**	**0.006**	-	-	-	-	-	-
127	WD1 5139.50	6.000	1.00	60.56	17.100	0.000077	0.00132	0.375	0.015	-0.01671	0.01711	-	-	-	-	-	**0.689**	**0.007**	0.817	2.157	0.300	0.236	0.00101	0.00031
(DRAIN)																								
-	WD1 5136.70	-	1.00	60.56	17.100	0.000022	0.00072	0.375	0.015	-0.01595	0.01711	-	-	-	-	-	**0.566**	**0.004**	-	-	-	-	-	-
128	WD1 5136.50	3.000	1.00	60.56	17.100	0.000026	0.00078	0.375	0.015	-0.01590	0.01711	-	-	-	-	-	**0.583**	**0.005**	0.817	1.781	0.300	0.282	0.00056	0.00022
(DRAIN)																								
-	WD1 5133.70	-	1.00	60.56	17.100	0.000022	0.00057	0.375	0.015	-0.01514	0.01711	-	-	-	-	-	**0.534**	**0.004**	-	-	-	-	-	-
129	WD1 5133.50	3.000	1.00	60.56	17.100	0.000026	0.00063	0.375	0.015	-0.01508	0.01711	-	-	-	-	-	**0.555**	**0.004**	0.817	1.674	0.300	0.299	0.00044	0.00019
(DRAIN)																								
-	WD1 5130.70	-	1.00	60.56	17.100	0.000022	0.00054	0.375	0.015	-0.01433	0.01711	-	-	-	-	-	**0.542**	**0.003**	-	-	-	-	-	-
130	WD1 5130.50	3.000	1.00	60.56	17.100	0.000026	0.00060	0.375	0.015	-0.01427	0.01711	-	-	-	-	-	**0.564**	**0.004**	0.817	1.697	0.300	0.295	0.00042	0.00018
(DRAIN)																								
-	WD1 5127.70	-	1.00	60.56	17.100	0.000022	0.00055	0.375	0.015	-0.01351	0.01711	-	-	-	-	-	**0.564**	**0.004**	-	-	-	-	-	-
131	WD1 5127.50	3.000	1.00	60.56	17.100	0.000026	0.00060	0.375	0.015	-0.01346	0.01711	-	-	-	-	-	**0.588**	**0.004**	0.817	1.766	0.300	0.285	0.00043	0.00017
(DRAIN)																								
-	WD1 5124.70	-	1.00	60.56	17.100	0.000022	0.00056	0.375	0.015	-0.01270	0.01711	-	-	-	-	-	**0.594**	**0.004**	-	-	-	-	-	-
132	WD1 5124.50	3.000	1.00	60.56	17.100	0.000026	0.00062	0.375	0.015	-0.01264	0.01711	-	-	-	-	-	**0.618**	**0.004**	0.817	1.857	0.300	0.272	0.00045	0.00017
(DRAIN)																								
-	WD1 5121.70	-	1.00	60.56	17.100	0.000022	0.00059	0.375	0.015	-0.01188	0.01711	-	-	-	-	-	**0.629**	**0.004**	-	-	-	-	-	-
133	WD1 5121.50	3.000	1.00	60.56	17.100	0.000026	0.00065	0.375	0.015	-0.01183	0.01711	-	-	-	-	-	**0.654**	**0.004**	0.817	1.964	0.300	0.258	0.00048	0.00017
(DRAIN)																								
-	WD1 5117.45	-	1.00	60.56	17.100	0.000044	0.00098	0.375	0.015	-0.01073	0.01711	-	-	-	-	-	**0.812**	**0.005**	-	-	-	-	-	-
134	WD1 5117.25	4.250	1.00	60.56	17.100	0.000047	0.00104	0.375	0.015	-0.01068	0.01711	-	-	-	-	-	**0.832**	**0.006**	0.817	2.548	0.300	0.202	0.00083	0.00021
(DRAIN)																								
-	WD1 5113.20	-	1.00	60.56	17.100	0.000022	0.00103	0.375	0.015	-0.00958	0.01711	-	-	-	-	-	**0.887**	**0.006**	-	-	-	-	-	-
135	WD1 5113.00	4.250	1.00	60.56	17.100	0.000026	0.00108	0.375	0.015	-0.00953	0.01711	-	-	-	-	-	**0.909**	**0.006**	0.817	2.780	0.300	0.186	0.00088	0.00020
(DRAIN)																								
-	WD1 5110.20	-	1.00	60.56	17.100	0.000022	0.00089	0.375	0.015	-0.00877	0.01711	-	-	-	-	-	**0.888**	**0.005**	-	-	-	-	-	-
136	WD1 5110.00	3.000	1.00	60.56	17.100	0.000026	0.00095	0.375	0.015	-0.00871	0.01711	-	-	-	-	-	**0.913**	**0.005**	0.817	2.770	0.300	0.186	0.00077	0.00018
(DRAIN)																								
-	WD1 5107.20	-	1.00	60.56	17.100	0.000022	0.00086	0.375	0.015	-0.00795	0.01711	-	-	-	-	-	**0.932**	**0.005**	-	-	-	-	-	-
137	WD1 5107.00	3.000	1.00	60.56	17.100	0.000026	0.00092	0.375	0.015	-0.00790	0.01711	-	-	-	-	-	**0.959**	**0.005**	0.817	2.898	0.300	0.179	0.00075	0.00016
(DRAIN)																								
-	WD1 5104.20	-	1.00	60.56	17.100	0.000022	0.00088	0.375	0.015	-0.00714	0.01711	-	-	-	-	-	**1.007**	**0.005**	-	-	-	-	-	-
138	WD1 5104.00	3.000	1.00	60.56	17.100	0.000026	0.00094	0.375	0.015	-0.00708	0.01711	-	-	-	-	-	**1.036**	**0.005**	0.817	3.126	0.300	0.166	0.00078	0.00016
-	WD1 5101.20	-	1.00	60.56	17.100	0.000048	0.00160	0.375	0.015	-0.00633	0.01711	-	-	-	-	-	**1.357**	**0.007**	-	-	-	-	-	-
139	WD1 5101.00	3.000	1.00	60.56	17.100	0.000051	0.00165	0.375	0.015	-0.00627	0.01711	-	-	-	-	-	**1.382**	**0.007**	0.817	4.264	0.300	0.123	0.00145	0.00020
-	WD1 5098.20	-	1.00	60.56	17.100	0.000048	0.00226	0.375	0.015	-0.00600	0.01711	-	-	-	-	-	**1.598**	**0.008**	-	-	-	-	-	-
140	WD1 5098.00	3.000	1.00	60.56	17.100	0.000051	0.00232	0.375	0.015	-0.00600	0.01711	-	-	-	-	-	**1.613**	**0.008**	0.817	5.048	0.300	0.104	0.00208	0.00024

WD1 Line Drainage

Drains and Depressed Scuppers - 10 Year Intensity

Use Drain Type D-3, modified to 300 mm width. Use minimum drain spacing of 3.0 m.

Place 300mm long scuppers between drains at minimum spacing of 3.0 m on center, and at least 1.5 m from a drain.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "WD1" 52+98. The amount of flow crossing the deck is 0.00126 m^3/s. BDA p.17-3 advises allowing a maximum of 0.003 m^3/s to flow across deck. Therefore, this configuration is more than adequate.

Drains:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	Depth 0.3m from Curb m	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	WD1 5551.662	1.00	50.36	17.100	0.000000	0.00000	0.375	0.013	0.008500	0.02270	n/a	0.300	**0.000**	**0.000**	0.00000	n/a
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
1	WD1 5519.500	1.00	50.36	17.100	0.000026	0.00069	0.375	0.013	0.023651	0.02270	32.2	0.300	**0.390**	**0.002**	0.00001	0.00067
(Scupper)																
2	WD1 5516.000	1.00	50.36	17.100	0.000034	0.00051	0.375	0.013	0.025300	0.02270	3.5	0.300	**0.335**	**0.001**	0.00000	0.00051
(Scupper)																
3	WD1 5513.000	1.00	50.36	17.100	0.000026	0.00039	0.375	0.013	0.026713	0.02270	3.0	0.300	**0.292**	**0.000**	0.00000	0.00039
(Scupper)																
4	WD1 5508.000	1.00	50.36	17.100	0.000043	0.00071	0.375	0.013	0.029069	0.02270	5.0	0.300	**0.347**	**0.001**	0.00000	0.00071
(Scupper)																
5	WD1 5505.000	1.00	50.36	17.100	0.000026	0.00039	0.375	0.013	0.030482	0.02270	3.0	0.300	**0.268**	**0.000**	0.00000	0.00039
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
6	WD1 5487.000	1.00	50.36	17.100	0.000026	0.00063	0.375	0.013	0.035000	0.02270	18.0	0.300	**0.296**	**0.000**	0.00000	0.00063
(Scupper)																
7	WD1 5484.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.035000	0.02270	3.0	0.300	**0.245**	**0.000**	0.00000	0.00038
(Scupper)																
8	WD1 5481.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.035000	0.02270	3.0	0.300	**0.245**	**0.000**	0.00000	0.00038
(Scupper)																
9	WD1 5478.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.035000	0.02213	3.0	0.300	**0.246**	**0.000**	0.00000	0.00038
(Scupper)																
10	WD1 5475.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.035000	0.02130	3.0	0.300	**0.248**	**0.000**	0.00000	0.00038
(Scupper)																
11	WD1 5472.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.035000	0.02047	3.0	0.300	**0.249**	**0.000**	0.00000	0.00038
(Scupper)																
12	WD1 5469.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.034174	0.01964	3.0	0.300	**0.255**	**0.000**	0.00000	0.00038
(Scupper)																
13	WD1 5462.500	1.00	50.36	17.100	0.000026	0.00070	0.375	0.013	0.032125	0.01784	6.5	0.300	**0.340**	**0.001**	0.00000	0.00070
(Scupper)																

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	WD1 5545.20	-	1.00	50.36	17.100	0.000111	0.00156	0.375	0.013	0.01154	0.02270	-	-	-	-	-	**0.830**	**0.006**	-	-	-	-	-	-
1	WD1 5545.00	-	1.00	50.36	17.100	0.000114	0.00161	0.375	0.013	0.01164	0.02270	0.038	0.300	0.1383	0.00648	YES	0.178	0.000	0.817	0.781	0.300	0.582	0.00067	0.00094
-	WD1 5542.20	-	1.00	50.36	17.100	0.000048	0.00135	0.375	0.013	0.01296	0.02270	-	-	-	-	-	**0.731**	**0.006**	-	-	-	-	-	-
2	WD1 5542.00	3.000	1.00	50.36	17.100	0.000051	0.00139	0.375	0.013	0.01305	0.02270	0.038	0.300	0.1397	0.00659	YES	0.168	0.000	0.817	0.731	0.300	0.613	0.00054	0.00086
-	WD1 5539.20	-	1.00	50.36	17.100	0.000048	0.00121	0.375	0.013	0.01437	0.02270	-	-	-	-	-	**0.659**	**0.005**	-	-	-	-	-	-
3	WD1 5539.00	3.000	1.00	50.36	17.100	0.000051	0.00126	0.375	0.013	0.01446	0.02270	0.038	0.300	0.1411	0.00671	YES	0.160	0.000	0.817	0.697	0.300	0.637	0.00046	0.00080
-	WD1 5536.20	-	1.00	50.36	17.100	0.000048	0.00113	0.375	0.013	0.01578	0.02270	-	-	-	-	-	**0.606**	**0.005**	-	-	-	-	-	-
4	WD1 5536.00	3.000	1.00	50.36	17.100	0.000051	0.00118	0.375	0.013	0.01588	0.02270	0.038	0.300	0.1425	0.00682	YES	0.156	0.000	0.817	0.674	0.300	0.653	0.00041	0.00077
-	WD1 5533.20	-	1.00	50.36	17.100	0.000048	0.00108	0.375	0.013	0.01720	0.02270	-	-	-	-	-	**0.565**	**0.005**	-	-	-	-	-	-
5	WD1 5533.00	3.000	1.00	50.36	17.100	0.000051	0.00113	0.375	0.013	0.01729	0.02270	0.038	0.300	0.1440	0.00693	YES	0.152	0.000	0.817	0.658	0.300	0.665	0.00038	0.00075
-	WD1 5530.20	-	1.00	50.36	17.100	0.000048	0.00105	0.375	0.013	0.01861	0.02270	-	-	-	-	-	**0.532**	**0.004**	-	-	-	-	-	-
6	WD1 5530.00	3.000	1.00	50.36	17.100	0.000051	0.00110	0.375	0.013	0.01870	0.02270	0.038	0.300	0.1454	0.00705	YES	0.150	0.000	0.817	0.647	0.300	0.674	0.00036	0.00074
-	WD1 5527.20	-	1.00	50.36	17.100	0.000048	0.00103	0.375	0.013	0.02002	0.02270	-	-	-	-	-	**0.504**	**0.004**	-	-	-	-	-	-
7	WD1 5527.00	3.000	1.00	50.36	17.100	0.000051	0.00108	0.375	0.013	0.02012	0.02270	0.038	0.300	0.1468	0.00716	YES	0.148	0.000	0.817	0.638	0.300	0.681	0.00035	0.00074
-	WD1 5524.20	-	1.00	50.36	17.100	0.000048	0.00102	0.375	0.013	0.02144	0.02270	-	-	-	-	-	**0.481**	**0.004**	-	-	-	-	-	-
8	WD1 5524.00	3.000	1.00	50.36	17.100	0.000051	0.00107	0.375	0.013	0.02153	0.02270	0.038	0.300	0.1482	0.00727	YES	0.146	0.000	0.817	0.631	0.300	0.687	0.00033	0.00073
-	WD1 5521.20	-	1.00	50.36	17.100	0.000048	0.00101	0.375	0.013	0.02285	0.02270	-	-	-	-	-	**0.460**	**0.004**	-	-	-	-	-	-
9	WD1 5521.00	3.000	1.00	50.36	17.100	0.000051	0.00106	0.375	0.013	0.02294	0.02270	0.038	0.300	0.1496	0.00739	YES	0.145	0.000	0.817	0.625	0.300	0.692	0.00033	0.00073
(DRAIN)																								
-	WD1 5518.20	-	1.00	50.36	17.100	0.000022	0.00033	0.375	0.013	0.02426	0.02270	-	-	-	-	-	**0.291**	**0.000**	-	-	-	-	-	-
10	WD1 5518.00	3.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.02436	0.02270	0.038	0.300	0.1510	0.00751	YES	0.098	0.000	0.817	0.402	0.300	0.915	0.00003	0.00034
(DRAIN)																								
-	WD1 5514.70	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.02591	0.02270	-	-	-	-	-	**0.275**	**0.000**	-	-	-	-	-	-
11	WD1 5514.50	3.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.02601	0.02270	0.038	0.300	0.1527	0.00764	YES	0.096	0.000	0.817	0.394	0.300	0.924	0.00003	0.00034
(DRAIN)																								
-	WD1 5510.70	-	1.00	50.36	17.100	0.000039	0.00055	0.375	0.013	0.02780	0.02270	-	-	-	-	-	**0.325**	**0.001**	-	-	-	-	-	-
12	WD1 5510.50	4.000	1.00	50.36	17.100	0.000043	0.00060	0.375	0.013	0.02789	0.02270	0.038	0.300	0.1546	0.00780	YES	0.115	0.000	0.817	0.484	0.300	0.825	0.00011	0.00050
(DRAIN)																								
-	WD1 5506.70	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	0.02968	0.02270	-	-	-	-	-	**0.253**	**0.000**	-	-	-	-	-	-
13	WD1 5506.50	4.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02978	0.02270	0.038	0.300	0.1564	0.00796	YES	0.094	0.000	0.817	0.389	0.300	0.929	0.00003	0.00034
(DRAIN)																								
-	WD1 5500.70	-	1.00	50.36	17.100	0.000074	0.00104	0.375	0.013	0.03251	0.02270	-	-	-	-	-	**0.373**	**0.002**	-	-	-	-	-	-
14	WD1 5500.50	6.000	1.00	50.36	17.100	0.000077	0.00109	0.375	0.013	0.03260	0.02270	0.038	0.300	0.1593	0.00820	YES	0.141	0.000	0.817	0.609	0.300	0.706	0.00032	0.00077
-	WD1 5497.70	-	1.00	50.36	17.100	0.000048	0.00099	0.375	0.013	0.03392	0.02270	-	-	-	-	-	**0.358**	**0.002**	-	-	-	-	-	-
15	WD1 5497.50	3.000	1.00	50.36	17.100	0.000051	0.00104	0.375	0.013	0.03402	0.02270	0.038	0.300	0.1607	0.00832	YES	0.138	0.000	0.817	0.595	0.300	0.717	0.00030	0.00075
-	WD1 5494.70	-	1.00	50.36	17.100	0.000048	0.00097	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.347**	**0.002**	-	-	-	-	-	-
16	WD1 5494.50	3.000	1.00	50.36	17.100	0.000051	0.00102	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.136	0.000	0.817	0.587	0.300	0.724	0.00028	0.00074
-	WD1 5491.70	-	1.00	50.36	17.100	0.000048	0.00096	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.345**	**0.002**	-	-	-	-	-	-
17	WD1 5491.50	3.000	1.00	50.36	17.100	0.000051	0.00100	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.135	0.000	0.817	0.584	0.300	0.727	0.00027	0.00073
-	WD1 5488.70	-	1.00	50.36	17.100	0.000048	0.00095	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.345**	**0.002**	-	-	-	-	-	-
18	WD1 5488.50	3.000	1.00	50.36	17.100	0.000051	0.00100	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.135	0.000	0.817	0.582	0.300	0.728	0.00027	0.00073
(DRAIN)																								
-	WD1 5485.70	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.227**	**0.000**	-	-	-	-	-	-
19	WD1 5485.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.092	0.000	0.817	0.380	0.300	0.939	0.00002	0.00034
(DRAIN)																								
-	WD1 5482.70	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.227**	**0.000**	-	-	-	-	-	-
20	WD1 5482.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02270	0.038	0.300	0.1617	0.00841	YES	0.092	0.000	0.817	0.380	0.300	0.939	0.00002	0.00034
(DRAIN)																								
-	WD1 5479.70	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.03500	0.02260	-	-	-	-	-	**0.228**	**0.000**	-	-	-	-	-	-
21	WD1 5479.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02255	0.038	0.300	0.1617	0.00838	YES	0.092	0.000	0.817	0.379	0.300	0.940	0.00002	0.00034
(DRAIN)																								
-	WD1 5476.70	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.03500	0.02177	-	-	-	-	-	**0.229**	**0.000**	-	-	-	-	-	-
22	WD1 5476.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02172	0.038	0.300	0.1617	0.00823	YES	0.093	0.000	0.817	0.375	0.300	0.945	0.00002	0.00034
(DRAIN)																								
-	WD1 5473.70	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.03500	0.02094	-	-	-	-	-	**0.231**	**0.000**	-	-	-	-	-	-
23	WD1 5473.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02089	0.038	0.300	0.1617	0.00807	YES	0.094	0.000	0.817	0.371	0.300	0.949	0.00002	0.00034
(DRAIN)																								
-	WD1 5470.50	-	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03465	0.02006	-	-	-	-	-	**0.247**	**0.000**	-	-	-	-	-	-
24	WD1 5470.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03465	0.02006	0.038	0.300	0.1613	0.00788	YES	0.094	0.000	0.817	0.367	0.300	0.953	0.00002	0.00034
(DRAIN)																								
-	WD1 5464.20	-	1.00	50.36	17.100	0.000082	0.00116	0.375	0.013	0.03266	0.01831	-	-	-	-	-	**0.403**	**0.003**	-	-	-	-	-	-
25	WD1 5464.00	6.500	1.00	50.36	17.100	0.000086	0.00121	0.375	0.013	0.03260	0.01826	0.038	0.300	0.1593	0.00736	YES	0.152	0.000	0.817	0.596	0.300	0.716	0.00034	0.00086
(DRAIN)																								
-	WD1 5461.20	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	0.03172	0.01748	-	-	-	-	-	**0.255**	**0.000**	-	-	-	-	-	-
26	WD1 5461.00	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03165	0.01743	0.038	0.300	0.1583	0.00712	YES	0.098	0.000	0.817	0.357	0.300	0.964	0.00001	0.00035

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	Depth 0.3m from Curb m	Bypass Flow m^3/s	Intercept. Flow m^3/s
14	WD1 5459.500	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.031179	0.01701	3.0	0.300	**0.276**	**0.000**	0.00000	0.00037
(Scupper)																
15	WD1 5456.500	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.030233	0.01618	3.0	0.300	**0.283**	**0.000**	0.00000	0.00037
(Scupper)																
16	WD1 5453.000	1.00	50.36	17.100	0.000030	0.00044	0.375	0.013	0.029130	0.01521	3.5	0.300	**0.313**	**0.000**	0.00000	0.00044
(Scupper)																
17	WD1 5449.500	1.00	50.36	17.100	0.000030	0.00044	0.375	0.013	0.028026	0.01424	3.5	0.300	**0.324**	**0.001**	0.00000	0.00044
(Scupper)																
18	WD1 5446.500	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.027081	0.01341	3.0	0.300	**0.313**	**0.000**	0.00000	0.00037
(Scupper)																
19	WD1 5443.500	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.026135	0.01258	3.0	0.300	**0.323**	**0.001**	0.00000	0.00037
(Scupper)																
20	WD1 5440.500	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.025189	0.01175	3.0	0.300	**0.335**	**0.001**	0.00000	0.00036
(Scupper)																
21	WD1 5437.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.024243	0.01092	3.0	0.300	**0.347**	**0.001**	0.00000	0.00036
(Scupper)																
22	WD1 5434.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.023298	0.01009	3.0	0.300	**0.361**	**0.001**	0.00000	0.00036
(Scupper)																
23	WD1 5431.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.022352	0.00926	3.0	0.300	**0.376**	**0.002**	0.00001	0.00036
(Scupper)																
24	WD1 5428.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.021406	0.00843	3.0	0.300	**0.393**	**0.002**	0.00001	0.00035
(Scupper)																
25	WD1 5425.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.020460	0.00760	3.0	0.300	**0.412**	**0.002**	0.00001	0.00035
(Scupper)																
26	WD1 5422.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.020000	0.00677	3.0	0.300	**0.427**	**0.003**	0.00001	0.00035
(Scupper)																
27	WD1 5419.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.020000	0.00617	3.0	0.300	**0.434**	**0.003**	0.00002	0.00035
(Scupper)																
28	WD1 5416.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.020000	0.00673	3.0	0.300	**0.428**	**0.003**	0.00001	0.00035
(Scupper)																
29	WD1 5413.000	1.00	50.36	17.100	0.000030	0.00042	0.375	0.013	0.020000	0.00737	3.5	0.300	**0.446**	**0.003**	0.00002	0.00040
(Scupper)																
30	WD1 5409.500	1.00	50.36	17.100	0.000030	0.00042	0.375	0.013	0.020000	0.00801	3.5	0.300	**0.439**	**0.003**	0.00002	0.00040
(Scupper)																
31	WD1 5406.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.020000	0.00856	3.0	0.300	**0.409**	**0.002**	0.00001	0.00035
(Scupper)																
32	WD1 5403.500	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.020000	0.00911	3.0	0.300	**0.404**	**0.002**	0.00001	0.00035
(Scupper)																
33	WD1 5400.000	1.00	50.36	17.100	0.000030	0.00043	0.375	0.013	0.020000	0.00976	3.5	0.300	**0.425**	**0.003**	0.00002	0.00041
(Scupper)																
34	WD1 5396.500	1.00	50.36	17.209	0.000030	0.00044	0.375	0.013	0.020000	0.01040	3.5	0.300	**0.422**	**0.002**	0.00002	0.00042
(Scupper)																
(Scupper)																
(Scupper)																
35	WD1 5380.500	1.00	50.36	17.709	0.000035	0.00067	0.375	0.013	0.020000	0.01334	16.0	0.300	**0.475**	**0.003**	0.00005	0.00063
(Scupper)																
36	WD1 5377.500	1.00	50.36	17.803	0.000027	0.00040	0.375	0.013	0.020000	0.01389	3.0	0.300	**0.387**	**0.002**	0.00001	0.00039
(Scupper)																
37	WD1 5374.500	1.00	50.36	17.897	0.000027	0.00039	0.375	0.013	0.020000	0.01444	3.0	0.300	**0.382**	**0.002**	0.00001	0.00039
(Scupper)																
38	WD1 5371.500	1.00	50.36	17.991	0.000027	0.00040	0.375	0.013	0.020000	0.01500	3.0	0.300	**0.381**	**0.002**	0.00001	0.00039

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
(DRAIN)																								
-	WD1 5458.20	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.03077	0.01665	-	-	-	-	-	**0.261**	**0.000**	-	-	-	-	-	-
27	WD1 5458.00	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03071	0.01660	0.038	0.300	0.1574	0.00688	YES	0.099	0.000	0.817	0.352	0.300	0.968	0.00001	0.00035
(DRAIN)																								
-	WD1 5454.95	-	1.00	50.36	17.100	0.000027	0.00037	0.375	0.013	0.02974	0.01575	-	-	-	-	-	**0.288**	**0.000**	-	-	-	-	-	-
28	WD1 5454.75	3.250	1.00	50.36	17.100	0.000030	0.00042	0.375	0.013	0.02968	0.01570	0.038	0.300	0.1563	0.00661	YES	0.107	0.000	0.817	0.370	0.300	0.950	0.00002	0.00040
(DRAIN)																								
-	WD1 5451.45	-	1.00	50.36	17.100	0.000027	0.00037	0.375	0.013	0.02864	0.01478	-	-	-	-	-	**0.298**	**0.000**	-	-	-	-	-	-
29	WD1 5451.25	3.500	1.00	50.36	17.100	0.000030	0.00042	0.375	0.013	0.02858	0.01473	0.038	0.300	0.1552	0.00633	YES	0.109	0.000	0.817	0.365	0.300	0.955	0.00002	0.00040
(DRAIN)																								
-	WD1 5448.20	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.02762	0.01388	-	-	-	-	-	**0.289**	**0.000**	-	-	-	-	-	-
30	WD1 5448.00	3.250	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.02755	0.01383	0.038	0.300	0.1542	0.00607	YES	0.104	0.000	0.817	0.337	0.300	0.981	0.00001	0.00036
(DRAIN)																								
-	WD1 5445.20	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.02667	0.01305	-	-	-	-	-	**0.299**	**0.000**	-	-	-	-	-	-
31	WD1 5445.00	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.02661	0.01300	0.038	0.300	0.1533	0.00582	YES	0.106	0.000	0.817	0.332	0.300	0.985	0.00001	0.00036
(DRAIN)																								
-	WD1 5442.20	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.02573	0.01222	-	-	-	-	-	**0.310**	**0.000**	-	-	-	-	-	-
32	WD1 5442.00	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.02566	0.01217	0.038	0.300	0.1523	0.00558	YES	0.108	0.000	0.817	0.327	0.300	0.989	0.00000	0.00036
(DRAIN)																								
-	WD1 5439.20	-	1.00	50.36	17.100	0.000022	0.00031	0.375	0.013	0.02478	0.01139	-	-	-	-	-	**0.321**	**0.001**	-	-	-	-	-	-
33	WD1 5439.00	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.02472	0.01134	0.038	0.300	0.1514	0.00533	YES	0.110	0.000	0.817	0.321	0.300	0.992	0.00000	0.00036
(DRAIN)																								
-	WD1 5436.20	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	0.02383	0.01056	-	-	-	-	-	**0.334**	**0.001**	-	-	-	-	-	-
34	WD1 5436.00	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.02377	0.01051	0.038	0.300	0.1504	0.00508	YES	0.112	0.000	0.817	0.316	0.300	0.995	0.00000	0.00036
(DRAIN)																								
-	WD1 5433.20	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	0.02289	0.00973	-	-	-	-	-	**0.349**	**0.001**	-	-	-	-	-	-
35	WD1 5433.00	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.02282	0.00968	0.038	0.300	0.1495	0.00482	YES	0.114	0.000	0.817	0.310	0.300	0.998	0.00000	0.00036
(DRAIN)																								
-	WD1 5430.20	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	0.02194	0.00890	-	-	-	-	-	**0.365**	**0.001**	-	-	-	-	-	-
36	WD1 5430.00	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02188	0.00885	0.038	0.300	0.1485	0.00456	YES	0.117	0.000	0.817	0.303	0.300	1.000	0.00000	0.00037
(DRAIN)																								
-	WD1 5427.20	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	0.02100	0.00807	-	-	-	-	-	**0.383**	**0.002**	-	-	-	-	-	-
37	WD1 5427.00	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02093	0.00802	0.038	0.300	0.1476	0.00429	YES	0.120	0.000	0.817	0.296	0.300	1.000	0.00000	0.00037
(DRAIN)																								
-	WD1 5424.20	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	0.02005	0.00724	-	-	-	-	-	**0.404**	**0.002**	-	-	-	-	-	-
38	WD1 5424.00	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02000	0.00719	0.038	0.300	0.1467	0.00402	YES	0.123	0.000	0.817	0.289	0.300	1.000	0.00000	0.00037
(DRAIN)																								
-	WD1 5421.20	-	1.00	50.36	17.100	0.000022	0.00033	0.375	0.013	0.02000	0.00641	-	-	-	-	-	**0.416**	**0.002**	-	-	-	-	-	-
39	WD1 5421.00	3.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.02000	0.00636	0.038	0.300	0.1467	0.00378	YES	0.126	0.000	0.817	0.280	0.300	1.000	0.00000	0.00038
(DRAIN)																								
-	WD1 5418.20	-	1.00	50.36	17.100	0.000022	0.00033	0.375	0.013	0.02000	0.00641	-	-	-	-	-	**0.416**	**0.002**	-	-	-	-	-	-
40	WD1 5418.00	3.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.02000	0.00645	0.038	0.300	0.1467	0.00381	YES	0.126	0.000	0.817	0.281	0.300	1.000	0.00000	0.00038
(DRAIN)																								
-	WD1 5414.95	-	1.00	50.36	17.100	0.000027	0.00039	0.375	0.013	0.02000	0.00701	-	-	-	-	-	**0.436**	**0.003**	-	-	-	-	-	-
41	WD1 5414.75	3.250	1.00	50.36	17.100	0.000030	0.00044	0.375	0.013	0.02000	0.00705	0.038	0.300	0.1467	0.00398	YES	0.131	0.000	0.817	0.307	0.300	0.999	0.00000	0.00044
(DRAIN)																								
-	WD1 5411.45	-	1.00	50.36	17.100	0.000027	0.00040	0.375	0.013	0.02000	0.00765	-	-	-	-	-	**0.431**	**0.003**	-	-	-	-	-	-
42	WD1 5411.25	3.500	1.00	50.36	17.100	0.000030	0.00044	0.375	0.013	0.02000	0.00769	0.038	0.300	0.1467	0.00416	YES	0.130	0.000	0.817	0.317	0.300	0.995	0.00000	0.00044
(DRAIN)																								
-	WD1 5408.20	-	1.00	50.36	17.100	0.000022	0.00033	0.375	0.013	0.02000	0.00825	-	-	-	-	-	**0.399**	**0.002**	-	-	-	-	-	-
43	WD1 5408.00	3.250	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.02000	0.00829	0.038	0.300	0.1467	0.00432	YES	0.121	0.000	0.817	0.305	0.300	0.999	0.00000	0.00038
(DRAIN)																								
-	WD1 5405.20	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	0.02000	0.00880	-	-	-	-	-	**0.390**	**0.002**	-	-	-	-	-	-
44	WD1 5405.00	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02000	0.00884	0.038	0.300	0.1467	0.00446	YES	0.118	0.000	0.817	0.307	0.300	0.999	0.00000	0.00037
(DRAIN)																								
-	WD1 5401.95	-	1.00	50.36	17.100	0.000027	0.00038	0.375	0.013	0.02000	0.00940	-	-	-	-	-	**0.410**	**0.002**	-	-	-	-	-	-
45	WD1 5401.75	3.250	1.00	50.36	17.100	0.000030	0.00043	0.375	0.013	0.02000	0.00944	0.038	0.300	0.1467	0.00461	YES	0.123	0.000	0.817	0.334	0.300	0.984	0.00001	0.00042
(DRAIN)																								
-	WD1 5398.45	-	1.00	50.36	17.148	0.000027	0.00039	0.375	0.013	0.02000	0.01004	-	-	-	-	-	**0.408**	**0.002**	-	-	-	-	-	-
46	WD1 5398.25	3.500	1.00	50.36	17.155	0.000030	0.00044	0.375	0.013	0.02000	0.01008	0.038	0.300	0.1467	0.00476	YES	0.123	0.000	0.817	0.343	0.300	0.976	0.00001	0.00043
(DRAIN)																								
-	WD1 5394.70	-	1.00	50.36	17.266	0.000031	0.00045	0.375	0.013	0.02000	0.01073	-	-	-	-	-	**0.427**	**0.003**	-	-	-	-	-	-
47	WD1 5394.50	3.750	1.00	50.36	17.272	0.000035	0.00050	0.375	0.013	0.02000	0.01077	0.038	0.300	0.1467	0.00492	YES	0.128	0.000	0.817	0.370	0.300	0.950	0.00003	0.00048
-	WD1 5391.70	-	1.00	50.36	17.359	0.000049	0.00071	0.375	0.013	0.02000	0.01128	-	-	-	-	-	**0.500**	**0.004**	-	-	-	-	-	-
48	WD1 5391.50	3.000	1.00	50.36	17.366	0.000052	0.00076	0.375	0.013	0.02000	0.01132	0.038	0.300	0.1467	0.00505	YES	0.147	0.000	0.817	0.447	0.300	0.865	0.00010	0.00066
-	WD1 5388.70	-	1.00	50.36	17.453	0.000049	0.00079	0.375	0.013	0.02000	0.01183	-	-	-	-	-	**0.516**	**0.004**	-	-	-	-	-	-
49	WD1 5388.50	3.000	1.00	50.36	17.459	0.000052	0.00084	0.375	0.013	0.02000	0.01187	0.038	0.300	0.1467	0.00517	YES	0.152	0.000	0.817	0.473	0.300	0.836	0.00014	0.00070
-	WD1 5385.70	-	1.00	50.36	17.547	0.000049	0.00083	0.375	0.013	0.02000	0.01239	-	-	-	-	-	**0.521**	**0.004**	-	-	-	-	-	-
50	WD1 5385.50	3.000	1.00	50.36	17.553	0.000053	0.00088	0.375	0.013	0.02000	0.01242	0.038	0.300	0.1467	0.00529	YES	0.153	0.000	0.817	0.489	0.300	0.820	0.00016	0.00072
-	WD1 5382.70	-	1.00	50.36	17.641	0.000049	0.00086	0.375	0.013	0.02000	0.01294	-	-	-	-	-	**0.522**	**0.004**	-	-	-	-	-	-
51	WD1 5382.50	3.000	1.00	50.36	17.647	0.000053	0.00091	0.375	0.013	0.02000	0.01297	0.038	0.300	0.1467	0.00541	YES	0.153	0.000	0.817	0.501	0.300	0.807	0.00017	0.00073
(DRAIN)																								
-	WD1 5379.20	-	1.00	50.36	17.750	0.000023	0.00037	0.375	0.013	0.02000	0.01358	-	-	-	-	-	**0.379**	**0.002**	-	-	-	-	-	-
52	WD1 5379.00	3.500	1.00	50.36	17.756	0.000027	0.00042	0.375	0.013	0.02000	0.01362	0.038	0.300	0.1467	0.00554	YES	0.114	0.000	0.817	0.369	0.300	0.951	0.00002	0.00040
(DRAIN)																								
-	WD1 5376.20	-	1.00	50.36	17.844	0.000023	0.00033	0.375	0.013	0.02000	0.01413	-	-	-	-	-	**0.361**	**0.001**	-	-	-	-	-	-
53	WD1 5376.00	3.000	1.00	50.36	17.850	0.000027	0.00038	0.375	0.013	0.02000	0.01417	0.038	0.300	0.1467	0.00565	YES	0.110	0.000	0.817	0.359	0.300	0.961	0.00001	0.00037
(DRAIN)																								
-	WD1 5373.20	-	1.00	50.36	17.938	0.000023	0.00034	0.375	0.013	0.02000	0.01468	-	-	-	-	-	**0.359**	**0.001**	-	-	-	-	-	-
54	WD1 5373.00	3.000	1.00	50.36	17.944	0.000027	0.00039	0.375	0.013	0.02000	0.01472	0.038	0.300	0.1467	0.00576	YES	0.109	0.000	0.817	0.364	0.300	0.956	0.00002	0.00037
(DRAIN)																								
-	WD1 5370.20	-	1.00	50.36	18.031	0.000023	0.00034	0.375	0.013	0.02000	0.01524	-	-	-	-	-	**0.357**	**0.001**	-	-	-	-	-	-

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
(Scupper)																
39	WD1 5368.500	1.00	50.36	18.084	0.000027	0.00040	0.375	0.013	0.020000	0.01555	3.0	0.300	**0.380**	**0.002**	0.00001	0.00040
(Scupper)																
40	WD1 5365.500	1.00	50.36	18.178	0.000027	0.00041	0.375	0.013	0.020000	0.01610	3.0	0.300	**0.379**	**0.002**	0.00001	0.00040
(Scupper)																
41	WD1 5362.500	1.00	50.36	18.272	0.000027	0.00041	0.375	0.013	0.020000	0.01665	3.0	0.300	**0.378**	**0.002**	0.00001	0.00040
(Scupper)																
42	WD1 5359.500	1.00	50.36	18.366	0.000028	0.00041	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.377**	**0.002**	0.00001	0.00041
(Scupper)																
43	WD1 5356.500	1.00	50.36	18.459	0.000028	0.00042	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.378**	**0.002**	0.00001	0.00041
(Scupper)																
44	WD1 5353.500	1.00	50.36	18.553	0.000028	0.00042	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.379**	**0.002**	0.00001	0.00041
(Scupper)																
45	WD1 5350.500	1.00	50.36	18.647	0.000028	0.00042	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.380**	**0.002**	0.00001	0.00041
(Scupper)																
46	WD1 5347.000	1.00	50.36	18.756	0.000033	0.00051	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.408**	**0.002**	0.00001	0.00049
(Scupper)																
47	WD1 5343.500	1.00	50.36	18.866	0.000033	0.00051	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.409**	**0.002**	0.00002	0.00050
(Scupper)																
48	WD1 5340.500	1.00	50.36	18.959	0.000028	0.00043	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.384**	**0.002**	0.00001	0.00042
(Scupper)																
49	WD1 5337.500	1.00	50.36	19.053	0.000029	0.00043	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.384**	**0.002**	0.00001	0.00042
(Scupper)																
50	WD1 5334.000	1.00	50.36	19.163	0.000034	0.00052	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.412**	**0.002**	0.00002	0.00051
(Scupper)																
51	WD1 5330.500	1.00	50.36	19.272	0.000034	0.00053	0.375	0.013	0.019118	0.01711	3.5	0.300	**0.425**	**0.002**	0.00002	0.00051
(Scupper)																
52	WD1 5327.500	1.00	50.36	19.366	0.000029	0.00045	0.375	0.013	0.017353	0.01711	3.0	0.300	**0.424**	**0.002**	0.00002	0.00043
(Scupper)																
53	WD1 5324.500	1.00	50.36	19.459	0.000029	0.00045	0.375	0.013	0.015588	0.01711	3.0	0.300	**0.455**	**0.002**	0.00003	0.00042
(Scupper)																
54	WD1 5321.000	1.00	50.36	19.569	0.000034	0.00055	0.375	0.013	0.013529	0.01711	3.5	0.300	**0.535**	**0.003**	0.00006	0.00048
(Scupper)																
55	WD1 5318.000	1.00	50.36	19.663	0.000029	0.00047	0.375	0.013	0.011765	0.01711	3.0	0.300	**0.552**	**0.003**	0.00006	0.00041
(Scupper)																
56	WD1 5315.000	1.00	50.36	19.756	0.000030	0.00047	0.375	0.013	0.010000	0.01711	3.0	0.300	**0.612**	**0.003**	0.00008	0.00040
(Scupper)																
57	WD1 5312.000	1.00	50.36	19.850	0.000030	0.00049	0.375	0.013	0.008235	0.01711	3.0	0.300	**0.698**	**0.003**	0.00011	0.00038
(Scupper)																
(Scupper)																
(Scupper)																
58	WD1 5294.000	1.00	50.36	20.413	0.000031	0.00090	0.375	0.013	-0.002353	0.01711	18.0	0.300	**1.924**	**0.004**	0.00057	0.00033
(Scupper)																
59	WD1 5291.000	1.00	50.36	20.506	0.000031	0.00073	0.375	0.013	-0.004118	0.01711	3.0	0.300	**1.256**	**0.004**	0.00035	0.00038
(Scupper)																
60	WD1 5288.000	1.00	50.36	20.600	0.000031	0.00062	0.375	0.013	-0.005882	0.01711	3.0	0.300	**0.947**	**0.004**	0.00023	0.00040
(Scupper)																
61	WD1 5285.000	1.00	50.36	20.694	0.000031	0.00057	0.375	0.013	-0.007647	0.01711	3.0	0.300	**0.776**	**0.004**	0.00015	0.00041
(Scupper)																
62	WD1 5282.000	1.00	50.36	20.788	0.000031	0.00054	0.375	0.013	-0.009412	0.01711	3.0	0.300	**0.668**	**0.003**	0.00011	0.00043

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
55	WD1 5370.00	3.000	1.00	50.36	18.038	0.000027	0.00039	0.375	0.013	0.02000	0.01527	0.038	0.300	0.1467	0.00586	YES	0.108	0.000	0.817	0.369	0.300	0.952	0.00002	0.00037
(DRAIN)																								
-	WD1 5367.20	-	1.00	50.36	18.125	0.000024	0.00034	0.375	0.013	0.02000	0.01579	-	-	-	-	-	**0.355**	**0.001**	-	-	-	-	-	-
56	WD1 5367.00	3.000	1.00	50.36	18.131	0.000027	0.00039	0.375	0.013	0.02000	0.01582	0.038	0.300	0.1467	0.00597	YES	0.108	0.000	0.817	0.373	0.300	0.947	0.00002	0.00037
(DRAIN)																								
-	WD1 5364.20	-	1.00	50.36	18.219	0.000024	0.00034	0.375	0.013	0.02000	0.01634	-	-	-	-	-	**0.354**	**0.001**	-	-	-	-	-	-
57	WD1 5364.00	3.000	1.00	50.36	18.225	0.000027	0.00039	0.375	0.013	0.02000	0.01637	0.038	0.300	0.1467	0.00607	YES	0.107	0.000	0.817	0.378	0.300	0.942	0.00002	0.00037
(DRAIN)																								
-	WD1 5361.20	-	1.00	50.36	18.313	0.000024	0.00034	0.375	0.013	0.02000	0.01689	-	-	-	-	-	**0.352**	**0.001**	-	-	-	-	-	-
58	WD1 5361.00	3.000	1.00	50.36	18.319	0.000027	0.00039	0.375	0.013	0.02000	0.01693	0.038	0.300	0.1467	0.00617	YES	0.107	0.000	0.817	0.382	0.300	0.937	0.00002	0.00037
(DRAIN)																								
-	WD1 5358.20	-	1.00	50.36	18.406	0.000024	0.00034	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.352**	**0.001**	-	-	-	-	-	-
59	WD1 5358.00	3.000	1.00	50.36	18.413	0.000028	0.00040	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.107	0.000	0.817	0.384	0.300	0.935	0.00003	0.00037
(DRAIN)																								
-	WD1 5355.20	-	1.00	50.36	18.500	0.000024	0.00035	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.353**	**0.001**	-	-	-	-	-	-
60	WD1 5355.00	3.000	1.00	50.36	18.506	0.000028	0.00040	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.107	0.000	0.817	0.385	0.300	0.934	0.00003	0.00037
(DRAIN)																								
-	WD1 5352.20	-	1.00	50.36	18.594	0.000024	0.00035	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.353**	**0.001**	-	-	-	-	-	-
61	WD1 5352.00	3.000	1.00	50.36	18.600	0.000028	0.00040	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.107	0.000	0.817	0.386	0.300	0.933	0.00003	0.00037
(DRAIN)																								
-	WD1 5348.95	-	1.00	50.36	18.695	0.000029	0.00042	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.378**	**0.002**	-	-	-	-	-	-
62	WD1 5348.75	3.250	1.00	50.36	18.702	0.000033	0.00047	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.114	0.000	0.817	0.413	0.300	0.903	0.00005	0.00042
(DRAIN)																								
-	WD1 5345.45	-	1.00	50.36	18.805	0.000029	0.00043	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.381**	**0.002**	-	-	-	-	-	-
63	WD1 5345.25	3.500	1.00	50.36	18.811	0.000033	0.00048	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.115	0.000	0.817	0.417	0.300	0.899	0.00005	0.00043
(DRAIN)																								
-	WD1 5342.20	-	1.00	50.36	18.906	0.000025	0.00036	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.359**	**0.001**	-	-	-	-	-	-
64	WD1 5342.00	3.250	1.00	50.36	18.913	0.000028	0.00042	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.109	0.000	0.817	0.392	0.300	0.926	0.00003	0.00038
(DRAIN)																								
-	WD1 5339.20	-	1.00	50.36	19.000	0.000025	0.00036	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.357**	**0.001**	-	-	-	-	-	-
65	WD1 5339.00	3.000	1.00	50.36	19.006	0.000029	0.00041	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.108	0.000	0.817	0.390	0.300	0.929	0.00003	0.00038
(DRAIN)																								
-	WD1 5335.95	-	1.00	50.36	19.102	0.000030	0.00042	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.381**	**0.002**	-	-	-	-	-	-
66	WD1 5335.75	3.250	1.00	50.36	19.108	0.000033	0.00048	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.115	0.000	0.817	0.417	0.300	0.899	0.00005	0.00043
(DRAIN)																								
-	WD1 5332.45	-	1.00	50.36	19.211	0.000030	0.00044	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.385**	**0.002**	-	-	-	-	-	-
67	WD1 5332.25	3.500	1.00	50.36	19.217	0.000034	0.00049	0.375	0.013	0.02000	0.01711	0.038	0.300	0.1467	0.00621	YES	0.116	0.000	0.817	0.421	0.300	0.894	0.00005	0.00044
(DRAIN)																								
-	WD1 5329.20	-	1.00	50.36	19.313	0.000025	0.00037	0.375	0.013	0.01835	0.01711	-	-	-	-	-	**0.384**	**0.002**	-	-	-	-	-	-
68	WD1 5329.00	3.250	1.00	50.36	19.319	0.000029	0.00043	0.375	0.013	0.01824	0.01711	0.038	0.300	0.1449	0.00608	YES	0.111	0.000	0.817	0.401	0.300	0.917	0.00004	0.00039
(DRAIN)																								
-	WD1 5326.20	-	1.00	50.36	19.406	0.000025	0.00037	0.375	0.013	0.01659	0.01711	-	-	-	-	-	**0.408**	**0.002**	-	-	-	-	-	-
69	WD1 5326.00	3.000	1.00	50.36	19.413	0.000029	0.00043	0.375	0.013	0.01647	0.01711	0.038	0.300	0.1431	0.00596	YES	0.112	0.000	0.817	0.403	0.300	0.914	0.00004	0.00039
(DRAIN)																								
-	WD1 5322.95	-	1.00	50.36	19.508	0.000030	0.00045	0.375	0.013	0.01468	0.01711	-	-	-	-	-	**0.473**	**0.003**	-	-	-	-	-	-
70	WD1 5322.75	3.250	1.00	50.36	19.514	0.000034	0.00051	0.375	0.013	0.01456	0.01711	0.038	0.300	0.1412	0.00583	YES	0.120	0.000	0.817	0.436	0.300	0.877	0.00006	0.00044
(DRAIN)																								
-	WD1 5319.70	-	1.00	50.36	19.609	0.000025	0.00042	0.375	0.013	0.01276	0.01711	-	-	-	-	-	**0.503**	**0.003**	-	-	-	-	-	-
71	WD1 5319.50	3.250	1.00	50.36	19.616	0.000029	0.00048	0.375	0.013	0.01265	0.01711	0.038	0.300	0.1393	0.00570	YES	0.118	0.000	0.817	0.428	0.300	0.886	0.00005	0.00042
(DRAIN)																								
-	WD1 5316.70	-	1.00	50.36	19.703	0.000026	0.00042	0.375	0.013	0.01100	0.01711	-	-	-	-	-	**0.551**	**0.003**	-	-	-	-	-	-
72	WD1 5316.50	3.000	1.00	50.36	19.709	0.000030	0.00047	0.375	0.013	0.01088	0.01711	0.038	0.300	0.1375	0.00558	YES	0.119	0.000	0.817	0.431	0.300	0.882	0.00006	0.00042
(DRAIN)																								
-	WD1 5313.70	-	1.00	50.36	19.797	0.000026	0.00044	0.375	0.013	0.00924	0.01711	-	-	-	-	-	**0.627**	**0.003**	-	-	-	-	-	-
73	WD1 5313.50	3.000	1.00	50.36	19.803	0.000030	0.00050	0.375	0.013	0.00912	0.01711	0.038	0.300	0.1358	0.00546	YES	0.122	0.000	0.817	0.443	0.300	0.869	0.00007	0.00043
(DRAIN)																								
-	WD1 5310.70	-	1.00	50.36	19.891	0.000026	0.00047	0.375	0.013	0.00747	0.01711	-	-	-	-	-	**0.734**	**0.003**	-	-	-	-	-	-
74	WD1 5310.50	3.000	1.00	50.36	19.897	0.000030	0.00053	0.375	0.013	0.00735	0.01711	0.038	0.300	0.1340	0.00534	YES	0.126	0.000	0.817	0.459	0.300	0.852	0.00008	0.00045
-	WD1 5307.70	-	1.00	50.36	19.984	0.000056	0.00087	0.375	0.013	0.00571	0.01711	-	-	-	-	-	**1.091**	**0.005**	-	-	-	-	-	-
75	WD1 5307.50	3.000	1.00	50.36	19.991	0.000060	0.00092	0.375	0.013	0.00559	0.01711	0.038	0.300	0.1323	0.00522	YES	0.157	0.000	0.817	0.584	0.300	0.727	0.00025	0.00067
-	WD1 5304.70	-	1.00	50.36	20.078	0.000056	0.00105	0.375	0.013	0.00394	0.01711	-	-	-	-	-	**1.475**	**0.005**	-	-	-	-	-	-
76	WD1 5304.50	3.000	1.00	50.36	20.084	0.000060	0.00110	0.375	0.013	0.00382	0.01711	0.038	0.300	0.1305	0.00511	YES	0.169	0.000	0.817	0.634	0.300	0.684	0.00035	0.00075
-	WD1 5301.70	-	1.00	50.36	20.172	0.000056	0.00114	0.375	0.013	0.00218	0.01711	-	-	-	-	-	**2.211**	**0.004**	-	-	-	-	-	-
77	WD1 5301.50	3.000	1.00	50.36	20.178	0.000061	0.00120	0.375	0.013	0.00206	0.01711	0.038	0.300	0.1287	0.00499	YES	0.176	0.000	0.817	0.663	0.300	0.662	0.00041	0.00080
-	WD1 5298.70	-	1.00	50.36	20.266	0.000057	0.00121	0.375	0.013	0.00041	0.01711	-	-	-	-	-	**6.385**	**0.003**	-	-	-	-	-	-
78	WD1 5298.50	3.000	1.00	50.36	20.272	0.000061	**0.00126**	0.375	0.013	0.00029	0.01711	0.038	0.300	0.1270	0.00488	YES	0.181	0.000	0.817	0.683	0.300	0.647	0.00045	0.00082
-	WD1 5295.70	-	1.00	50.36	20.359	0.000057	0.00125	0.375	0.013	-0.00135	0.01711	-	-	-	-	-	**3.076**	**0.004**	-	-	-	-	-	-
79	WD1 5295.50	3.000	1.00	50.36	20.366	0.000061	0.00131	0.375	0.013	-0.00147	0.01711	0.038	0.300	0.1281	0.00496	YES	0.182	0.000	0.817	0.689	0.300	0.643	0.00047	0.00084
(DRAIN)																								
-	WD1 5292.70	-	1.00	50.36	20.453	0.000027	0.00095	0.375	0.013	-0.00312	0.01711	-	-	-	-	-	**1.645**	**0.004**	-	-	-	-	-	-
80	WD1 5292.50	3.000	1.00	50.36	20.459	0.000031	0.00100	0.375	0.013	-0.00324	0.01711	0.038	0.300	0.1299	0.00507	YES	0.163	0.000	0.817	0.612	0.300	0.703	0.00030	0.00071
(DRAIN)																								
-	WD1 5289.70	-	1.00	50.36	20.547	0.000027	0.00073	0.375	0.013	-0.00488	0.01711	-	-	-	-	-	**1.128**	**0.004**	-	-	-	-	-	-
81	WD1 5289.50	3.000	1.00	50.36	20.553	0.000031	0.00079	0.375	0.013	-0.00500	0.01711	0.038	0.300	0.1317	0.00519	YES	0.148	0.000	0.817	0.548	0.300	0.760	0.00019	0.00060
(DRAIN)																								
-	WD1 5286.70	-	1.00	50.36	20.641	0.000027	0.00060	0.375	0.013	-0.00665	0.01711	-	-	-	-	-	**0.866**	**0.004**	-	-	-	-	-	-
82	WD1 5286.50	3.000	1.00	50.36	20.647	0.000031	0.00066	0.375	0.013	-0.00676	0.01711	0.038	0.300	0.1334	0.00530	YES	0.138	0.000	0.817	0.505	0.300	0.802	0.00013	0.00053
(DRAIN)																								
-	WD1 5283.70	-	1.00	50.36	20.734	0.000027	0.00053	0.375	0.013	-0.00841	0.01711	-	-	-	-	-	**0.714**	**0.003**	-	-	-	-	-	-
83	WD1 5283.50	3.000	1.00	50.36	20.741	0.000031	0.00059	0.375	0.013	-0.00853	0.01711	0.038	0.300	0.1352	0.00542	YES	0.131	0.000	0.817	0.479	0.300	0.830	0.00010	0.00049
(DRAIN)																								
-	WD1 5280.70	-	1.00	50.36	20.828	0.000027	0.00049	0.375	0.013	-0.01018	0.01711	-	-	-	-	-	**0.614**	**0.003**	-	-	-	-	-	-

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
(Scupper)																
63	WD1 5279.000	1.00	50.36	20.881	0.000031	0.00052	0.375	0.013	-0.011176	0.01711	3.0	0.300	**0.593**	**0.003**	0.00008	0.00044
(Scupper)																
64	WD1 5276.000	1.00	50.36	20.975	0.000031	0.00051	0.375	0.013	-0.012941	0.01711	3.0	0.300	**0.538**	**0.003**	0.00006	0.00046
(Scupper)																
65	WD1 5273.000	1.00	50.36	21.069	0.000032	0.00051	0.375	0.013	-0.014706	0.01711	3.0	0.300	**0.494**	**0.003**	0.00004	0.00047
(Scupper)																
66	WD1 5270.000	1.00	50.36	21.163	0.000032	0.00050	0.375	0.013	-0.016471	0.01711	3.0	0.300	**0.459**	**0.003**	0.00003	0.00047
(Scupper)																
67	WD1 5267.000	1.00	50.36	21.256	0.000032	0.00050	0.375	0.013	-0.018235	0.01711	3.0	0.300	**0.429**	**0.002**	0.00002	0.00048
(Scupper)																
68	WD1 5264.000	1.00	50.36	21.350	0.000032	0.00050	0.375	0.013	-0.020000	0.01711	3.0	0.300	**0.405**	**0.002**	0.00001	0.00048
(Scupper)																
69	WD1 5261.000	1.00	50.36	21.444	0.000032	0.00050	0.375	0.013	-0.021765	0.01711	3.0	0.300	**0.384**	**0.002**	0.00001	0.00049
(Scupper)																
70	WD1 5257.000	1.00	50.36	21.569	0.000043	0.00070	0.375	0.013	-0.024118	0.01711	4.0	0.300	**0.409**	**0.003**	0.00002	0.00068
(Scupper)																
71	WD1 5254.000	1.00	50.36	21.663	0.000032	0.00050	0.375	0.013	-0.025882	0.01711	3.0	0.300	**0.345**	**0.001**	0.00000	0.00050
(Scupper)																
(Scupper)																
(Scupper)																
72	WD1 5240.500	1.00	50.36	22.084	0.000050	0.00106	0.375	0.013	-0.030000	0.01711	13.5	0.300	**0.417**	**0.004**	0.00004	0.00103
(Scupper)																
73	WD1 5237.500	1.00	50.36	22.178	0.000033	0.00052	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.318**	**0.001**	0.00000	0.00052
(Scupper)																
74	WD1 5234.000	1.00	50.36	22.288	0.000039	0.00061	0.375	0.013	-0.030000	0.01711	3.5	0.300	**0.339**	**0.001**	0.00000	0.00061
(Scupper)																
75	WD1 5231.000	1.00	50.36	22.381	0.000034	0.00051	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.317**	**0.001**	0.00000	0.00051
(Scupper)																
76	WD1 5228.000	1.00	50.36	22.475	0.000034	0.00051	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.318**	**0.001**	0.00000	0.00051
(Scupper)																
77	WD1 5225.000	1.00	50.36	22.569	0.000034	0.00052	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.318**	**0.001**	0.00000	0.00052
78	WD1 5219.500	1.00	50.36	22.741	0.000125	0.00176	0.375	0.013	-0.030000	0.01711	5.5	0.300	**0.505**	**0.006**	0.00016	0.00161
(Scupper)																
79	WD1 5216.500	1.00	50.36	22.834	0.000034	0.00057	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.331**	**0.001**	0.00000	0.00057
(Scupper)																
80	WD1 5213.500	1.00	50.36	22.928	0.000034	0.00053	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.321**	**0.001**	0.00000	0.00053
(Scupper)																
81	WD1 5210.500	1.00	50.36	23.022	0.000035	0.00053	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.321**	**0.001**	0.00000	0.00053
(Scupper)																
82	WD1 5207.500	1.00	50.36	23.116	0.000035	0.00053	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.322**	**0.001**	0.00000	0.00053
(Scupper)																
83	WD1 5204.500	1.00	50.36	23.209	0.000035	0.00053	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.322**	**0.001**	0.00000	0.00053
(Scupper)																
84	WD1 5201.500	1.00	50.36	23.303	0.000035	0.00054	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.323**	**0.001**	0.00000	0.00054
(Scupper)																
85	WD1 5198.500	1.00	50.36	23.397	0.000035	0.00054	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.323**	**0.001**	0.00000	0.00054
(Scupper)																
86	WD1 5195.500	1.00	50.36	23.491	0.000035	0.00054	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.324**	**0.001**	0.00000	0.00054
(Scupper)																
87	WD1 5192.000	1.00	50.36	23.600	0.000041	0.00065	0.375	0.013	-0.030000	0.01711	3.5	0.300	**0.348**	**0.001**	0.00000	0.00065
(Scupper)																
(Scupper)																

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
84	WD1 5280.50	3.000	1.00	50.36	20.834	0.000031	0.00055	0.375	0.013	-0.01029	0.01711	0.038	0.300	0.1370	0.00554	YES	0.126	0.000	0.817	0.460	0.300	0.850	0.00008	0.00047
(DRAIN)																								
-	WD1 5277.70	-	1.00	50.36	20.922	0.000027	0.00046	0.375	0.013	-0.01194	0.01711	-	-	-	-	-	**0.544**	**0.003**	-	-	-	-	-	-
85	WD1 5277.50	3.000	1.00	50.36	20.928	0.000031	0.00052	0.375	0.013	-0.01206	0.01711	0.038	0.300	0.1387	0.00566	YES	0.123	0.000	0.817	0.447	0.300	0.865	0.00007	0.00045
(DRAIN)																								
-	WD1 5274.70	-	1.00	50.36	21.016	0.000027	0.00044	0.375	0.013	-0.01371	0.01711	-	-	-	-	-	**0.491**	**0.003**	-	-	-	-	-	-
86	WD1 5274.50	3.000	1.00	50.36	21.022	0.000032	0.00050	0.375	0.013	-0.01382	0.01711	0.038	0.300	0.1405	0.00578	YES	0.120	0.000	0.817	0.436	0.300	0.877	0.00006	0.00044
(DRAIN)																								
-	WD1 5271.70	-	1.00	50.36	21.109	0.000027	0.00043	0.375	0.013	-0.01547	0.01711	-	-	-	-	-	**0.449**	**0.002**	-	-	-	-	-	-
87	WD1 5271.50	3.000	1.00	50.36	21.116	0.000032	0.00049	0.375	0.013	-0.01559	0.01711	0.038	0.300	0.1423	0.00590	YES	0.118	0.000	0.817	0.428	0.300	0.886	0.00006	0.00043
(DRAIN)																								
-	WD1 5268.70	-	1.00	50.36	21.203	0.000028	0.00042	0.375	0.013	-0.01724	0.01711	-	-	-	-	-	**0.416**	**0.002**	-	-	-	-	-	-
88	WD1 5268.50	3.000	1.00	50.36	21.209	0.000032	0.00048	0.375	0.013	-0.01735	0.01711	0.038	0.300	0.1440	0.00602	YES	0.116	0.000	0.817	0.421	0.300	0.894	0.00005	0.00043
(DRAIN)																								
-	WD1 5265.70	-	1.00	50.36	21.297	0.000028	0.00041	0.375	0.013	-0.01900	0.01711	-	-	-	-	-	**0.389**	**0.002**	-	-	-	-	-	-
89	WD1 5265.50	3.000	1.00	50.36	21.303	0.000032	0.00047	0.375	0.013	-0.01912	0.01711	0.038	0.300	0.1458	0.00615	YES	0.115	0.000	0.817	0.415	0.300	0.900	0.00005	0.00042
(DRAIN)																								
-	WD1 5262.70	-	1.00	50.36	21.391	0.000028	0.00041	0.375	0.013	-0.02076	0.01711	-	-	-	-	-	**0.366**	**0.001**	-	-	-	-	-	-
90	WD1 5262.50	3.000	1.00	50.36	21.397	0.000032	0.00047	0.375	0.013	-0.02088	0.01711	0.038	0.300	0.1475	0.00627	YES	0.113	0.000	0.817	0.410	0.300	0.906	0.00004	0.00042
(DRAIN)																								
-	WD1 5259.20	-	1.00	50.36	21.500	0.000039	0.00055	0.375	0.013	-0.02282	0.01711	-	-	-	-	-	**0.388**	**0.002**	-	-	-	-	-	-
91	WD1 5259.00	3.500	1.00	50.36	21.506	0.000043	0.00062	0.375	0.013	-0.02294	0.01711	0.038	0.300	0.1496	0.00642	YES	0.125	0.000	0.817	0.457	0.300	0.854	0.00009	0.00052
(DRAIN)																								
-	WD1 5255.70	-	1.00	50.36	21.609	0.000028	0.00042	0.375	0.013	-0.02488	0.01711	-	-	-	-	-	**0.330**	**0.001**	-	-	-	-	-	-
92	WD1 5255.50	3.500	1.00	50.36	21.616	0.000032	0.00048	0.375	0.013	-0.02500	0.01711	0.038	0.300	0.1517	0.00656	YES	0.112	0.000	0.817	0.408	0.300	0.909	0.00004	0.00043
(DRAIN)																								
-	WD1 5251.95	-	1.00	50.36	21.727	0.000045	0.00063	0.375	0.013	-0.02709	0.01711	-	-	-	-	-	**0.366**	**0.002**	-	-	-	-	-	-
93	WD1 5251.75	3.750	1.00	50.36	21.733	0.000049	0.00069	0.375	0.013	-0.02721	0.01711	0.038	0.300	0.1539	0.00672	YES	0.128	0.000	0.817	0.472	0.300	0.837	0.00011	0.00058
-	WD1 5248.95	-	1.00	50.36	21.820	0.000061	0.00097	0.375	0.013	-0.02885	0.01711	-	-	-	-	-	**0.414**	**0.003**	-	-	-	-	-	-
94	WD1 5248.75	3.000	1.00	50.36	21.827	0.000065	0.00104	0.375	0.013	-0.02897	0.01711	0.038	0.300	0.1556	0.00685	YES	0.148	0.000	0.817	0.556	0.300	0.752	0.00026	0.00078
-	WD1 5245.95	-	1.00	50.36	21.914	0.000061	0.00112	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.426**	**0.004**	-	-	-	-	-	-
95	WD1 5245.75	3.000	1.00	50.36	21.920	0.000066	0.00118	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.155	0.000	0.817	0.586	0.300	0.725	0.00033	0.00086
-	WD1 5242.95	-	1.00	50.36	22.008	0.000062	0.00119	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.436**	**0.004**	-	-	-	-	-	-
96	WD1 5242.75	3.000	1.00	50.36	22.014	0.000066	0.00126	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.158	0.000	0.817	0.600	0.300	0.712	0.00036	0.00090
(DRAIN)																								
-	WD1 5239.20	-	1.00	50.36	22.125	0.000029	0.00044	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.300**	**0.000**	-	-	-	-	-	-
97	WD1 5239.00	3.750	1.00	50.36	22.131	0.000033	0.00050	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.112	0.000	0.817	0.409	0.300	0.907	0.00005	0.00046
(DRAIN)																								
-	WD1 5235.95	-	1.00	50.36	22.227	0.000034	0.00049	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.311**	**0.000**	-	-	-	-	-	-
98	WD1 5235.75	3.250	1.00	50.36	22.233	0.000039	0.00055	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.116	0.000	0.817	0.424	0.300	0.891	0.00006	0.00049
(DRAIN)																								
-	WD1 5232.70	-	1.00	50.36	22.328	0.000029	0.00041	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.292**	**0.000**	-	-	-	-	-	-
99	WD1 5232.50	3.250	1.00	50.36	22.334	0.000034	0.00047	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.110	0.000	0.817	0.399	0.300	0.919	0.00004	0.00044
(DRAIN)																								
-	WD1 5229.70	-	1.00	50.36	22.422	0.000029	0.00041	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.292**	**0.000**	-	-	-	-	-	-
100	WD1 5229.50	3.000	1.00	50.36	22.428	0.000034	0.00047	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.110	0.000	0.817	0.399	0.300	0.919	0.00004	0.00044
(DRAIN)																								
-	WD1 5226.70	-	1.00	50.36	22.516	0.000029	0.00041	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.293**	**0.000**	-	-	-	-	-	-
101	WD1 5226.50	3.000	1.00	50.36	22.522	0.000034	0.00048	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.110	0.000	0.817	0.400	0.300	0.918	0.00004	0.00044
(DRAIN)																								
(DRAIN)																								
-	WD1 5218.20	-	1.00	50.36	22.781	0.000030	0.00058	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.332**	**0.001**	-	-	-	-	-	-
102	WD1 5218.00	8.500	1.00	50.36	22.788	0.000034	0.00064	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.123	0.000	0.817	0.453	0.300	0.859	0.00009	0.00055
(DRAIN)																								
-	WD1 5215.20	-	1.00	50.36	22.875	0.000030	0.00042	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.295**	**0.000**	-	-	-	-	-	-
103	WD1 5215.00	3.000	1.00	50.36	22.881	0.000034	0.00049	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.111	0.000	0.817	0.403	0.300	0.915	0.00004	0.00044
(DRAIN)																								
-	WD1 5212.20	-	1.00	50.36	22.969	0.000030	0.00042	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.295**	**0.000**	-	-	-	-	-	-
104	WD1 5212.00	3.000	1.00	50.36	22.975	0.000034	0.00049	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.111	0.000	0.817	0.403	0.300	0.914	0.00004	0.00044
(DRAIN)																								
-	WD1 5209.20	-	1.00	50.36	23.063	0.000030	0.00042	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.295**	**0.000**	-	-	-	-	-	-
105	WD1 5209.00	3.000	1.00	50.36	23.069	0.000035	0.00049	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.111	0.000	0.817	0.404	0.300	0.913	0.00004	0.00045
(DRAIN)																								
-	WD1 5206.20	-	1.00	50.36	23.156	0.000030	0.00042	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.296**	**0.000**	-	-	-	-	-	-
106	WD1 5206.00	3.000	1.00	50.36	23.163	0.000035	0.00049	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.111	0.000	0.817	0.404	0.300	0.913	0.00004	0.00045
(DRAIN)																								
-	WD1 5203.20	-	1.00	50.36	23.250	0.000030	0.00043	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.296**	**0.000**	-	-	-	-	-	-
107	WD1 5203.00	3.000	1.00	50.36	23.256	0.000035	0.00049	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.111	0.000	0.817	0.405	0.300	0.912	0.00004	0.00045
(DRAIN)																								
-	WD1 5200.20	-	1.00	50.36	23.344	0.000030	0.00043	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.297**	**0.000**	-	-	-	-	-	-
108	WD1 5200.00	3.000	1.00	50.36	23.350	0.000035	0.00049	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.111	0.000	0.817	0.406	0.300	0.911	0.00004	0.00045
(DRAIN)																								
-	WD1 5197.20	-	1.00	50.36	23.438	0.000030	0.00043	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.297**	**0.000**	-	-	-	-	-	-
109	WD1 5197.00	3.000	1.00	50.36	23.444	0.000035	0.00050	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.112	0.000	0.817	0.407	0.300	0.910	0.00004	0.00045
(DRAIN)																								
-	WD1 5193.95	-	1.00	50.36	23.539	0.000036	0.00052	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.318**	**0.001**	-	-	-	-	-	-
110	WD1 5193.75	3.250	1.00	50.36	23.545	0.000041	0.00058	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.118	0.000	0.817	0.434	0.300	0.879	0.00007	0.00051
(DRAIN)																								
-	WD1 5190.70	-	1.00	50.36	23.641	0.000031	0.00044	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.299**	**0.000**	-	-	-	-	-	-
111	WD1 5190.50	3.250	1.00	50.36	23.647	0.000035	0.00050	0.375	0.013	-0.03000	0.01711	0.038	0.300	0.1567	0.00693	YES	0.112	0.000	0.817	0.409	0.300	0.908	0.00005	0.00046
-	WD1 5187.70	-	1.00	50.36	23.734	0.000066	0.00098	0.375	0.013	-0.02978	0.01711	-	-	-	-	-	**0.407**	**0.003**	-	-	-	-	-	-
112	WD1 5187.50	3.000	1.00	50.36	23.741	0.000071	0.00105	0.375	0.013	-0.02973	0.01711	0.038	0.300	0.1564	0.00691	YES	0.148	0.000	0.817	0.558	0.300	0.751	0.00026	0.00079

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept Flow m^3/s
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
88	WD1 5174.000	1.00	50.36	24.163	0.000036	0.00100	0.375	0.013	-0.026058	0.01711	18.0	0.300	**0.446**	**0.004**	0.00005	0.00095
(Scupper)																
89	WD1 5171.000	1.00	50.36	24.256	0.000036	0.00058	0.375	0.013	-0.025254	0.01711	3.0	0.300	**0.371**	**0.002**	0.00001	0.00058
(Scupper)																
90	WD1 5168.000	1.00	50.36	24.350	0.000037	0.00061	0.375	0.013	-0.024441	0.01711	3.0	0.300	**0.384**	**0.002**	0.00001	0.00060
(Scupper)																
91	WD1 5165.000	1.00	50.36	24.444	0.000037	0.00058	0.375	0.013	-0.023627	0.01711	3.0	0.300	**0.385**	**0.002**	0.00001	0.00057
(Scupper)																
92	WD1 5162.000	1.00	50.36	24.538	0.000037	0.00058	0.375	0.013	-0.022814	0.01711	3.0	0.300	**0.394**	**0.002**	0.00001	0.00057
(Scupper)																
93	WD1 5159.000	1.00	50.36	17.100	0.000026	0.00042	0.375	0.013	-0.022000	0.01711	3.0	0.300	**0.359**	**0.001**	0.00000	0.00042
(Scupper)																
(Scupper)																
94	WD1 5153.000	1.00	50.36	17.100	0.000026	0.00050	0.375	0.013	-0.020373	0.01711	6.0	0.300	**0.402**	**0.002**	0.00001	0.00049
(Scupper)																
95	WD1 5150.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	-0.019559	0.01711	3.0	0.300	**0.372**	**0.001**	0.00000	0.00038
(Scupper)																
96	WD1 5147.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	-0.018746	0.01711	3.0	0.300	**0.381**	**0.002**	0.00001	0.00038
(Scupper)																
97	WD1 5144.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	-0.017932	0.01711	3.0	0.300	**0.392**	**0.002**	0.00001	0.00037
(Scupper)																
98	WD1 5138.000	1.00	50.36	17.100	0.000026	0.00118	0.375	0.015	-0.016305	0.01711	6.0	0.300	**0.670**	**0.006**	0.00024	0.00094
(Scupper)																
99	WD1 5135.000	1.00	50.36	17.100	0.000026	0.00078	0.375	0.015	-0.015492	0.01711	3.0	0.300	**0.592**	**0.005**	0.00012	0.00066
(Scupper)																
100	WD1 5132.000	1.00	50.36	17.100	0.000026	0.00068	0.375	0.015	-0.014678	0.01711	3.0	0.300	**0.583**	**0.004**	0.00010	0.00058
(Scupper)																
101	WD1 5129.000	1.00	50.36	17.100	0.000026	0.00067	0.375	0.015	-0.013864	0.01711	3.0	0.300	**0.601**	**0.004**	0.00011	0.00057
(Scupper)																
102	WD1 5126.000	1.00	50.36	17.100	0.000026	0.00068	0.375	0.015	-0.013051	0.01711	3.0	0.300	**0.627**	**0.004**	0.00012	0.00056
(Scupper)																
103	WD1 5123.000	1.00	50.36	17.100	0.000026	0.00070	0.375	0.015	-0.012237	0.01711	3.0	0.300	**0.659**	**0.004**	0.00014	0.00056
(Scupper)																
104	WD1 5120.000	1.00	50.36	17.100	0.000026	0.00072	0.375	0.015	-0.011424	0.01711	3.0	0.300	**0.695**	**0.005**	0.00016	0.00056
(Scupper)																
105	WD1 5114.500	1.00	50.36	17.100	0.000047	0.00130	0.375	0.015	-0.009932	0.01711	5.5	0.300	**0.949**	**0.006**	0.00047	0.00083
(Scupper)																
106	WD1 5111.500	1.00	50.36	17.100	0.000026	0.00102	0.375	0.015	-0.009119	0.01711	3.0	0.300	**0.914**	**0.006**	0.00035	0.00067
(Scupper)																
107	WD1 5108.500	1.00	50.36	17.100	0.000026	0.00093	0.375	0.015	-0.008305	0.01711	3.0	0.300	**0.934**	**0.005**	0.00033	0.00060
(Scupper)																
108	WD1 5105.500	1.00	50.36	17.100	0.000026	0.00092	0.375	0.015	-0.007492	0.01711	3.0	0.300	**0.991**	**0.005**	0.00035	0.00057
(Scupper)																
(Scupper)																
(Scupper)																
*	WD1 5091.000	1.00	50.36	17.100	0.000120	0.00333	0.375	0.015	-0.006000	0.02003	14.5	-	**1.793**	**0.000**	-	-
**	WD1 5018.000	1.00	50.36	17.100	0.001368	0.02093	0.375	0.015	-0.006000	0.01767	87.5	-	**3.659**	**0.000**	-	-

*Note: Check of flow width at location where shoulder begins transitioning from 0.300m to 3.900m. At this location, the shoulder is 0.300m.
**Note: Check of flow width at end of Type K Barrier. At this location, the shoulder is 3.900m wide

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	WD1 5184.70	-	1.00	50.36	23.828	0.000067	0.00120	0.375	0.013	-0.02897	0.01711	-	-	-	-	-	**0.447**	**0.004**	-	-	-	-	-	-
113	WD1 5184.50	3.000	1.00	50.36	23.834	0.000072	0.00127	0.375	0.013	-0.02892	0.01711	0.038	0.300	0.1556	0.00685	YES	0.159	0.000	0.817	0.606	0.300	0.708	0.00037	0.00090
-	WD1 5181.70	-	1.00	50.36	23.922	0.000067	0.00132	0.375	0.013	-0.02816	0.01711	-	-	-	-	-	**0.470**	**0.005**	-	-	-	-	-	-
114	WD1 5181.50	3.000	1.00	50.36	23.928	0.000072	0.00138	0.375	0.013	-0.02810	0.01711	0.038	0.300	0.1548	0.00679	YES	0.165	0.000	0.817	0.630	0.300	0.688	0.00043	0.00095
-	WD1 5178.70	-	1.00	50.36	24.016	0.000067	0.00138	0.375	0.013	-0.02734	0.01711	-	-	-	-	-	**0.488**	**0.005**	-	-	-	-	-	-
115	WD1 5178.50	3.000	1.00	50.36	24.022	0.000072	0.00145	0.375	0.013	-0.02729	0.01711	0.038	0.300	0.1540	0.00673	YES	0.169	0.000	0.817	0.644	0.300	0.677	0.00047	0.00098
-	WD1 5175.70	-	1.00	50.36	24.109	0.000068	0.00142	0.375	0.013	-0.02653	0.01711	-	-	-	-	-	**0.502**	**0.005**	-	-	-	-	-	-
116	WD1 5175.50	3.000	1.00	50.36	24.116	0.000072	0.00149	0.375	0.013	-0.02647	0.01711	0.038	0.300	0.1531	0.00667	YES	0.171	0.000	0.817	0.654	0.300	0.669	0.00049	0.00100
(DRAIN)																								
-	WD1 5172.70	-	1.00	50.36	24.203	0.000031	0.00049	0.375	0.013	-0.02572	0.01711	-	-	-	-	-	**0.345**	**0.001**	-	-	-	-	-	-
117	WD1 5172.50	3.000	1.00	50.36	24.209	0.000036	0.00056	0.375	0.013	-0.02566	0.01711	0.038	0.300	0.1523	0.00661	YES	0.119	0.000	0.817	0.436	0.300	0.877	0.00007	0.00049
(DRAIN)																								
-	WD1 5169.70	-	1.00	60.56	24.297	0.000032	0.00054	0.375	0.013	-0.02490	0.01711	-	-	-	-	-	**0.364**	**0.002**	-	-	-	-	-	-
118	WD1 5169.50	3.000	1.00	60.56	24.303	0.000036	0.00063	0.375	0.013	-0.02485	0.01711	0.038	0.300	0.1515	0.00655	YES	0.124	0.000	0.817	0.457	0.300	0.854	0.00009	0.00053
(DRAIN)																								
-	WD1 5166.70	-	1.00	50.36	24.391	0.000032	0.00046	0.375	0.013	-0.02409	0.01711	-	-	-	-	-	**0.349**	**0.001**	-	-	-	-	-	-
119	WD1 5166.50	3.000	1.00	50.36	24.397	0.000037	0.00053	0.375	0.013	-0.02403	0.01711	0.038	0.300	0.1507	0.00649	YES	0.117	0.000	0.817	0.427	0.300	0.888	0.00006	0.00047
(DRAIN)																								
-	WD1 5163.70	-	1.00	50.36	24.484	0.000032	0.00046	0.375	0.013	-0.02327	0.01711	-	-	-	-	-	**0.357**	**0.001**	-	-	-	-	-	-
120	WD1 5163.50	3.000	1.00	50.36	24.491	0.000037	0.00053	0.375	0.013	-0.02322	0.01711	0.038	0.300	0.1499	0.00644	YES	0.117	0.000	0.817	0.429	0.300	0.886	0.00006	0.00047
(DRAIN)																								
-	WD1 5160.70	-	1.00	50.36	24.578	0.000032	0.00046	0.375	0.013	-0.02246	0.01711	-	-	-	-	-	**0.366**	**0.001**	-	-	-	-	-	-
121	WD1 5160.50	3.000	1.00	50.36	24.584	0.000037	0.00053	0.375	0.013	-0.02241	0.01711	0.038	0.300	0.1491	0.00638	YES	0.118	0.000	0.817	0.431	0.300	0.882	0.00006	0.00047
(DRAIN)																								
-	WD1 5157.70	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	-0.02165	0.01711	-	-	-	-	-	**0.325**	**0.001**	-	-	-	-	-	-
122	WD1 5157.50	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	-0.02159	0.01711	0.038	0.300	0.1483	0.00632	YES	0.103	0.000	0.817	0.369	0.300	0.951	0.00002	0.00035
-	WD1 5154.70	-	1.00	50.36	17.100	0.000048	0.00069	0.375	0.013	-0.02083	0.01711	-	-	-	-	-	**0.446**	**0.003**	-	-	-	-	-	-
123	WD1 5154.50	3.000	1.00	50.36	17.100	0.000051	0.00074	0.375	0.013	-0.02078	0.01711	0.038	0.300	0.1474	0.00626	YES	0.135	0.000	0.817	0.499	0.300	0.809	0.00014	0.00060
(DRAIN)																								
-	WD1 5151.70	-	1.00	50.36	17.100	0.000022	0.00033	0.375	0.013	-0.02002	0.01711	-	-	-	-	-	**0.345**	**0.001**	-	-	-	-	-	-
124	WD1 5151.50	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	-0.01997	0.01711	0.038	0.300	0.1466	0.00621	YES	0.105	0.000	0.817	0.376	0.300	0.944	0.00002	0.00035
(DRAIN)																								
-	WD1 5148.70	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	-0.01921	0.01711	-	-	-	-	-	**0.351**	**0.001**	-	-	-	-	-	-
125	WD1 5148.50	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	-0.01915	0.01711	0.038	0.300	0.1458	0.00615	YES	0.104	0.000	0.817	0.374	0.300	0.946	0.00002	0.00035
(DRAIN)																								
-	WD1 5145.70	-	1.00	50.36	17.100	0.000022	0.00032	0.375	0.013	-0.01839	0.01711	-	-	-	-	-	**0.361**	**0.001**	-	-	-	-	-	-
126	WD1 5145.50	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	-0.01834	0.01711	0.038	0.300	0.1450	0.00609	YES	0.105	0.000	0.817	0.375	0.300	0.944	0.00002	0.00035
(DRAIN)																								
-	WD1 5139.70	-	1.00	50.36	17.100	0.000074	0.00104	0.375	0.015	-0.01677	0.01711	-	-	-	-	-	**0.629**	**0.006**	-	-	-	-	-	-
127	WD1 5139.50	6.000	1.00	50.36	17.100	0.000077	0.00109	0.375	0.015	-0.01671	0.01711	-	-	-	-	-	**0.641**	**0.006**	0.817	1.991	0.300	0.255	0.00081	0.00028
(DRAIN)																								
-	WD1 5136.70	-	1.00	50.36	17.100	0.000022	0.00055	0.375	0.015	-0.01595	0.01711	-	-	-	-	-	**0.512**	**0.003**	-	-	-	-	-	-
128	WD1 5136.50	3.000	1.00	50.36	17.100	0.000026	0.00060	0.375	0.015	-0.01590	0.01711	-	-	-	-	-	**0.529**	**0.004**	0.817	1.597	0.300	0.312	0.00041	0.00019
(DRAIN)																								
-	WD1 5133.70	-	1.00	50.36	17.100	0.000022	0.00043	0.375	0.015	-0.01514	0.01711	-	-	-	-	-	**0.481**	**0.003**	-	-	-	-	-	-
129	WD1 5133.50	3.000	1.00	50.36	17.100	0.000026	0.00048	0.375	0.015	-0.01508	0.01711	-	-	-	-	-	**0.502**	**0.003**	0.817	1.497	0.300	0.331	0.00032	0.00016
(DRAIN)																								
-	WD1 5130.70	-	1.00	50.36	17.100	0.000022	0.00041	0.375	0.015	-0.01433	0.01711	-	-	-	-	-	**0.490**	**0.003**	-	-	-	-	-	-
130	WD1 5130.50	3.000	1.00	50.36	17.100	0.000026	0.00046	0.375	0.015	-0.01427	0.01711	-	-	-	-	-	**0.512**	**0.003**	0.817	1.523	0.300	0.326	0.00031	0.00015
(DRAIN)																								
-	WD1 5127.70	-	1.00	50.36	17.100	0.000022	0.00042	0.375	0.015	-0.01351	0.01711	-	-	-	-	-	**0.512**	**0.003**	-	-	-	-	-	-
131	WD1 5127.50	3.000	1.00	50.36	17.100	0.000026	0.00047	0.375	0.015	-0.01346	0.01711	-	-	-	-	-	**0.534**	**0.003**	0.817	1.587	0.300	0.314	0.00032	0.00015
(DRAIN)																								
-	WD1 5124.70	-	1.00	50.36	17.100	0.000022	0.00043	0.375	0.015	-0.01270	0.01711	-	-	-	-	-	**0.539**	**0.003**	-	-	-	-	-	-
132	WD1 5124.50	3.000	1.00	50.36	17.100	0.000026	0.00048	0.375	0.015	-0.01264	0.01711	-	-	-	-	-	**0.562**	**0.003**	0.817	1.669	0.300	0.300	0.00034	0.00014
(DRAIN)																								
-	WD1 5121.70	-	1.00	50.36	17.100	0.000022	0.00045	0.375	0.015	-0.01188	0.01711	-	-	-	-	-	**0.570**	**0.003**	-	-	-	-	-	-
133	WD1 5121.50	3.000	1.00	50.36	17.100	0.000026	0.00050	0.375	0.015	-0.01183	0.01711	-	-	-	-	-	**0.594**	**0.003**	0.817	1.763	0.300	0.285	0.00036	0.00014
(DRAIN)																								
-	WD1 5117.45	-	1.00	50.36	17.100	0.000044	0.00077	0.375	0.015	-0.01073	0.01711	-	-	-	-	-	**0.743**	**0.005**	-	-	-	-	-	-
134	WD1 5117.25	4.250	1.00	50.36	17.100	0.000047	0.00082	0.375	0.015	-0.01068	0.01711	-	-	-	-	-	**0.763**	**0.005**	0.817	2.311	0.300	0.221	0.00064	0.00018
(DRAIN)																								
-	WD1 5113.20	-	1.00	50.36	17.100	0.000022	0.00079	0.375	0.015	-0.00958	0.01711	-	-	-	-	-	**0.803**	**0.005**	-	-	-	-	-	-
135	WD1 5113.00	4.250	1.00	50.36	17.100	0.000026	0.00083	0.375	0.015	-0.00953	0.01711	-	-	-	-	-	**0.824**	**0.005**	0.817	2.490	0.300	0.206	0.00066	0.00017
(DRAIN)																								
-	WD1 5110.20	-	1.00	50.36	17.100	0.000022	0.00067	0.375	0.015	-0.00877	0.01711	-	-	-	-	-	**0.798**	**0.004**	-	-	-	-	-	-
136	WD1 5110.00	3.000	1.00	50.36	17.100	0.000026	0.00072	0.375	0.015	-0.00871	0.01711	-	-	-	-	-	**0.822**	**0.005**	0.817	2.464	0.300	0.208	0.00057	0.00015
(DRAIN)																								
-	WD1 5107.20	-	1.00	50.36	17.100	0.000022	0.00064	0.375	0.015	-0.00795	0.01711	-	-	-	-	-	**0.837**	**0.004**	-	-	-	-	-	-
137	WD1 5107.00	3.000	1.00	50.36	17.100	0.000026	0.00069	0.375	0.015	-0.00790	0.01711	-	-	-	-	-	**0.863**	**0.004**	0.817	2.576	0.300	0.200	0.00055	0.00014
(DRAIN)																								
-	WD1 5104.20	-	1.00	50.36	17.100	0.000022	0.00066	0.375	0.015	-0.00714	0.01711	-	-	-	-	-	**0.905**	**0.004**	-	-	-	-	-	-
138	WD1 5104.00	3.000	1.00	50.36	17.100	0.000026	0.00071	0.375	0.015	-0.00708	0.01711	-	-	-	-	-	**0.934**	**0.004**	0.817	2.782	0.300	0.186	0.00058	0.00013
-	WD1 5101.20	-	1.00	50.36	17.100	0.000048	0.00125	0.375	0.015	-0.00633	0.01711	-	-	-	-	-	**1.240**	**0.006**	-	-	-	-	-	-
139	WD1 5101.00	3.000	1.00	50.36	17.100	0.000051	0.00130	0.375	0.015	-0.00627	0.01711	-	-	-	-	-	**1.264**	**0.006**	0.817	3.858	0.300	0.136	0.00113	0.00018
-	WD1 5098.20	-	1.00	50.36	17.100	0.000048	0.00180	0.375	0.015	-0.00600	0.01711	-	-	-	-	-	**1.467**	**0.007**	-	-	-	-	-	-
140	WD1 5098.00	3.000	1.00	50.36	17.100	0.000051	0.00185	0.375	0.015	-0.00600	0.01711	-	-	-	-	-	**1.482**	**0.007**	0.817	4.590	0.300	0.115	0.00164	0.00021

WD1 Line Drainage

Drains and Scuppers with Uniform Cross Slope - 25 Year Intensity

Use Drain Type D-3, modified to 300 mm width. Use minimum drain spacing of 3.0 m.

Place 300mm long scuppers between drains at minimum spacing of 3.0 m on center, and at least 1.5 m from a drain.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "WD1" 52+98. The amount of flow crossing the deck is 0.00438 m^3/s.
BDA p.17-3 advises allowing a maximum of 0.003 m^3/s to flow across deck. Therefore, this configuration is **not adequate.**

Drains:

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	Depth 0.3m from Curb	Bypass Flow	Intercept. Flow
	m		mm/hr	m	km^2	m^3/s					m	m	**m**	**m**	m^3/s	m^3/s
-	WD1 5551.662	1.00	60.56	17.100	0.000000	0.00000	0.375	0.013	0.008500	0.02270	n/a	0.300	**0.000**	**0.000**	0.00000	n/a
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
1	WD1 5519.500	1.00	60.56	17.100	0.000026	0.00476	0.375	0.013	0.023651	0.02270	32.2	0.300	**0.806**	**0.012**	0.00137	0.00338
(Scupper)																
2	WD1 5516.000	1.00	60.56	17.100	0.000034	0.00199	0.375	0.013	0.025300	0.02270	3.5	0.300	**0.557**	**0.007**	0.00025	0.00174
(Scupper)																
3	WD1 5513.000	1.00	60.56	17.100	0.000026	0.00089	0.375	0.013	0.026713	0.02270	3.0	0.300	**0.399**	**0.003**	0.00002	0.00087
(Scupper)																
4	WD1 5508.000	1.00	60.56	17.100	0.000043	0.00122	0.375	0.013	0.029069	0.02270	5.0	0.300	**0.425**	**0.004**	0.00005	0.00117
(Scupper)																
5	WD1 5505.000	1.00	60.56	17.100	0.000026	0.00072	0.375	0.013	0.030482	0.02270	3.0	0.300	**0.339**	**0.001**	0.00000	0.00072
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
6	WD1 5487.000	1.00	60.56	17.100	0.000026	0.00258	0.375	0.013	0.035000	0.02270	18.0	0.300	**0.501**	**0.007**	0.00023	0.00236
(Scupper)																
7	WD1 5484.000	1.00	60.56	17.100	0.000026	0.00083	0.375	0.013	0.035000	0.02270	3.0	0.300	**0.328**	**0.001**	0.00000	0.00083
(Scupper)																
8	WD1 5481.000	1.00	60.56	17.100	0.000026	0.00067	0.375	0.013	0.035000	0.02270	3.0	0.300	**0.302**	**0.000**	0.00000	0.00067
(Scupper)																
9	WD1 5478.000	1.00	60.56	17.100	0.000026	0.00067	0.375	0.013	0.035000	0.02213	3.0	0.300	**0.303**	**0.000**	0.00000	0.00067
(Scupper)																
10	WD1 5475.000	1.00	60.56	17.100	0.000026	0.00067	0.375	0.013	0.035000	0.02130	3.0	0.300	**0.305**	**0.000**	0.00000	0.00067
(Scupper)																
11	WD1 5472.000	1.00	60.56	17.100	0.000026	0.00066	0.375	0.013	0.035000	0.02047	3.0	0.300	**0.307**	**0.000**	0.00000	0.00066
(Scupper)																
12	WD1 5469.000	1.00	60.56	17.100	0.000026	0.00066	0.375	0.013	0.034174	0.01964	3.0	0.300	**0.314**	**0.000**	0.00000	0.00066
(Scupper)																
13	WD1 5462.500	1.00	60.56	17.100	0.000026	0.00145	0.375	0.013	0.032125	0.01784	6.5	0.300	**0.446**	**0.005**	0.00007	0.00138
(Scupper)																
14	WD1 5459.500	1.00	60.56	17.100	0.000026	0.00072	0.375	0.013	0.031179	0.01701	3.0	0.300	**0.352**	**0.002**	0.00000	0.00071
(Scupper)																
15	WD1 5456.500	1.00	60.56	17.100	0.000026	0.00067	0.375	0.013	0.030233	0.01618	3.0	0.300	**0.353**	**0.002**	0.00000	0.00066
(Scupper)																
16	WD1 5453.000	1.00	60.56	17.100	0.000030	0.00079	0.375	0.013	0.029130	0.01521	3.5	0.300	**0.389**	**0.003**	0.00002	0.00078
(Scupper)																
17	WD1 5449.500	1.00	60.56	17.100	0.000030	0.00080	0.375	0.013	0.028026	0.01424	3.5	0.300	**0.406**	**0.003**	0.00002	0.00078
(Scupper)																
18	WD1 5446.500	1.00	60.56	17.100	0.000026	0.00068	0.375	0.013	0.027081	0.01341	3.0	0.300	**0.395**	**0.003**	0.00002	0.00067
(Scupper)																
19	WD1 5443.500	1.00	60.56	17.100	0.000026	0.00068	0.375	0.013	0.026135	0.01258	3.0	0.300	**0.407**	**0.003**	0.00002	0.00066
(Scupper)																
20	WD1 5440.500	1.00	60.56	17.100	0.000026	0.00068	0.375	0.013	0.025189	0.01175	3.0	0.300	**0.423**	**0.003**	0.00003	0.00066
(Scupper)																
21	WD1 5437.500	1.00	60.56	17.100	0.000026	0.00069	0.375	0.013	0.024243	0.01092	3.0	0.300	**0.440**	**0.003**	0.00003	0.00065
(Scupper)																
22	WD1 5434.500	1.00	60.56	17.100	0.000026	0.00069	0.375	0.013	0.023298	0.01009	3.0	0.300	**0.459**	**0.004**	0.00004	0.00065
(Scupper)																
23	WD1 5431.500	1.00	60.56	17.100	0.000026	0.00070	0.375	0.013	0.022352	0.00926	3.0	0.300	**0.481**	**0.004**	0.00005	0.00065
(Scupper)																
24	WD1 5428.500	1.00	60.56	17.100	0.000026	0.00071	0.375	0.013	0.021406	0.00843	3.0	0.300	**0.505**	**0.004**	0.00006	0.00064
(Scupper)																

Scuppers:

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	Depth 0.3m from Curb	K	L_T	L	E	Bypass Flow	Intercept. Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		**m**	**m**		m	m		m^3/s	m^3/s
1	WD1 5545.00	-	1.00	60.56	17.100	0.000114	0.00193	0.375	0.013	0.01164	0.02270	-	-	-	-	-	**0.895**	**0.007**	0.817	3.726	0.300	0.140	0.00166	0.00027
2	WD1 5542.00	3.000	1.00	60.56	17.100	0.000051	0.00253	0.375	0.013	0.01305	0.02270	-	-	-	-	-	**0.922**	**0.008**	0.817	3.896	0.300	0.134	0.00219	0.00034
3	WD1 5539.00	3.000	1.00	60.56	17.100	0.000051	0.00306	0.375	0.013	0.01446	0.02270	-	-	-	-	-	**0.928**	**0.009**	0.817	3.968	0.300	0.132	0.00266	0.00040
4	WD1 5536.00	3.000	1.00	60.56	17.100	0.000051	0.00353	0.375	0.013	0.01588	0.02270	-	-	-	-	-	**0.924**	**0.010**	0.817	3.982	0.300	0.132	0.00306	0.00046
5	WD1 5533.00	3.000	1.00	60.56	17.100	0.000051	0.00393	0.375	0.013	0.01729	0.02270	-	-	-	-	-	**0.912**	**0.011**	0.817	3.960	0.300	0.132	0.00341	0.00052
6	WD1 5530.00	3.000	1.00	60.56	17.100	0.000051	0.00428	0.375	0.013	0.01870	0.02270	-	-	-	-	-	**0.897**	**0.011**	0.817	3.916	0.300	0.134	0.00371	0.00057
7	WD1 5527.00	3.000	1.00	60.56	17.100	0.000051	0.00458	0.375	0.013	0.02012	0.02270	-	-	-	-	-	**0.879**	**0.012**	0.817	3.856	0.300	0.136	0.00396	0.00062
8	WD1 5524.00	3.000	1.00	60.56	17.100	0.000051	0.00483	0.375	0.013	0.02153	0.02270	-	-	-	-	-	**0.859**	**0.012**	0.817	3.785	0.300	0.138	0.00416	0.00067
9	WD1 5521.00	3.000	1.00	60.56	17.100	0.000051	0.00503	0.375	0.013	0.02294	0.02270	-	-	-	-	-	**0.838**	**0.012**	0.817	3.707	0.300	0.141	0.00432	0.00071
(DRAIN)																								
10	WD1 5518.00	3.000	1.00	60.56	17.100	0.000026	0.00181	0.375	0.013	0.02436	0.02270	-	-	-	-	-	**0.550**	**0.006**	0.817	2.327	0.300	0.220	0.00141	0.00040
(DRAIN)																								
11	WD1 5514.50	3.500	1.00	60.56	17.100	0.000026	0.00069	0.375	0.013	0.02601	0.02270	-	-	-	-	-	**0.368**	**0.002**	0.817	1.491	0.300	0.333	0.00046	0.00023
(DRAIN)																								
12	WD1 5510.50	4.000	1.00	60.56	17.100	0.000043	0.00075	0.375	0.013	0.02789	0.02270	-	-	-	-	-	**0.363**	**0.002**	0.817	1.479	0.300	0.335	0.00050	0.00025
(DRAIN)																								
13	WD1 5506.50	4.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	0.02978	0.02270	-	-	-	-	-	**0.296**	**0.000**	0.817	1.184	0.300	0.409	0.00028	0.00020
(DRAIN)																								
14	WD1 5500.50	6.000	1.00	60.56	17.100	0.000077	0.00131	0.375	0.013	0.03260	0.02270	-	-	-	-	-	**0.406**	**0.003**	0.817	1.704	0.300	0.294	0.00092	0.00038
15	WD1 5497.50	3.000	1.00	60.56	17.100	0.000051	0.00179	0.375	0.013	0.03402	0.02270	-	-	-	-	-	**0.445**	**0.005**	0.817	1.897	0.300	0.266	0.00131	0.00048
16	WD1 5494.50	3.000	1.00	60.56	17.100	0.000051	0.00218	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.471**	**0.006**	0.817	2.027	0.300	0.251	0.00164	0.00055
17	WD1 5491.50	3.000	1.00	60.56	17.100	0.000051	0.00251	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.496**	**0.007**	0.817	2.147	0.300	0.237	0.00191	0.00059
18	WD1 5488.50	3.000	1.00	60.56	17.100	0.000051	0.00278	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.516**	**0.008**	0.817	2.243	0.300	0.228	0.00215	0.00063
(DRAIN)																								
19	WD1 5485.50	3.000	1.00	60.56	17.100	0.000026	0.00066	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.301**	**0.000**	0.817	1.227	0.300	0.396	0.00040	0.00026
(DRAIN)																								
20	WD1 5482.50	3.000	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.257**	**0.000**	0.817	1.030	0.300	0.462	0.00023	0.00020
(DRAIN)																								
21	WD1 5479.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03500	0.02255	-	-	-	-	-	**0.257**	**0.000**	0.817	1.027	0.300	0.463	0.00023	0.00020
(DRAIN)																								
22	WD1 5476.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03500	0.02172	-	-	-	-	-	**0.259**	**0.000**	0.817	1.015	0.300	0.468	0.00023	0.00020
(DRAIN)																								
23	WD1 5473.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03500	0.02089	-	-	-	-	-	**0.261**	**0.000**	0.817	1.004	0.300	0.472	0.00023	0.00021
(DRAIN)																								
24	WD1 5470.50	3.000	1.00	60.56	17.100	0.000026	0.00043	0.375	0.013	0.03465	0.02006	-	-	-	-	-	**0.265**	**0.000**	0.817	0.997	0.300	0.475	0.00023	0.00021
(DRAIN)																								
25	WD1 5464.00	6.500	1.00	60.56	17.100	0.000086	0.00145	0.375	0.013	0.03260	0.01826	-	-	-	-	-	**0.440**	**0.005**	0.817	1.668	0.300	0.300	0.00101	0.00044
(DRAIN)																								
26	WD1 5461.00	3.000	1.00	60.56	17.100	0.000026	0.00051	0.375	0.013	0.03165	0.01743	-	-	-	-	-	**0.305**	**0.000**	0.817	1.078	0.300	0.444	0.00028	0.00023
(DRAIN)																								
27	WD1 5458.00	3.000	1.00	60.56	17.100	0.000026	0.00044	0.375	0.013	0.03071	0.01660	-	-	-	-	-	**0.297**	**0.000**	0.817	1.017	0.300	0.467	0.00023	0.00021
(DRAIN)																								
28	WD1 5454.75	3.250	1.00	60.56	17.100	0.000030	0.00051	0.375	0.013	0.02968	0.01570	-	-	-	-	-	**0.325**	**0.001**	0.817	1.089	0.300	0.440	0.00029	0.00023
(DRAIN)																								
29	WD1 5451.25	3.500	1.00	60.56	17.100	0.000030	0.00052	0.375	0.013	0.02858	0.01473	-	-	-	-	-	**0.339**	**0.001**	0.817	1.103	0.300	0.435	0.00030	0.00023
(DRAIN)																								
30	WD1 5448.00	3.250	1.00	60.56	17.100	0.000026	0.00046	0.375	0.013	0.02755	0.01383	-	-	-	-	-	**0.334**	**0.001**	0.817	1.045	0.300	0.456	0.00025	0.00021
(DRAIN)																								
31	WD1 5445.00	3.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.02661	0.01300	-	-	-	-	-	**0.343**	**0.001**	0.817	1.041	0.300	0.458	0.00024	0.00021
(DRAIN)																								
32	WD1 5442.00	3.000	1.00	60.56	17.100	0.000026	0.00045	0.375	0.013	0.02566	0.01217	-	-	-	-	-	**0.357**	**0.001**	0.817	1.047	0.300	0.455	0.00025	0.00021
(DRAIN)																								
33	WD1 5439.00	3.000	1.00	60.56	17.100	0.000026	0.00046	0.375	0.013	0.02472	0.01134	-	-	-	-	-	**0.372**	**0.002**	0.817	1.054	0.300	0.453	0.00025	0.00021
(DRAIN)																								
34	WD1 5436.00	3.000	1.00	60.56	17.100	0.000026	0.00047	0.375	0.013	0.02377	0.01051	-	-	-	-	-	**0.389**	**0.002**	0.817	1.062	0.300	0.450	0.00026	0.00021
(DRAIN)																								
35	WD1 5433.00	3.000	1.00	60.56	17.100	0.000026	0.00048	0.375	0.013	0.02282	0.00968	-	-	-	-	-	**0.408**	**0.002**	0.817	1.070	0.300	0.447	0.00026	0.00021
(DRAIN)																								
36	WD1 5430.00	3.000	1.00	60.56	17.100	0.000026	0.00049	0.375	0.013	0.02188	0.00885	-	-	-	-	-	**0.429**	**0.003**	0.817	1.078	0.300	0.444	0.00027	0.00022
(DRAIN)																								
37	WD1 5427.00	3.000	1.00	60.56	17.100	0.000026	0.00050	0.375	0.013	0.02093	0.00802	-	-	-	-	-	**0.453**	**0.003**	0.817	1.085	0.300	0.441	0.00028	0.00022

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
25	WD1 5425.500	1.00	60.56	17.100	0.000026	0.00071	0.375	0.013	0.020460	0.00760	3.0	0.300	**0.531**	**0.005**	0.00008	0.00064
(Scupper)																
26	WD1 5422.500	1.00	60.56	17.100	0.000026	0.00072	0.375	0.013	0.020000	0.00677	3.0	0.300	**0.554**	**0.005**	0.00009	0.00063
(Scupper)																
27	WD1 5419.500	1.00	60.56	17.100	0.000026	0.00072	0.375	0.013	0.020000	0.00617	3.0	0.300	**0.564**	**0.005**	0.00010	0.00063
(Scupper)																
28	WD1 5416.500	1.00	60.56	17.100	0.000026	0.00073	0.375	0.013	0.020000	0.00673	3.0	0.300	**0.556**	**0.005**	0.00009	0.00064
(Scupper)																
29	WD1 5413.000	1.00	60.56	17.100	0.000030	0.00086	0.375	0.013	0.020000	0.00737	3.5	0.300	**0.581**	**0.006**	0.00012	0.00073
(Scupper)																
30	WD1 5409.500	1.00	60.56	17.100	0.000030	0.00089	0.375	0.013	0.020000	0.00801	3.5	0.300	**0.579**	**0.006**	0.00013	0.00076
(Scupper)																
31	WD1 5406.500	1.00	60.56	17.100	0.000026	0.00077	0.375	0.013	0.020000	0.00856	3.0	0.300	**0.542**	**0.005**	0.00009	0.00068
(Scupper)																
32	WD1 5403.500	1.00	60.56	17.100	0.000026	0.00074	0.375	0.013	0.020000	0.00911	3.0	0.300	**0.529**	**0.005**	0.00008	0.00066
(Scupper)																
33	WD1 5400.000	1.00	60.56	17.100	0.000030	0.00087	0.375	0.013	0.020000	0.00976	3.5	0.300	**0.553**	**0.005**	0.00011	0.00076
(Scupper)																
34	WD1 5396.500	1.00	60.56	17.209	0.000030	0.00090	0.375	0.013	0.020000	0.01040	3.5	0.300	**0.554**	**0.005**	0.00011	0.00078
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
35	WD1 5380.500	1.00	60.56	17.709	0.000035	0.00279	0.375	0.013	0.020000	0.01334	16.0	0.300	**0.810**	**0.010**	0.00081	0.00198
(Scupper)																
36	WD1 5377.500	1.00	60.56	17.803	0.000027	0.00139	0.375	0.013	0.020000	0.01389	3.0	0.300	**0.618**	**0.006**	0.00024	0.00115
(Scupper)																
37	WD1 5374.500	1.00	60.56	17.897	0.000027	0.00092	0.375	0.013	0.020000	0.01444	3.0	0.300	**0.526**	**0.005**	0.00010	0.00082
(Scupper)																
38	WD1 5371.500	1.00	60.56	17.991	0.000027	0.00082	0.375	0.013	0.020000	0.01500	3.0	0.300	**0.499**	**0.004**	0.00007	0.00075
(Scupper)																
39	WD1 5368.500	1.00	60.56	18.084	0.000027	0.00080	0.375	0.013	0.020000	0.01555	3.0	0.300	**0.492**	**0.004**	0.00007	0.00074
(Scupper)																
40	WD1 5365.500	1.00	60.56	18.178	0.000027	0.00080	0.375	0.013	0.020000	0.01610	3.0	0.300	**0.490**	**0.004**	0.00006	0.00074
(Scupper)																
41	WD1 5362.500	1.00	60.56	18.272	0.000027	0.00081	0.375	0.013	0.020000	0.01665	3.0	0.300	**0.488**	**0.004**	0.00006	0.00075
(Scupper)																
42	WD1 5359.500	1.00	60.56	18.366	0.000028	0.00081	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.486**	**0.004**	0.00006	0.00075
(Scupper)																
43	WD1 5356.500	1.00	60.56	18.459	0.000028	0.00082	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.487**	**0.004**	0.00006	0.00075
(Scupper)																
44	WD1 5353.500	1.00	60.56	18.553	0.000028	0.00082	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.489**	**0.004**	0.00007	0.00076
(Scupper)																
45	WD1 5350.500	1.00	60.56	18.647	0.000028	0.00083	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.490**	**0.004**	0.00007	0.00076
(Scupper)																
46	WD1 5347.000	1.00	60.56	18.756	0.000033	0.00098	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.521**	**0.004**	0.00010	0.00088
(Scupper)																
47	WD1 5343.500	1.00	60.56	18.866	0.000033	0.00101	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.527**	**0.005**	0.00011	0.00090
(Scupper)																
48	WD1 5340.500	1.00	60.56	18.959	0.000028	0.00088	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.500**	**0.004**	0.00008	0.00080
(Scupper)																
49	WD1 5337.500	1.00	60.56	19.053	0.000029	0.00086	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.496**	**0.004**	0.00007	0.00078
(Scupper)																
50	WD1 5334.000	1.00	60.56	19.163	0.000034	0.00100	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.526**	**0.005**	0.00011	0.00090
(Scupper)																
51	WD1 5330.500	1.00	60.56	19.272	0.000034	0.00104	0.375	0.013	0.019118	0.01711	3.5	0.300	**0.548**	**0.005**	0.00012	0.00091
(Scupper)																
52	WD1 5327.500	1.00	60.56	19.366	0.000029	0.00092	0.375	0.013	0.017353	0.01711	3.0	0.300	**0.556**	**0.004**	0.00012	0.00080
(Scupper)																
53	WD1 5324.500	1.00	60.56	19.459	0.000029	0.00093	0.375	0.013	0.015588	0.01711	3.0	0.300	**0.597**	**0.005**	0.00014	0.00078
(Scupper)																
54	WD1 5321.000	1.00	60.56	19.569	0.000034	0.00112	0.375	0.013	0.013529	0.01711	3.5	0.300	**0.700**	**0.005**	0.00025	0.00087
(Scupper)																
55	WD1 5318.000	1.00	60.56	19.663	0.000029	0.00108	0.375	0.013	0.011765	0.01711	3.0	0.300	**0.752**	**0.005**	0.00028	0.00080
(Scupper)																
56	WD1 5315.000	1.00	60.56	19.756	0.000030	0.00112	0.375	0.013	0.010000	0.01711	3.0	0.300	**0.845**	**0.005**	0.00035	0.00077
(Scupper)																
57	WD1 5312.000	1.00	60.56	19.850	0.000030	0.00120	0.375	0.013	0.008235	0.01711	3.0	0.300	**0.979**	**0.006**	0.00045	0.00075
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
58	WD1 5294.000	1.00	60.56	20.413	0.000031	0.00573	0.375	0.013	-0.002353	0.01711	18.0	0.300	**3.852**	**0.008**	0.00461	0.00111
(Scupper)																
59	WD1 5291.000	1.00	60.56	20.506	0.000031	0.00541	0.375	0.013	-0.004118	0.01711	3.0	0.300	**2.658**	**0.010**	0.00393	0.00148

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
(DRAIN)																								
38	WD1 5424.00	3.000	1.00	60.56	17.100	0.000026	0.00051	0.375	0.013	0.02000	0.00719	-	-	-	-	-	**0.481**	**0.004**	0.817	1.092	0.300	0.439	0.00029	0.00023
(DRAIN)																								
39	WD1 5421.00	3.000	1.00	60.56	17.100	0.000026	0.00053	0.375	0.013	0.02000	0.00636	-	-	-	-	-	**0.497**	**0.004**	0.817	1.063	0.300	0.449	0.00029	0.00024
(DRAIN)																								
40	WD1 5418.00	3.000	1.00	60.56	17.100	0.000026	0.00053	0.375	0.013	0.02000	0.00645	-	-	-	-	-	**0.497**	**0.004**	0.817	1.073	0.300	0.446	0.00029	0.00024
(DRAIN)																								
41	WD1 5414.75	3.250	1.00	60.56	17.100	0.000030	0.00060	0.375	0.013	0.02000	0.00705	-	-	-	-	-	**0.512**	**0.004**	0.817	1.160	0.300	0.417	0.00035	0.00025
(DRAIN)																								
42	WD1 5411.25	3.500	1.00	60.56	17.100	0.000030	0.00063	0.375	0.013	0.02000	0.00769	-	-	-	-	-	**0.514**	**0.004**	0.817	1.216	0.300	0.399	0.00038	0.00025
(DRAIN)																								
43	WD1 5408.00	3.250	1.00	60.56	17.100	0.000026	0.00056	0.375	0.013	0.02000	0.00829	-	-	-	-	-	**0.485**	**0.004**	0.817	1.184	0.300	0.409	0.00033	0.00023
(DRAIN)																								
44	WD1 5405.00	3.000	1.00	60.56	17.100	0.000026	0.00052	0.375	0.013	0.02000	0.00884	-	-	-	-	-	**0.467**	**0.003**	0.817	1.173	0.300	0.412	0.00031	0.00022
(DRAIN)																								
45	WD1 5401.75	3.250	1.00	60.56	17.100	0.000030	0.00059	0.375	0.013	0.02000	0.00944	-	-	-	-	-	**0.481**	**0.004**	0.817	1.255	0.300	0.389	0.00036	0.00023
(DRAIN)																								
46	WD1 5398.25	3.500	1.00	60.56	17.155	0.000030	0.00062	0.375	0.013	0.02000	0.01008	-	-	-	-	-	**0.484**	**0.004**	0.817	1.307	0.300	0.375	0.00039	0.00023
(DRAIN)																								
47	WD1 5394.50	3.750	1.00	60.56	17.272	0.000035	0.00070	0.375	0.013	0.02000	0.01077	-	-	-	-	-	**0.501**	**0.004**	0.817	1.404	0.300	0.351	0.00045	0.00025
48	WD1 5391.50	3.000	1.00	60.56	17.366	0.000052	0.00134	0.375	0.013	0.02000	0.01132	-	-	-	-	-	**0.633**	**0.007**	0.817	1.872	0.300	0.270	0.00098	0.00036
49	WD1 5388.50	3.000	1.00	60.56	17.459	0.000052	0.00186	0.375	0.013	0.02000	0.01187	-	-	-	-	-	**0.711**	**0.008**	0.817	2.183	0.300	0.234	0.00143	0.00044
50	WD1 5385.50	3.000	1.00	60.56	17.553	0.000053	0.00232	0.375	0.013	0.02000	0.01242	-	-	-	-	-	**0.765**	**0.009**	0.817	2.427	0.300	0.211	0.00183	0.00049
51	WD1 5382.50	3.000	1.00	60.56	17.647	0.000053	0.00273	0.375	0.013	0.02000	0.01297	-	-	-	-	-	**0.806**	**0.010**	0.817	2.632	0.300	0.196	0.00219	0.00053
(DRAIN)																								
52	WD1 5379.00	3.500	1.00	60.56	17.756	0.000027	0.00126	0.375	0.013	0.02000	0.01362	-	-	-	-	-	**0.599**	**0.006**	0.817	1.933	0.300	0.262	0.00093	0.00033
(DRAIN)																								
53	WD1 5376.00	3.000	1.00	60.56	17.850	0.000027	0.00069	0.375	0.013	0.02000	0.01417	-	-	-	-	-	**0.474**	**0.003**	0.817	1.516	0.300	0.328	0.00046	0.00023
(DRAIN)																								
54	WD1 5373.00	3.000	1.00	60.56	17.944	0.000027	0.00055	0.375	0.013	0.02000	0.01472	-	-	-	-	-	**0.433**	**0.003**	0.817	1.398	0.300	0.353	0.00036	0.00019
(DRAIN)																								
55	WD1 5370.00	3.000	1.00	60.56	18.038	0.000027	0.00053	0.375	0.013	0.02000	0.01527	-	-	-	-	-	**0.423**	**0.002**	0.817	1.388	0.300	0.355	0.00034	0.00019
(DRAIN)																								
56	WD1 5367.00	3.000	1.00	60.56	18.131	0.000027	0.00053	0.375	0.013	0.02000	0.01582	-	-	-	-	-	**0.419**	**0.002**	0.817	1.400	0.300	0.352	0.00034	0.00019
(DRAIN)																								
57	WD1 5364.00	3.000	1.00	60.56	18.225	0.000027	0.00053	0.375	0.013	0.02000	0.01637	-	-	-	-	-	**0.417**	**0.002**	0.817	1.415	0.300	0.349	0.00034	0.00018
(DRAIN)																								
58	WD1 5361.00	3.000	1.00	60.56	18.319	0.000027	0.00053	0.375	0.013	0.02000	0.01693	-	-	-	-	-	**0.415**	**0.002**	0.817	1.431	0.300	0.345	0.00035	0.00018
(DRAIN)																								
59	WD1 5358.00	3.000	1.00	60.56	18.413	0.000028	0.00053	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.415**	**0.002**	0.817	1.438	0.300	0.344	0.00035	0.00018
(DRAIN)																								
60	WD1 5355.00	3.000	1.00	60.56	18.506	0.000028	0.00053	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.416**	**0.002**	0.817	1.442	0.300	0.343	0.00035	0.00018
(DRAIN)																								
61	WD1 5352.00	3.000	1.00	60.56	18.600	0.000028	0.00054	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.417**	**0.002**	0.817	1.446	0.300	0.342	0.00035	0.00018
(DRAIN)																								
62	WD1 5348.75	3.250	1.00	60.56	18.702	0.000033	0.00062	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.440**	**0.003**	0.817	1.536	0.300	0.324	0.00042	0.00020
(DRAIN)																								
63	WD1 5345.25	3.500	1.00	60.56	18.811	0.000033	0.00066	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.449**	**0.003**	0.817	1.573	0.300	0.317	0.00045	0.00021
(DRAIN)																								
64	WD1 5342.00	3.250	1.00	60.56	18.913	0.000028	0.00059	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.431**	**0.003**	0.817	1.501	0.300	0.331	0.00039	0.00019
(DRAIN)																								
65	WD1 5339.00	3.000	1.00	60.56	19.006	0.000029	0.00056	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.423**	**0.002**	0.817	1.470	0.300	0.337	0.00037	0.00019
(DRAIN)																								
66	WD1 5335.75	3.250	1.00	60.56	19.108	0.000033	0.00064	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.444**	**0.003**	0.817	1.554	0.300	0.320	0.00043	0.00020
(DRAIN)																								
67	WD1 5332.25	3.500	1.00	60.56	19.217	0.000034	0.00068	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.454**	**0.003**	0.817	1.591	0.300	0.313	0.00046	0.00021
(DRAIN)																								
68	WD1 5329.00	3.250	1.00	60.56	19.319	0.000029	0.00062	0.375	0.013	0.01824	0.01711	-	-	-	-	-	**0.464**	**0.003**	0.817	1.618	0.300	0.309	0.00043	0.00019
(DRAIN)																								
69	WD1 5326.00	3.000	1.00	60.56	19.413	0.000029	0.00061	0.375	0.013	0.01647	0.01711	-	-	-	-	-	**0.493**	**0.003**	0.817	1.713	0.300	0.293	0.00043	0.00018
(DRAIN)																								
70	WD1 5322.75	3.250	1.00	60.56	19.514	0.000034	0.00072	0.375	0.013	0.01456	0.01711	-	-	-	-	-	**0.567**	**0.004**	0.817	1.980	0.300	0.256	0.00054	0.00019
(DRAIN)																								
71	WD1 5319.50	3.250	1.00	60.56	19.616	0.000029	0.00075	0.375	0.013	0.01265	0.01711	-	-	-	-	-	**0.628**	**0.004**	0.817	2.189	0.300	0.233	0.00058	0.00017
(DRAIN)																								
72	WD1 5316.50	3.000	1.00	60.56	19.709	0.000030	0.00078	0.375	0.013	0.01088	0.01711	-	-	-	-	-	**0.700**	**0.004**	0.817	2.433	0.300	0.211	0.00061	0.00016
(DRAIN)																								
73	WD1 5313.50	3.000	1.00	60.56	19.803	0.000030	0.00085	0.375	0.013	0.00912	0.01711	-	-	-	-	-	**0.808**	**0.005**	0.817	2.808	0.300	0.184	0.00069	0.00016
(DRAIN)																								
74	WD1 5310.50	3.000	1.00	60.56	19.897	0.000030	0.00096	0.375	0.013	0.00735	0.01711	-	-	-	-	-	**0.967**	**0.005**	0.817	3.358	0.300	0.155	0.00081	0.00015
75	WD1 5307.50	3.000	1.00	60.56	19.991	0.000060	0.00183	0.375	0.013	0.00559	0.01711	-	-	-	-	-	**1.461**	**0.006**	0.817	5.192	0.300	0.102	0.00164	0.00019
76	WD1 5304.50	3.000	1.00	60.56	20.084	0.000060	0.00266	0.375	0.013	0.00382	0.01711	-	-	-	-	-	**2.134**	**0.007**	0.817	7.638	0.300	0.070	0.00248	0.00019
77	WD1 5301.50	3.000	1.00	60.56	20.178	0.000061	0.00350	0.375	0.013	0.00206	0.01711	-	-	-	-	-	**3.483**	**0.007**	0.817	#####	0.300	0.043	0.00335	0.00015
78	WD1 5298.50	3.000	1.00	60.56	20.272	0.000061	**0.00438**	0.375	0.013	0.00029	0.01711	-	-	-	-	-	**12.783**	**0.004**	0.817	#####	0.300	0.012	0.00433	0.00005
79	WD1 5295.50	3.000	1.00	60.56	20.366	0.000061	0.00537	0.375	0.013	-0.00147	0.01711	-	-	-	-	-	**5.043**	**0.007**	0.817	#####	0.300	0.029	0.00521	0.00016
(DRAIN)																								
80	WD1 5292.50	3.000	1.00	60.56	20.459	0.000031	0.00513	0.375	0.013	-0.00324	0.01711	-	-	-	-	-	**3.030**	**0.009**	0.817	#####	0.300	0.048	0.00489	0.00025
(DRAIN)																								

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	Depth 0.3m from Curb	Bypass Flow	Intercept. Flow
	m		mm/hr	m	km^2	m^3/s					m	m	m	m	m^3/s	m^3/s
(Scupper)																
60	WD1 5288.000	1.00	60.56	20.600	0.000031	0.00468	0.375	0.013	-0.005882	0.01711	3.0	0.300	**2.015**	**0.010**	0.00305	0.00164
(Scupper)																
61	WD1 5285.000	1.00	60.56	20.694	0.000031	0.00379	0.375	0.013	-0.007547	0.01711	3.0	0.300	**1.580**	**0.010**	0.00216	0.00163
(Scupper)																
62	WD1 5282.000	1.00	60.56	20.788	0.000031	0.00292	0.375	0.013	-0.009412	0.01711	3.0	0.300	**1.258**	**0.009**	0.00141	0.00151
(Scupper)																
63	WD1 5279.000	1.00	60.56	20.881	0.000031	0.00220	0.375	0.013	-0.011176	0.01711	3.0	0.300	**1.016**	**0.008**	0.00086	0.00133
(Scupper)																
64	WD1 5276.000	1.00	60.56	20.975	0.000031	0.00168	0.375	0.013	-0.012941	0.01711	3.0	0.300	**0.839**	**0.007**	0.00052	0.00117
(Scupper)																
65	WD1 5273.000	1.00	60.56	21.069	0.000032	0.00136	0.375	0.013	-0.014706	0.01711	3.0	0.300	**0.715**	**0.006**	0.00032	0.00104
(Scupper)																
66	WD1 5270.000	1.00	60.56	21.163	0.000032	0.00118	0.375	0.013	-0.016471	0.01711	3.0	0.300	**0.632**	**0.005**	0.00021	0.00097
(Scupper)																
67	WD1 5267.000	1.00	60.56	21.256	0.000032	0.00108	0.375	0.013	-0.018235	0.01711	3.0	0.300	**0.574**	**0.005**	0.00015	0.00093
(Scupper)																
68	WD1 5264.000	1.00	60.56	21.350	0.000032	0.00103	0.375	0.013	-0.020000	0.01711	3.0	0.300	**0.531**	**0.005**	0.00011	0.00091
(Scupper)																
69	WD1 5261.000	1.00	60.56	21.444	0.000032	0.00099	0.375	0.013	-0.021765	0.01711	3.0	0.300	**0.496**	**0.004**	0.00008	0.00090
(Scupper)																
70	WD1 5257.000	1.00	60.56	21.569	0.000043	0.00129	0.375	0.013	-0.024118	0.01711	4.0	0.300	**0.514**	**0.005**	0.00012	0.00116
(Scupper)																
71	WD1 5254.000	1.00	60.56	21.663	0.000032	0.00099	0.375	0.013	-0.025882	0.01711	3.0	0.300	**0.445**	**0.004**	0.00005	0.00094
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
72	WD1 5240.500	1.00	60.56	22.084	0.000050	0.00310	0.375	0.013	-0.030000	0.01711	13.5	0.300	**0.624**	**0.010**	0.00054	0.00256
(Scupper)																
73	WD1 5237.500	1.00	60.56	22.178	0.000033	0.00131	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.451**	**0.005**	0.00007	0.00124
(Scupper)																
74	WD1 5234.000	1.00	60.56	22.288	0.000039	0.00111	0.375	0.013	-0.030000	0.01711	3.5	0.300	**0.425**	**0.004**	0.00004	0.00107
(Scupper)																
75	WD1 5231.000	1.00	60.56	22.381	0.000034	0.00093	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.397**	**0.003**	0.00002	0.00091
(Scupper)																
76	WD1 5228.000	1.00	60.56	22.475	0.000034	0.00092	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.396**	**0.003**	0.00002	0.00090
(Scupper)																
77	WD1 5225.000	1.00	60.56	22.569	0.000034	0.00092	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.396**	**0.003**	0.00002	0.00090
78	WD1 5219.500	1.00	60.56	22.741	0.000125	0.00214	0.375	0.013	-0.030000	0.01711	5.5	0.300	**0.543**	**0.007**	0.00025	0.00189
(Scupper)																
79	WD1 5216.500	1.00	60.56	22.834	0.000034	0.00111	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.424**	**0.004**	0.00004	0.00107
(Scupper)																
80	WD1 5213.500	1.00	60.56	22.928	0.000034	0.00096	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.401**	**0.003**	0.00002	0.00093
(Scupper)																
81	WD1 5210.500	1.00	60.56	23.022	0.000035	0.00095	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.400**	**0.003**	0.00002	0.00092
(Scupper)																
82	WD1 5207.500	1.00	60.56	23.116	0.000035	0.00095	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.400**	**0.003**	0.00002	0.00093
(Scupper)																
83	WD1 5204.500	1.00	60.56	23.209	0.000035	0.00095	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.401**	**0.003**	0.00002	0.00093
(Scupper)																
84	WD1 5201.500	1.00	60.56	23.303	0.000035	0.00096	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.402**	**0.003**	0.00002	0.00093
(Scupper)																
85	WD1 5198.500	1.00	60.56	23.397	0.000035	0.00096	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.402**	**0.003**	0.00003	0.00094
(Scupper)																
86	WD1 5195.500	1.00	60.56	23.491	0.000035	0.00097	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.403**	**0.003**	0.00003	0.00094
(Scupper)																
87	WD1 5192.000	1.00	60.56	23.600	0.000041	0.00115	0.375	0.013	-0.030000	0.01711	3.5	0.300	**0.430**	**0.004**	0.00005	0.00110
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
88	WD1 5174.000	1.00	60.56	24.163	0.000036	0.00401	0.375	0.013	-0.026068	0.01711	18.0	0.300	**0.750**	**0.012**	0.00103	0.00298
(Scupper)																
89	WD1 5171.000	1.00	60.56	24.256	0.000036	0.00184	0.375	0.013	-0.025254	0.01711	3.0	0.300	**0.571**	**0.007**	0.00025	0.00159
(Scupper)																
90	WD1 5168.000	1.00	60.56	24.350	0.000037	0.00121	0.375	0.013	-0.024441	0.01711	3.0	0.300	**0.498**	**0.005**	0.00010	0.00111
(Scupper)																
91	WD1 5165.000	1.00	60.56	24.444	0.000037	0.00110	0.375	0.013	-0.023627	0.01711	3.0	0.300	**0.491**	**0.005**	0.00009	0.00101
(Scupper)																
92	WD1 5162.000	1.00	60.56	24.538	0.000037	0.00110	0.375	0.013	-0.022814	0.01711	3.0	0.300	**0.501**	**0.005**	0.00010	0.00100
(Scupper)																
93	WD1 5159.000	1.00	60.56	17.100	0.000026	0.00092	0.375	0.013	-0.022000	0.01711	3.0	0.300	**0.480**	**0.004**	0.00007	0.00085
(Scupper)																
(Scupper)																
94	WD1 5153.000	1.00	60.56	17.100	0.000026	0.00132	0.375	0.013	-0.020373	0.01711	6.0	0.300	**0.576**	**0.006**	0.00019	0.00113

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	Depth 0.3m from Curb	K	L_T	L	E	Bypass Flow	Intercept. Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		m	m		m	m		m^3/s	m^3/s
81	WD1 5289.50	3.000	1.00	60.56	20.553	0.000031	0.00445	0.375	0.013	-0.00500	0.01711	-	-	-	-	-	**2.188**	**0.009**	0.817	8.070	0.300	0.066	0.00416	0.00029
(DRAIN)																								
82	WD1 5286.50	3.000	1.00	60.56	20.647	0.000031	0.00357	0.375	0.013	-0.00676	0.01711	-	-	-	-	-	**1.668**	**0.009**	0.817	6.136	0.300	0.086	0.00326	0.00031
(DRAIN)																								
83	WD1 5283.50	3.000	1.00	60.56	20.741	0.000031	0.00269	0.375	0.013	-0.00853	0.01711	-	-	-	-	-	**1.297**	**0.009**	0.817	4.739	0.300	0.111	0.00239	0.00030
(DRAIN)																								
84	WD1 5280.50	3.000	1.00	60.56	20.834	0.000031	0.00194	0.375	0.013	-0.01029	0.01711	-	-	-	-	-	**1.021**	**0.007**	0.817	3.692	0.300	0.141	0.00167	0.00027
(DRAIN)																								
85	WD1 5277.50	3.000	1.00	60.56	20.928	0.000031	0.00140	0.375	0.013	-0.01206	0.01711	-	-	-	-	-	**0.817**	**0.006**	0.817	2.924	0.300	0.177	0.00115	0.00025
(DRAIN)																								
86	WD1 5274.50	3.000	1.00	60.56	21.022	0.000032	0.00105	0.375	0.013	-0.01382	0.01711	-	-	-	-	-	**0.675**	**0.005**	0.817	2.391	0.300	0.214	0.00083	0.00023
(DRAIN)																								
87	WD1 5271.50	3.000	1.00	60.56	21.116	0.000032	0.00086	0.375	0.013	-0.01559	0.01711	-	-	-	-	-	**0.579**	**0.004**	0.817	2.041	0.300	0.249	0.00064	0.00021
(DRAIN)																								
88	WD1 5268.50	3.000	1.00	60.56	21.209	0.000032	0.00075	0.375	0.013	-0.01735	0.01711	-	-	-	-	-	**0.516**	**0.004**	0.817	1.812	0.300	0.278	0.00054	0.00021
(DRAIN)																								
89	WD1 5265.50	3.000	1.00	60.56	21.303	0.000032	0.00069	0.375	0.013	-0.01912	0.01711	-	-	-	-	-	**0.471**	**0.003**	0.817	1.652	0.300	0.303	0.00048	0.00021
(DRAIN)																								
90	WD1 5262.50	3.000	1.00	60.56	21.397	0.000032	0.00066	0.375	0.013	-0.02088	0.01711	-	-	-	-	-	**0.437**	**0.003**	0.817	1.531	0.300	0.325	0.00044	0.00021
(DRAIN)																								
91	WD1 5259.00	3.500	1.00	60.56	21.506	0.000043	0.00081	0.375	0.013	-0.02294	0.01711	-	-	-	-	-	**0.446**	**0.003**	0.817	1.583	0.300	0.315	0.00056	0.00026
(DRAIN)																								
92	WD1 5255.50	3.500	1.00	60.56	21.616	0.000032	0.00067	0.375	0.013	-0.02500	0.01711	-	-	-	-	-	**0.394**	**0.002**	0.817	1.391	0.300	0.354	0.00044	0.00024
(DRAIN)																								
93	WD1 5251.75	3.750	1.00	60.56	21.733	0.000049	0.00088	0.375	0.013	-0.02721	0.01711	-	-	-	-	-	**0.413**	**0.003**	0.817	1.477	0.300	0.335	0.00058	0.00029
94	WD1 5248.75	3.000	1.00	60.56	21.827	0.000065	0.00169	0.375	0.013	-0.02897	0.01711	-	-	-	-	-	**0.508**	**0.006**	0.817	1.874	0.300	0.269	0.00124	0.00046
95	WD1 5245.75	3.000	1.00	60.56	21.920	0.000066	0.00235	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.562**	**0.008**	0.817	2.107	0.300	0.242	0.00178	0.00057
96	WD1 5242.75	3.000	1.00	60.56	22.014	0.000066	0.00290	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.608**	**0.009**	0.817	2.302	0.300	0.222	0.00226	0.00065
(DRAIN)																								
97	WD1 5239.00	3.750	1.00	60.56	22.131	0.000033	0.00110	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.423**	**0.004**	0.817	1.532	0.300	0.324	0.00074	0.00036
(DRAIN)																								
98	WD1 5235.75	3.250	1.00	60.56	22.233	0.000039	0.00073	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.363**	**0.002**	0.817	1.289	0.300	0.379	0.00045	0.00028
(DRAIN)																								
99	WD1 5232.50	3.250	1.00	60.56	22.334	0.000034	0.00061	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.339**	**0.001**	0.817	1.196	0.300	0.405	0.00036	0.00025
(DRAIN)																								
100	WD1 5229.50	3.000	1.00	60.56	22.428	0.000034	0.00059	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.335**	**0.001**	0.817	1.180	0.300	0.410	0.00035	0.00024
(DRAIN)																								
101	WD1 5226.50	3.000	1.00	60.56	22.522	0.000034	0.00059	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.335**	**0.001**	0.817	1.182	0.300	0.410	0.00035	0.00024
(DRAIN)																								
(DRAIN)																								
102	WD1 5218.00	8.500	1.00	60.56	22.788	0.000034	0.00083	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.380**	**0.002**	0.817	1.360	0.300	0.361	0.00053	0.00030
(DRAIN)																								
103	WD1 5215.00	3.000	1.00	60.56	22.881	0.000034	0.00062	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.342**	**0.001**	0.817	1.207	0.300	0.402	0.00037	0.00025
(DRAIN)																								
104	WD1 5212.00	3.000	1.00	60.56	22.975	0.000034	0.00061	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.339**	**0.001**	0.817	1.194	0.300	0.406	0.00036	0.00025
(DRAIN)																								
105	WD1 5209.00	3.000	1.00	60.56	23.069	0.000035	0.00061	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.339**	**0.001**	0.817	1.195	0.300	0.406	0.00036	0.00025
(DRAIN)																								
106	WD1 5206.00	3.000	1.00	60.56	23.163	0.000035	0.00061	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.339**	**0.001**	0.817	1.197	0.300	0.405	0.00036	0.00025
(DRAIN)																								
107	WD1 5203.00	3.000	1.00	60.56	23.256	0.000035	0.00062	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.340**	**0.001**	0.817	1.200	0.300	0.404	0.00037	0.00025
(DRAIN)																								
108	WD1 5200.00	3.000	1.00	60.56	23.350	0.000035	0.00062	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.341**	**0.001**	0.817	1.202	0.300	0.404	0.00037	0.00025
(DRAIN)																								
109	WD1 5197.00	3.000	1.00	60.56	23.444	0.000035	0.00062	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.341**	**0.001**	0.817	1.204	0.300	0.403	0.00037	0.00025
(DRAIN)																								
110	WD1 5193.75	3.250	1.00	60.56	23.545	0.000041	0.00072	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.361**	**0.002**	0.817	1.284	0.300	0.380	0.00045	0.00028
(DRAIN)																								
111	WD1 5190.50	3.250	1.00	60.56	23.647	0.000035	0.00065	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.347**	**0.001**	0.817	1.226	0.300	0.397	0.00039	0.00026
112	WD1 5187.50	3.000	1.00	60.56	23.741	0.000071	0.00160	0.375	0.013	-0.02973	0.01711	-	-	-	-	-	**0.489**	**0.006**	0.817	1.801	0.300	0.280	0.00115	0.00045
113	WD1 5184.50	3.000	1.00	60.56	23.834	0.000072	0.00236	0.375	0.013	-0.02892	0.01711	-	-	-	-	-	**0.576**	**0.008**	0.817	2.158	0.300	0.236	0.00181	0.00056
114	WD1 5181.50	3.000	1.00	60.56	23.928	0.000072	0.00302	0.375	0.013	-0.02810	0.01711	-	-	-	-	-	**0.643**	**0.010**	0.817	2.434	0.300	0.211	0.00239	0.00064
115	WD1 5178.50	3.000	1.00	60.56	24.022	0.000072	0.00361	0.375	0.013	-0.02729	0.01711	-	-	-	-	-	**0.700**	**0.011**	0.817	2.669	0.300	0.193	0.00291	0.00070
116	WD1 5175.50	3.000	1.00	60.56	24.116	0.000072	0.00414	0.375	0.013	-0.02647	0.01711	-	-	-	-	-	**0.751**	**0.012**	0.817	2.879	0.300	0.180	0.00339	0.00074
(DRAIN)																								
117	WD1 5172.50	3.000	1.00	60.56	24.209	0.000036	0.00164	0.375	0.013	-0.02566	0.01711	-	-	-	-	-	**0.542**	**0.006**	0.817	1.989	0.300	0.255	0.00122	0.00042
(DRAIN)																								
118	WD1 5169.50	3.000	1.00	60.56	24.303	0.000036	0.00087	0.375	0.013	-0.02485	0.01711	-	-	-	-	-	**0.436**	**0.003**	0.817	1.553	0.300	0.320	0.00059	0.00028
(DRAIN)																								
119	WD1 5166.50	3.000	1.00	60.56	24.397	0.000037	0.00072	0.375	0.013	-0.02403	0.01711	-	-	-	-	-	**0.415**	**0.003**	0.817	1.467	0.300	0.338	0.00048	0.00024
(DRAIN)																								
120	WD1 5163.50	3.000	1.00	60.56	24.491	0.000037	0.00071	0.375	0.013	-0.02322	0.01711	-	-	-	-	-	**0.421**	**0.003**	0.817	1.487	0.300	0.333	0.00047	0.00024
(DRAIN)																								
121	WD1 5160.50	3.000	1.00	60.56	24.584	0.000037	0.00072	0.375	0.013	-0.02241	0.01711	-	-	-	-	-	**0.433**	**0.003**	0.817	1.528	0.300	0.325	0.00049	0.00023
(DRAIN)																								
122	WD1 5157.50	3.000	1.00	60.56	17.100	0.000026	0.00050	0.375	0.013	-0.02159	0.01711	-	-	-	-	-	**0.387**	**0.002**	0.817	1.342	0.300	0.366	0.00032	0.00018
123	WD1 5154.50	3.000	1.00	60.56	17.100	0.000051	0.00119	0.375	0.013	-0.02078	0.01711	-	-	-	-	-	**0.547**	**0.005**	0.817	1.971	0.300	0.257	0.00088	0.00031
(DRAIN)																								

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	Depth 0.3m from Curb	Bypass Flow	Intercept. Flow
	m		mm/hr	m	km^2	m^3/s					m	m	m	m	m^3/s	m^3/s
(Scupper)																
95	WD1 5150.000	1.00	60.56	17.100	0.000026	0.00085	0.375	0.013	-0.019559	0.01711	3.0	0.300	**0.502**	**0.004**	0.00008	0.00078
(Scupper)																
96	WD1 5147.000	1.00	60.56	17.100	0.000026	0.00077	0.375	0.013	-0.018746	0.01711	3.0	0.300	**0.497**	**0.004**	0.00007	0.00071
(Scupper)																
97	WD1 5144.000	1.00	60.56	17.100	0.000026	0.00077	0.375	0.013	-0.017932	0.01711	3.0	0.300	**0.509**	**0.004**	0.00007	0.00070
(Scupper)																
98	WD1 5138.000	1.00	60.56	17.100	0.000026	0.00149	0.375	0.015	-0.016305	0.01711	6.0	0.300	**0.732**	**0.007**	0.00037	0.00113
(Scupper)																
99	WD1 5135.000	1.00	60.56	17.100	0.000026	0.00101	0.375	0.015	-0.015492	0.01711	3.0	0.300	**0.653**	**0.005**	0.00020	0.00081
(Scupper)																
100	WD1 5132.000	1.00	60.56	17.100	0.000026	0.00088	0.375	0.015	-0.014678	0.01711	3.0	0.300	**0.641**	**0.005**	0.00016	0.00072
(Scupper)																
101	WD1 5129.000	1.00	60.56	17.100	0.000026	0.00086	0.375	0.015	-0.013864	0.01711	3.0	0.300	**0.658**	**0.005**	0.00017	0.00069
(Scupper)																
102	WD1 5126.000	1.00	60.56	17.100	0.000026	0.00087	0.375	0.015	-0.013051	0.01711	3.0	0.300	**0.686**	**0.005**	0.00019	0.00068
(Scupper)																
103	WD1 5123.000	1.00	60.56	17.100	0.000026	0.00089	0.375	0.015	-0.012237	0.01711	3.0	0.300	**0.721**	**0.005**	0.00021	0.00068
(Scupper)																
104	WD1 5120.000	1.00	60.56	17.100	0.000026	0.00091	0.375	0.015	-0.011424	0.01711	3.0	0.300	**0.761**	**0.005**	0.00024	0.00067
(Scupper)																
105	WD1 5114.500	1.00	60.56	17.100	0.000047	0.00163	0.375	0.015	-0.009932	0.01711	5.5	0.300	**1.030**	**0.007**	0.00065	0.00098
(Scupper)																
106	WD1 5111.500	1.00	60.56	17.100	0.000026	0.00132	0.375	0.015	-0.009119	0.01711	3.0	0.300	**1.005**	**0.006**	0.00051	0.00081
(Scupper)																
107	WD1 5108.500	1.00	60.56	17.100	0.000026	0.00121	0.375	0.015	-0.008305	0.01711	3.0	0.300	**1.030**	**0.006**	0.00048	0.00072
(Scupper)																
108	WD1 5105.500	1.00	60.56	17.100	0.000026	0.00119	0.375	0.015	-0.007492	0.01711	3.0	0.300	**1.092**	**0.006**	0.00050	0.00068
(Scupper)																
(Scupper)																
(Scupper)																
*	WD1 5091.000	1.00	60.56	17.100	0.000120	0.00411	0.375	0.015	-0.006000	0.02003	14.5	-	**1.941**	**0.000**	-	-
**	WD1 5018.000	1.00	60.56	17.100	0.001368	0.02527	0.375	0.015	-0.006000	0.01767	87.5	-	**3.927**	**0.000**	-	-

*Note: Check of flow width at location where shoulder begins transitioning from 0.300m to 3.900m. At this location, the shoulder is 0.300m.
**Note: Check of flow width at end of Type K Barrier. At this location, the shoulder is 3.900m wide

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	Depth 0.3m from Curb	K	L_T	L	E	Bypass Flow	Intercept. Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		m	m		m	m		m^3/s	m^3/s
124	WD1 5151.50	3.000	1.00	60.56	17.100	0.000026	0.00062	0.375	0.013	-0.01997	0.01711	-	-	-	-	-	**0.440**	**0.003**	0.817	1.537	0.300	0.324	0.00042	0.00020
(DRAIN)																								
125	WD1 5148.50	3.000	1.00	60.56	17.100	0.000026	0.00051	0.375	0.013	-0.01915	0.01711	-	-	-	-	-	**0.420**	**0.002**	0.817	1.452	0.300	0.341	0.00034	0.00017
(DRAIN)																								
126	WD1 5145.50	3.000	1.00	60.56	17.100	0.000026	0.00050	0.375	0.013	-0.01834	0.01711	-	-	-	-	-	**0.428**	**0.002**	0.817	1.477	0.300	0.335	0.00033	0.00017
(DRAIN)																								
127	WD1 5139.50	6.000	1.00	60.56	17.100	0.000077	0.00138	0.375	0.015	-0.01671	0.01711	-	-	-	-	-	**0.699**	**0.007**	0.817	2.193	0.300	0.233	0.00106	0.00032
(DRAIN)																								
128	WD1 5136.50	3.000	1.00	60.56	17.100	0.000026	0.00080	0.375	0.015	-0.01590	0.01711	-	-	-	-	-	**0.589**	**0.005**	0.817	1.799	0.300	0.280	0.00058	0.00022
(DRAIN)																								
129	WD1 5133.50	3.000	1.00	60.56	17.100	0.000026	0.00063	0.375	0.015	-0.01508	0.01711	-	-	-	-	-	**0.557**	**0.004**	0.817	1.681	0.300	0.298	0.00044	0.00019
(DRAIN)																								
130	WD1 5130.50	3.000	1.00	60.56	17.100	0.000026	0.00060	0.375	0.015	-0.01427	0.01711	-	-	-	-	-	**0.565**	**0.004**	0.817	1.698	0.300	0.295	0.00042	0.00018
(DRAIN)																								
131	WD1 5127.50	3.000	1.00	60.56	17.100	0.000026	0.00060	0.375	0.015	-0.01346	0.01711	-	-	-	-	-	**0.588**	**0.004**	0.817	1.767	0.300	0.285	0.00043	0.00017
(DRAIN)																								
132	WD1 5124.50	3.000	1.00	60.56	17.100	0.000026	0.00062	0.375	0.015	-0.01264	0.01711	-	-	-	-	-	**0.618**	**0.004**	0.817	1.857	0.300	0.272	0.00045	0.00017
(DRAIN)																								
133	WD1 5121.50	3.000	1.00	60.56	17.100	0.000026	0.00065	0.375	0.015	-0.01183	0.01711	-	-	-	-	-	**0.654**	**0.004**	0.817	1.964	0.300	0.258	0.00048	0.00017
(DRAIN)																								
134	WD1 5117.25	4.250	1.00	60.56	17.100	0.000047	0.00104	0.375	0.015	-0.01068	0.01711	-	-	-	-	-	**0.832**	**0.006**	0.817	2.548	0.300	0.202	0.00083	0.00021
(DRAIN)																								
135	WD1 5113.00	4.250	1.00	60.56	17.100	0.000026	0.00108	0.375	0.015	-0.00953	0.01711	-	-	-	-	-	**0.909**	**0.006**	0.817	2.780	0.300	0.186	0.00088	0.00020
(DRAIN)																								
136	WD1 5110.00	3.000	1.00	60.56	17.100	0.000026	0.00095	0.375	0.015	-0.00871	0.01711	-	-	-	-	-	**0.913**	**0.005**	0.817	2.770	0.300	0.186	0.00077	0.00018
(DRAIN)																								
137	WD1 5107.00	3.000	1.00	60.56	17.100	0.000026	0.00092	0.375	0.015	-0.00790	0.01711	-	-	-	-	-	**0.959**	**0.005**	0.817	2.898	0.300	0.179	0.00075	0.00016
(DRAIN)																								
138	WD1 5104.00	3.000	1.00	60.56	17.100	0.000026	0.00094	0.375	0.015	-0.00708	0.01711	-	-	-	-	-	**1.036**	**0.005**	0.817	3.126	0.300	0.166	0.00078	0.00016
139	WD1 5101.00	3.000	1.00	60.56	17.100	0.000051	0.00165	0.375	0.015	-0.00627	0.01711	-	-	-	-	-	**1.382**	**0.007**	0.817	4.264	0.300	0.123	0.00145	0.00020
140	WD1 5098.00	3.000	1.00	60.56	17.100	0.000051	0.00232	0.375	0.015	-0.00600	0.01711	-	-	-	-	-	**1.613**	**0.008**	0.817	5.048	0.300	0.104	0.00208	0.00024

WD1 Line Drainage

Drains and Scuppers with Uniform Cross Slope - 10 Year Intensity

Use Drain Type D-3, modified to 300 mm width. Use minimum drain spacing of 3.0 m.

Place 300mm long scuppers between drains at minimum spacing of 3.0 m on center, and at least 1.5 m from a drain.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "WD1" 52+98. The amount of flow crossing the deck is 0.00356 m^3/s.
BDA p.17-3 advises allowing a maximum of 0.003 m^3/s to flow across deck. Therefore, this configuration is **not adequate.**

Drains:

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	**Depth 0.3m from Curb**	Bypass Flow	Intercept. Flow
	m		mm/hr	m	km^2	m^3/s					m	m	**m**	**m**	m^3/s	m^3/s
-	WD1 5551.662	1.00	50.36	17.100	0.000000	0.00000	0.375	0.013	0.008500	0.02270	n/a	0.300	**0.000**	**0.000**	0.00000	n/a
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
1	WD1 5519.500	1.00	50.36	17.100	0.000026	0.00373	0.375	0.013	0.023651	0.02270	32.2	0.300	**0.735**	**0.010**	0.00092	0.00281
(Scupper)																
2	WD1 5516.000	1.00	50.36	17.100	0.000034	0.00144	0.375	0.013	0.025300	0.02270	3.5	0.300	**0.494**	**0.005**	0.00012	0.00132
(Scupper)																
3	WD1 5513.000	1.00	50.36	17.100	0.000026	0.00066	0.375	0.013	0.026713	0.02270	3.0	0.300	**0.356**	**0.001**	0.00000	0.00065
(Scupper)																
4	WD1 5508.000	1.00	50.36	17.100	0.000043	0.00099	0.375	0.013	0.029069	0.02270	5.0	0.300	**0.393**	**0.003**	0.00002	0.00097
(Scupper)																
5	WD1 5505.000	1.00	50.36	17.100	0.000026	0.00057	0.375	0.013	0.030482	0.02270	3.0	0.300	**0.311**	**0.000**	0.00000	0.00057
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
6	WD1 5487.000	1.00	50.36	17.100	0.000026	0.00202	0.375	0.013	0.035000	0.02270	18.0	0.300	**0.457**	**0.006**	0.00012	0.00190
(Scupper)																
7	WD1 5484.000	1.00	50.36	17.100	0.000026	0.00063	0.375	0.013	0.035000	0.02270	3.0	0.300	**0.295**	**0.000**	0.00000	0.00063
(Scupper)																
8	WD1 5481.000	1.00	50.36	17.100	0.000026	0.00054	0.375	0.013	0.035000	0.02270	3.0	0.300	**0.280**	**0.000**	0.00000	0.00054
(Scupper)																
9	WD1 5478.000	1.00	50.36	17.100	0.000026	0.00054	0.375	0.013	0.035000	0.02213	3.0	0.300	**0.281**	**0.000**	0.00000	0.00054
(Scupper)																
10	WD1 5475.000	1.00	50.36	17.100	0.000026	0.00054	0.375	0.013	0.035000	0.02130	3.0	0.300	**0.283**	**0.000**	0.00000	0.00054
(Scupper)																
11	WD1 5472.000	1.00	50.36	17.100	0.000026	0.00054	0.375	0.013	0.035000	0.02047	3.0	0.300	**0.284**	**0.000**	0.00000	0.00054
(Scupper)																
12	WD1 5469.000	1.00	50.36	17.100	0.000026	0.00054	0.375	0.013	0.034174	0.01964	3.0	0.300	**0.291**	**0.000**	0.00000	0.00054
(Scupper)																
13	WD1 5462.500	1.00	50.36	17.100	0.000026	0.00118	0.375	0.013	0.032125	0.01784	6.5	0.300	**0.412**	**0.004**	0.00004	0.00114
(Scupper)																
14	WD1 5459.500	1.00	50.36	17.100	0.000026	0.00057	0.375	0.013	0.031179	0.01701	3.0	0.300	**0.322**	**0.001**	0.00000	0.00057
(Scupper)																
15	WD1 5456.500	1.00	50.36	17.100	0.000026	0.00054	0.375	0.013	0.030233	0.01618	3.0	0.300	**0.326**	**0.001**	0.00000	0.00054
(Scupper)																
16	WD1 5453.000	1.00	50.36	17.100	0.000030	0.00065	0.375	0.013	0.029130	0.01521	3.5	0.300	**0.360**	**0.002**	0.00001	0.00064
(Scupper)																
17	WD1 5449.500	1.00	50.36	17.100	0.000030	0.00065	0.375	0.013	0.028026	0.01424	3.5	0.300	**0.375**	**0.002**	0.00001	0.00064
(Scupper)																
18	WD1 5446.500	1.00	50.36	17.100	0.000026	0.00055	0.375	0.013	0.027081	0.01341	3.0	0.300	**0.364**	**0.002**	0.00001	0.00054
(Scupper)																
19	WD1 5443.500	1.00	50.36	17.100	0.000026	0.00055	0.375	0.013	0.026135	0.01258	3.0	0.300	**0.376**	**0.002**	0.00001	0.00054
(Scupper)																
20	WD1 5440.500	1.00	50.36	17.100	0.000026	0.00055	0.375	0.013	0.025189	0.01175	3.0	0.300	**0.390**	**0.002**	0.00001	0.00054
(Scupper)																
21	WD1 5437.500	1.00	50.36	17.100	0.000026	0.00055	0.375	0.013	0.024243	0.01092	3.0	0.300	**0.406**	**0.003**	0.00002	0.00054
(Scupper)																
22	WD1 5434.500	1.00	50.36	17.100	0.000026	0.00056	0.375	0.013	0.023298	0.01009	3.0	0.300	**0.423**	**0.003**	0.00002	0.00053
(Scupper)																
23	WD1 5431.500	1.00	50.36	17.100	0.000026	0.00056	0.375	0.013	0.022352	0.00926	3.0	0.300	**0.442**	**0.003**	0.00003	0.00053
(Scupper)																
24	WD1 5428.500	1.00	50.36	17.100	0.000026	0.00056	0.375	0.013	0.021406	0.00843	3.0	0.300	**0.464**	**0.004**	0.00004	0.00053
(Scupper)																

Scuppers:

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	**Depth 0.3m from Curb**	K	L_T	L	E	Bypass Flow	Intercept. Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		**m**	**m**		m	m		m^3/s	m^3/s
1	WD1 5545.00	-	1.00	50.36	17.100	0.000114	0.00161	0.375	0.013	0.01164	0.02270	-	-	-	-	-	**0.835**	**0.006**	0.817	3.448	0.300	0.151	0.00136	0.00024
2	WD1 5542.00	3.000	1.00	50.36	17.100	0.000051	0.00209	0.375	0.013	0.01305	0.02270	-	-	-	-	-	**0.858**	**0.007**	0.817	3.593	0.300	0.145	0.00178	0.00030
3	WD1 5539.00	3.000	1.00	50.36	17.100	0.000051	0.00251	0.375	0.013	0.01446	0.02270	-	-	-	-	-	**0.861**	**0.008**	0.817	3.649	0.300	0.143	0.00215	0.00036
4	WD1 5536.00	3.000	1.00	50.36	17.100	0.000051	0.00287	0.375	0.013	0.01588	0.02270	-	-	-	-	-	**0.855**	**0.009**	0.817	3.653	0.300	0.143	0.00246	0.00041
5	WD1 5533.00	3.000	1.00	50.36	17.100	0.000051	0.00318	0.375	0.013	0.01729	0.02270	-	-	-	-	-	**0.843**	**0.009**	0.817	3.625	0.300	0.144	0.00273	0.00046
6	WD1 5530.00	3.000	1.00	50.36	17.100	0.000051	0.00345	0.375	0.013	0.01870	0.02270	-	-	-	-	-	**0.827**	**0.010**	0.817	3.576	0.300	0.146	0.00295	0.00050
7	WD1 5527.00	3.000	1.00	50.36	17.100	0.000051	0.00367	0.375	0.013	0.02012	0.02270	-	-	-	-	-	**0.809**	**0.010**	0.817	3.513	0.300	0.148	0.00312	0.00054
8	WD1 5524.00	3.000	1.00	50.36	17.100	0.000051	0.00385	0.375	0.013	0.02153	0.02270	-	-	-	-	-	**0.789**	**0.011**	0.817	3.441	0.300	0.151	0.00327	0.00058
9	WD1 5521.00	3.000	1.00	50.36	17.100	0.000051	0.00399	0.375	0.013	0.02294	0.02270	-	-	-	-	-	**0.768**	**0.011**	0.817	3.362	0.300	0.155	0.00337	0.00062
(DRAIN)																								
10	WD1 5518.00	3.000	1.00	50.36	17.100	0.000026	0.00128	0.375	0.013	0.02436	0.02270	-	-	-	-	-	**0.484**	**0.004**	0.817	2.015	0.300	0.252	0.00096	0.00032
(DRAIN)																								
11	WD1 5514.50	3.500	1.00	50.36	17.100	0.000026	0.00048	0.375	0.013	0.02601	0.02270	-	-	-	-	-	**0.321**	**0.001**	0.817	1.282	0.300	0.381	0.00030	0.00018
(DRAIN)																								
12	WD1 5510.50	4.000	1.00	50.36	17.100	0.000043	0.00061	0.375	0.013	0.02789	0.02270	-	-	-	-	-	**0.336**	**0.001**	0.817	1.357	0.300	0.362	0.00039	0.00022
(DRAIN)																								
13	WD1 5506.50	4.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.02978	0.02270	-	-	-	-	-	**0.271**	**0.000**	0.817	1.075	0.300	0.445	0.00021	0.00017
(DRAIN)																								
14	WD1 5500.50	6.000	1.00	50.36	17.100	0.000077	0.00109	0.375	0.013	0.03260	0.02270	-	-	-	-	-	**0.379**	**0.003**	0.817	1.576	0.300	0.316	0.00074	0.00034
15	WD1 5497.50	3.000	1.00	50.36	17.100	0.000051	0.00147	0.375	0.013	0.03402	0.02270	-	-	-	-	-	**0.413**	**0.004**	0.817	1.743	0.300	0.288	0.00104	0.00042
16	WD1 5494.50	3.000	1.00	50.36	17.100	0.000051	0.00177	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.435**	**0.005**	0.817	1.854	0.300	0.272	0.00129	0.00048
17	WD1 5491.50	3.000	1.00	50.36	17.100	0.000051	0.00201	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.456**	**0.005**	0.817	1.956	0.300	0.259	0.00149	0.00052
18	WD1 5488.50	3.000	1.00	50.36	17.100	0.000051	0.00221	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.473**	**0.006**	0.817	2.037	0.300	0.249	0.00166	0.00055
(DRAIN)																								
19	WD1 5485.50	3.000	1.00	50.36	17.100	0.000026	0.00048	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.267**	**0.000**	0.817	1.072	0.300	0.446	0.00027	0.00021
(DRAIN)																								
20	WD1 5482.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02270	-	-	-	-	-	**0.240**	**0.000**	0.817	0.952	0.300	0.494	0.00018	0.00018
(DRAIN)																								
21	WD1 5479.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02255	-	-	-	-	-	**0.240**	**0.000**	0.817	0.950	0.300	0.495	0.00018	0.00018
(DRAIN)																								
22	WD1 5476.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02172	-	-	-	-	-	**0.242**	**0.000**	0.817	0.940	0.300	0.500	0.00018	0.00018
(DRAIN)																								
23	WD1 5473.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03500	0.02089	-	-	-	-	-	**0.244**	**0.000**	0.817	0.929	0.300	0.505	0.00018	0.00018
(DRAIN)																								
24	WD1 5470.50	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03465	0.02006	-	-	-	-	-	**0.247**	**0.000**	0.817	0.923	0.300	0.507	0.00018	0.00018
(DRAIN)																								
25	WD1 5464.00	6.500	1.00	50.36	17.100	0.000086	0.00121	0.375	0.013	0.03260	0.01826	-	-	-	-	-	**0.410**	**0.004**	0.817	1.543	0.300	0.322	0.00082	0.00039
(DRAIN)																								
26	WD1 5461.00	3.000	1.00	50.36	17.100	0.000026	0.00040	0.375	0.013	0.03165	0.01743	-	-	-	-	-	**0.278**	**0.000**	0.817	0.973	0.300	0.485	0.00021	0.00019
(DRAIN)																								
27	WD1 5458.00	3.000	1.00	50.36	17.100	0.000026	0.00036	0.375	0.013	0.03071	0.01660	-	-	-	-	-	**0.276**	**0.000**	0.817	0.938	0.300	0.500	0.00018	0.00018
(DRAIN)																								
28	WD1 5454.75	3.250	1.00	50.36	17.100	0.000030	0.00042	0.375	0.013	0.02968	0.01570	-	-	-	-	-	**0.302**	**0.000**	0.817	1.005	0.300	0.472	0.00022	0.00020
(DRAIN)																								
29	WD1 5451.25	3.500	1.00	50.36	17.100	0.000030	0.00043	0.375	0.013	0.02858	0.01473	-	-	-	-	-	**0.314**	**0.000**	0.817	1.013	0.300	0.468	0.00023	0.00020
(DRAIN)																								
30	WD1 5448.00	3.250	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02755	0.01383	-	-	-	-	-	**0.308**	**0.000**	0.817	0.957	0.300	0.492	0.00019	0.00018
(DRAIN)																								
31	WD1 5445.00	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02661	0.01300	-	-	-	-	-	**0.318**	**0.000**	0.817	0.955	0.300	0.493	0.00019	0.00018
(DRAIN)																								
32	WD1 5442.00	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02566	0.01217	-	-	-	-	-	**0.330**	**0.001**	0.817	0.960	0.300	0.491	0.00019	0.00018
(DRAIN)																								
33	WD1 5439.00	3.000	1.00	50.36	17.100	0.000026	0.00037	0.375	0.013	0.02472	0.01134	-	-	-	-	-	**0.343**	**0.001**	0.817	0.965	0.300	0.488	0.00019	0.00018
(DRAIN)																								
34	WD1 5436.00	3.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.02377	0.01051	-	-	-	-	-	**0.359**	**0.001**	0.817	0.970	0.300	0.486	0.00019	0.00018
(DRAIN)																								
35	WD1 5433.00	3.000	1.00	50.36	17.100	0.000026	0.00038	0.375	0.013	0.02282	0.00968	-	-	-	-	-	**0.375**	**0.002**	0.817	0.975	0.300	0.484	0.00020	0.00019
(DRAIN)																								
36	WD1 5430.00	3.000	1.00	50.36	17.100	0.000026	0.00039	0.375	0.013	0.02188	0.00885	-	-	-	-	-	**0.395**	**0.002**	0.817	0.981	0.300	0.482	0.00020	0.00019
(DRAIN)																								
37	WD1 5427.00	3.000	1.00	50.36	17.100	0.000026	0.00040	0.375	0.013	0.02093	0.00802	-	-	-	-	-	**0.416**	**0.002**	0.817	0.986	0.300	0.479	0.00021	0.00019

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	Depth 0.3m from Curb m	Bypass Flow m^3/s	Intercept. Flow m^3/s
25	WD1 5425.500	1.00	50.36	17.100	0.000026	0.00057	0.375	0.013	0.020460	0.00760	3.0	0.300	**0.488**	**0.004**	0.00004	0.00052
(Scupper)																
26	WD1 5422.500	1.00	50.36	17.100	0.000026	0.00057	0.375	0.013	0.020000	0.00677	3.0	0.300	**0.508**	**0.004**	0.00005	0.00052
(Scupper)																
27	WD1 5419.500	1.00	50.36	17.100	0.000026	0.00057	0.375	0.013	0.020000	0.00617	3.0	0.300	**0.516**	**0.004**	0.00006	0.00052
(Scupper)																
28	WD1 5416.500	1.00	50.36	17.100	0.000026	0.00058	0.375	0.013	0.020000	0.00673	3.0	0.300	**0.509**	**0.004**	0.00005	0.00052
(Scupper)																
29	WD1 5413.000	1.00	50.36	17.100	0.000030	0.00068	0.375	0.013	0.020000	0.00737	3.5	0.300	**0.533**	**0.005**	0.00008	0.00061
(Scupper)																
30	WD1 5409.500	1.00	50.36	17.100	0.000030	0.00070	0.375	0.013	0.020000	0.00801	3.5	0.300	**0.531**	**0.005**	0.00008	0.00063
(Scupper)																
31	WD1 5406.500	1.00	50.36	17.100	0.000026	0.00060	0.375	0.013	0.020000	0.00856	3.0	0.300	**0.495**	**0.004**	0.00005	0.00055
(Scupper)																
32	WD1 5403.500	1.00	50.36	17.100	0.000026	0.00059	0.375	0.013	0.020000	0.00911	3.0	0.300	**0.485**	**0.004**	0.00004	0.00054
(Scupper)																
33	WD1 5400.000	1.00	50.36	17.100	0.000030	0.00069	0.375	0.013	0.020000	0.00976	3.5	0.300	**0.508**	**0.004**	0.00006	0.00063
(Scupper)																
34	WD1 5396.500	1.00	50.36	17.209	0.000030	0.00071	0.375	0.013	0.020000	0.01040	3.5	0.300	**0.508**	**0.004**	0.00007	0.00065
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
35	WD1 5380.500	1.00	50.36	17.709	0.000035	0.00221	0.375	0.013	0.020000	0.01334	16.0	0.300	**0.741**	**0.009**	0.00055	0.00166
(Scupper)																
36	WD1 5377.500	1.00	50.36	17.803	0.000027	0.00103	0.375	0.013	0.020000	0.01389	3.0	0.300	**0.553**	**0.005**	0.00013	0.00090
(Scupper)																
37	WD1 5374.500	1.00	50.36	17.897	0.000027	0.00070	0.375	0.013	0.020000	0.01444	3.0	0.300	**0.474**	**0.003**	0.00005	0.00065
(Scupper)																
38	WD1 5371.500	1.00	50.36	17.991	0.000027	0.00064	0.375	0.013	0.020000	0.01500	3.0	0.300	**0.456**	**0.003**	0.00004	0.00061
(Scupper)																
39	WD1 5368.500	1.00	50.36	18.084	0.000027	0.00064	0.375	0.013	0.020000	0.01555	3.0	0.300	**0.452**	**0.003**	0.00004	0.00060
(Scupper)																
40	WD1 5365.500	1.00	50.36	18.178	0.000027	0.00064	0.375	0.013	0.020000	0.01610	3.0	0.300	**0.450**	**0.003**	0.00003	0.00061
(Scupper)																
41	WD1 5362.500	1.00	50.36	18.272	0.000027	0.00065	0.375	0.013	0.020000	0.01665	3.0	0.300	**0.449**	**0.003**	0.00003	0.00061
(Scupper)																
42	WD1 5359.500	1.00	50.36	18.366	0.000028	0.00065	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.447**	**0.003**	0.00003	0.00062
(Scupper)																
43	WD1 5356.500	1.00	50.36	18.459	0.000028	0.00066	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.448**	**0.003**	0.00003	0.00062
(Scupper)																
44	WD1 5353.500	1.00	50.36	18.553	0.000028	0.00066	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.449**	**0.003**	0.00003	0.00062
(Scupper)																
45	WD1 5350.500	1.00	50.36	18.647	0.000028	0.00066	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.450**	**0.003**	0.00004	0.00063
(Scupper)																
46	WD1 5347.000	1.00	50.36	18.756	0.000033	0.00078	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.480**	**0.004**	0.00006	0.00073
(Scupper)																
47	WD1 5343.500	1.00	50.36	18.866	0.000033	0.00081	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.485**	**0.004**	0.00006	0.00074
(Scupper)																
48	WD1 5340.500	1.00	50.36	18.959	0.000028	0.00070	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.459**	**0.003**	0.00004	0.00065
(Scupper)																
49	WD1 5337.500	1.00	50.36	19.053	0.000029	0.00068	0.375	0.013	0.020000	0.01711	3.0	0.300	**0.455**	**0.003**	0.00004	0.00064
(Scupper)																
50	WD1 5334.000	1.00	50.36	19.163	0.000034	0.00081	0.375	0.013	0.020000	0.01711	3.5	0.300	**0.485**	**0.004**	0.00006	0.00074
(Scupper)																
51	WD1 5330.500	1.00	50.36	19.272	0.000034	0.00083	0.375	0.013	0.019118	0.01711	3.5	0.300	**0.504**	**0.004**	0.00007	0.00075
(Scupper)																
52	WD1 5327.500	1.00	50.36	19.366	0.000029	0.00073	0.375	0.013	0.017353	0.01711	3.0	0.300	**0.510**	**0.004**	0.00007	0.00066
(Scupper)																
53	WD1 5324.500	1.00	50.36	19.459	0.000029	0.00074	0.375	0.013	0.015588	0.01711	3.0	0.300	**0.548**	**0.004**	0.00009	0.00065
(Scupper)																
54	WD1 5321.000	1.00	50.36	19.569	0.000034	0.00089	0.375	0.013	0.013529	0.01711	3.5	0.300	**0.643**	**0.005**	0.00017	0.00073
(Scupper)																
55	WD1 5318.000	1.00	50.36	19.663	0.000029	0.00085	0.375	0.013	0.011765	0.01711	3.0	0.300	**0.688**	**0.005**	0.00018	0.00066
(Scupper)																
56	WD1 5315.000	1.00	50.36	19.756	0.000030	0.00088	0.375	0.013	0.010000	0.01711	3.0	0.300	**0.772**	**0.005**	0.00024	0.00064
(Scupper)																
57	WD1 5312.000	1.00	50.36	19.850	0.000030	0.00094	0.375	0.013	0.008235	0.01711	3.0	0.300	**0.895**	**0.005**	0.00032	0.00062
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
58	WD1 5294.000	1.00	50.36	20.413	0.000031	0.00466	0.375	0.013	-0.002353	0.01711	18.0	0.300	**3.567**	**0.008**	0.00369	0.00097
(Scupper)																
59	WD1 5291.000	1.00	50.36	20.506	0.000031	0.00434	0.375	0.013	-0.004118	0.01711	3.0	0.300	**2.447**	**0.009**	0.00306	0.00128

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_a m^3/s	Q< Q_w?	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
(DRAIN)																								
38	WD1 5424.00	3.000	1.00	50.36	17.100	0.000026	0.00041	0.375	0.013	0.02000	0.00719	-	-	-	-	-	**0.441**	**0.003**	0.817	0.991	0.300	0.478	0.00021	0.00019
(DRAIN)																								
39	WD1 5421.00	3.000	1.00	50.36	17.100	0.000026	0.00041	0.375	0.013	0.02000	0.00636	-	-	-	-	-	**0.455**	**0.003**	0.817	0.963	0.300	0.489	0.00021	0.00020
(DRAIN)																								
40	WD1 5418.00	3.000	1.00	50.36	17.100	0.000026	0.00042	0.375	0.013	0.02000	0.00645	-	-	-	-	-	**0.455**	**0.003**	0.817	0.971	0.300	0.486	0.00021	0.00020
(DRAIN)																								
41	WD1 5414.75	3.250	1.00	50.36	17.100	0.000030	0.00048	0.375	0.013	0.02000	0.00705	-	-	-	-	-	**0.470**	**0.003**	0.817	1.052	0.300	0.453	0.00026	0.00022
(DRAIN)																								
42	WD1 5411.25	3.500	1.00	50.36	17.100	0.000030	0.00050	0.375	0.013	0.02000	0.00769	-	-	-	-	-	**0.470**	**0.003**	0.817	1.100	0.300	0.436	0.00028	0.00022
(DRAIN)																								
43	WD1 5408.00	3.250	1.00	50.36	17.100	0.000026	0.00044	0.375	0.013	0.02000	0.00829	-	-	-	-	-	**0.442**	**0.003**	0.817	1.067	0.300	0.448	0.00024	0.00020
(DRAIN)																								
44	WD1 5405.00	3.000	1.00	50.36	17.100	0.000026	0.00041	0.375	0.013	0.02000	0.00884	-	-	-	-	-	**0.427**	**0.003**	0.817	1.060	0.300	0.450	0.00023	0.00019
(DRAIN)																								
45	WD1 5401.75	3.250	1.00	50.36	17.100	0.000030	0.00047	0.375	0.013	0.02000	0.00944	-	-	-	-	-	**0.442**	**0.003**	0.817	1.140	0.300	0.423	0.00027	0.00020
(DRAIN)																								
46	WD1 5398.25	3.500	1.00	50.36	17.155	0.000030	0.00049	0.375	0.013	0.02000	0.01008	-	-	-	-	-	**0.443**	**0.003**	0.817	1.184	0.300	0.409	0.00029	0.00020
(DRAIN)																								
47	WD1 5394.50	3.750	1.00	50.36	17.272	0.000035	0.00055	0.375	0.013	0.02000	0.01077	-	-	-	-	-	**0.459**	**0.003**	0.817	1.273	0.300	0.384	0.00034	0.00021
48	WD1 5391.50	3.000	1.00	50.36	17.366	0.000052	0.00108	0.375	0.013	0.02000	0.01132	-	-	-	-	-	**0.584**	**0.006**	0.817	1.709	0.300	0.294	0.00076	0.00032
49	WD1 5388.50	3.000	1.00	50.36	17.459	0.000052	0.00150	0.375	0.013	0.02000	0.01187	-	-	-	-	-	**0.655**	**0.007**	0.817	1.992	0.300	0.255	0.00112	0.00038
50	WD1 5385.50	3.000	1.00	50.36	17.553	0.000053	0.00186	0.375	0.013	0.02000	0.01242	-	-	-	-	-	**0.704**	**0.008**	0.817	2.211	0.300	0.231	0.00143	0.00043
51	WD1 5382.50	3.000	1.00	50.36	17.647	0.000053	0.00218	0.375	0.013	0.02000	0.01297	-	-	-	-	-	**0.741**	**0.009**	0.817	2.394	0.300	0.214	0.00171	0.00047
(DRAIN)																								
52	WD1 5379.00	3.500	1.00	50.36	17.756	0.000027	0.00093	0.375	0.013	0.02000	0.01362	-	-	-	-	-	**0.534**	**0.005**	0.817	1.699	0.300	0.295	0.00066	0.00027
(DRAIN)																								
53	WD1 5376.00	3.000	1.00	50.36	17.850	0.000027	0.00051	0.375	0.013	0.02000	0.01417	-	-	-	-	-	**0.422**	**0.002**	0.817	1.331	0.300	0.368	0.00032	0.00019
(DRAIN)																								
54	WD1 5373.00	3.000	1.00	50.36	17.944	0.000027	0.00043	0.375	0.013	0.02000	0.01472	-	-	-	-	-	**0.393**	**0.002**	0.817	1.255	0.300	0.388	0.00026	0.00017
(DRAIN)																								
55	WD1 5370.00	3.000	1.00	50.36	18.038	0.000027	0.00042	0.375	0.013	0.02000	0.01527	-	-	-	-	-	**0.387**	**0.002**	0.817	1.257	0.300	0.388	0.00026	0.00016
(DRAIN)																								
56	WD1 5367.00	3.000	1.00	50.36	18.131	0.000027	0.00042	0.375	0.013	0.02000	0.01582	-	-	-	-	-	**0.385**	**0.002**	0.817	1.271	0.300	0.384	0.00026	0.00016
(DRAIN)																								
57	WD1 5364.00	3.000	1.00	50.36	18.225	0.000027	0.00042	0.375	0.013	0.02000	0.01637	-	-	-	-	-	**0.383**	**0.002**	0.817	1.286	0.300	0.380	0.00026	0.00016
(DRAIN)																								
58	WD1 5361.00	3.000	1.00	50.36	18.319	0.000027	0.00042	0.375	0.013	0.02000	0.01693	-	-	-	-	-	**0.381**	**0.002**	0.817	1.301	0.300	0.376	0.00026	0.00016
(DRAIN)																								
59	WD1 5358.00	3.000	1.00	50.36	18.413	0.000028	0.00042	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.381**	**0.002**	0.817	1.307	0.300	0.375	0.00026	0.00016
(DRAIN)																								
60	WD1 5355.00	3.000	1.00	50.36	18.506	0.000028	0.00043	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.382**	**0.002**	0.817	1.311	0.300	0.374	0.00027	0.00016
(DRAIN)																								
61	WD1 5352.00	3.000	1.00	50.36	18.600	0.000028	0.00043	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.382**	**0.002**	0.817	1.314	0.300	0.373	0.00027	0.00016
(DRAIN)																								
62	WD1 5348.75	3.250	1.00	50.36	18.702	0.000033	0.00050	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.404**	**0.002**	0.817	1.399	0.300	0.352	0.00032	0.00018
(DRAIN)																								
63	WD1 5345.25	3.500	1.00	50.36	18.811	0.000033	0.00052	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.412**	**0.002**	0.817	1.427	0.300	0.346	0.00034	0.00018
(DRAIN)																								
64	WD1 5342.00	3.250	1.00	50.36	18.913	0.000028	0.00046	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.393**	**0.002**	0.817	1.356	0.300	0.362	0.00029	0.00017
(DRAIN)																								
65	WD1 5339.00	3.000	1.00	50.36	19.006	0.000029	0.00044	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.387**	**0.002**	0.817	1.333	0.300	0.368	0.00028	0.00016
(DRAIN)																								
66	WD1 5335.75	3.250	1.00	50.36	19.108	0.000033	0.00051	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.408**	**0.002**	0.817	1.414	0.300	0.349	0.00033	0.00018
(DRAIN)																								
67	WD1 5332.25	3.500	1.00	50.36	19.217	0.000034	0.00054	0.375	0.013	0.02000	0.01711	-	-	-	-	-	**0.416**	**0.002**	0.817	1.443	0.300	0.343	0.00035	0.00018
(DRAIN)																								
68	WD1 5329.00	3.250	1.00	50.36	19.319	0.000029	0.00048	0.375	0.013	0.01824	0.01711	-	-	-	-	-	**0.424**	**0.002**	0.817	1.460	0.300	0.339	0.00032	0.00016
(DRAIN)																								
69	WD1 5326.00	3.000	1.00	50.36	19.413	0.000029	0.00048	0.375	0.013	0.01647	0.01711	-	-	-	-	-	**0.450**	**0.002**	0.817	1.547	0.300	0.322	0.00032	0.00015
(DRAIN)																								
70	WD1 5322.75	3.250	1.00	50.36	19.514	0.000034	0.00057	0.375	0.013	0.01456	0.01711	-	-	-	-	-	**0.519**	**0.003**	0.817	1.793	0.300	0.281	0.00041	0.00016
(DRAIN)																								
71	WD1 5319.50	3.250	1.00	50.36	19.616	0.000029	0.00058	0.375	0.013	0.01265	0.01711	-	-	-	-	-	**0.571**	**0.003**	0.817	1.968	0.300	0.258	0.00043	0.00015
(DRAIN)																								
72	WD1 5316.50	3.000	1.00	50.36	19.709	0.000030	0.00060	0.375	0.013	0.01088	0.01711	-	-	-	-	-	**0.635**	**0.004**	0.817	2.183	0.300	0.234	0.00046	0.00014
(DRAIN)																								
73	WD1 5313.50	3.000	1.00	50.36	19.803	0.000030	0.00066	0.375	0.013	0.00912	0.01711	-	-	-	-	-	**0.733**	**0.004**	0.817	2.517	0.300	0.204	0.00052	0.00013
(DRAIN)																								
74	WD1 5310.50	3.000	1.00	50.36	19.897	0.000030	0.00074	0.375	0.013	0.00735	0.01711	-	-	-	-	-	**0.876**	**0.004**	0.817	3.009	0.300	0.172	0.00061	0.00013
75	WD1 5307.50	3.000	1.00	50.36	19.991	0.000060	0.00146	0.375	0.013	0.00559	0.01711	-	-	-	-	-	**1.342**	**0.006**	0.817	4.721	0.300	0.111	0.00129	0.00016
76	WD1 5304.50	3.000	1.00	50.36	20.084	0.000060	0.00214	0.375	0.013	0.00382	0.01711	-	-	-	-	-	**1.967**	**0.006**	0.817	6.973	0.300	0.076	0.00198	0.00016
77	WD1 5301.50	3.000	1.00	50.36	20.178	0.000061	0.00283	0.375	0.013	0.00206	0.01711	-	-	-	-	-	**3.216**	**0.006**	0.817	#####	0.300	0.047	0.00270	0.00013
78	WD1 5298.50	3.000	1.00	50.36	20.272	0.000061	**0.00356**	0.375	0.013	0.00029	0.01711	-	-	-	-	-	**11.820**	**0.003**	0.817	#####	0.300	0.013	0.00351	0.00005
79	WD1 5295.50	3.000	1.00	50.36	20.366	0.000061	0.00437	0.375	0.013	-0.00147	0.01711	-	-	-	-	-	**4.670**	**0.006**	0.817	#####	0.300	0.032	0.00423	0.00014
(DRAIN)																								
80	WD1 5292.50	3.000	1.00	50.36	20.459	0.000031	0.00412	0.375	0.013	-0.00324	0.01711	-	-	-	-	-	**2.791**	**0.008**	0.817	#####	0.300	0.053	0.00391	0.00022
(DRAIN)																								

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept Flow m^3/s
(Scupper)																
60	WD1 5288.000	1.00	50.36	20.600	0.000031	0.00368	0.375	0.013	-0.005882	0.01711	3.0	0.300	**1.840**	**0.009**	0.00229	0.00139
(Scupper)																
61	WD1 5285.000	1.00	50.36	20.694	0.000031	0.00290	0.375	0.013	-0.007647	0.01711	3.0	0.300	**1.429**	**0.009**	0.00155	0.00135
(Scupper)																
62	WD1 5282.000	1.00	50.36	20.788	0.000031	0.00218	0.375	0.013	-0.009412	0.01711	3.0	0.300	**1.127**	**0.008**	0.00095	0.00122
(Scupper)																
63	WD1 5279.000	1.00	50.36	20.881	0.000031	0.00161	0.375	0.013	-0.011176	0.01711	3.0	0.300	**0.904**	**0.007**	0.00055	0.00106
(Scupper)																
64	WD1 5276.000	1.00	50.36	20.975	0.000031	0.00123	0.375	0.013	-0.012941	0.01711	3.0	0.300	**0.746**	**0.006**	0.00031	0.00092
(Scupper)																
65	WD1 5273.000	1.00	50.36	21.069	0.000032	0.00102	0.375	0.013	-0.014706	0.01711	3.0	0.300	**0.641**	**0.005**	0.00019	0.00083
(Scupper)																
66	WD1 5270.000	1.00	50.36	21.163	0.000032	0.00091	0.375	0.013	-0.016471	0.01711	3.0	0.300	**0.572**	**0.004**	0.00012	0.00078
(Scupper)																
67	WD1 5267.000	1.00	50.36	21.256	0.000032	0.00085	0.375	0.013	-0.018235	0.01711	3.0	0.300	**0.523**	**0.004**	0.00009	0.00076
(Scupper)																
68	WD1 5264.000	1.00	50.36	21.350	0.000032	0.00081	0.375	0.013	-0.020000	0.01711	3.0	0.300	**0.486**	**0.004**	0.00006	0.00075
(Scupper)																
69	WD1 5261.000	1.00	50.36	21.444	0.000032	0.00079	0.375	0.013	-0.021765	0.01711	3.0	0.300	**0.455**	**0.003**	0.00004	0.00074
(Scupper)																
70	WD1 5257.000	1.00	50.36	21.569	0.000043	0.00104	0.375	0.013	-0.024118	0.01711	4.0	0.300	**0.474**	**0.004**	0.00007	0.00096
(Scupper)																
71	WD1 5254.000	1.00	50.36	21.663	0.000032	0.00078	0.375	0.013	-0.025882	0.01711	3.0	0.300	**0.408**	**0.003**	0.00002	0.00076
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
72	WD1 5240.500	1.00	50.36	22.084	0.000050	0.00247	0.375	0.013	-0.030000	0.01711	13.5	0.300	**0.572**	**0.008**	0.00034	0.00213
(Scupper)																
73	WD1 5237.500	1.00	50.36	22.178	0.000033	0.00098	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.405**	**0.003**	0.00003	0.00096
(Scupper)																
74	WD1 5234.000	1.00	50.36	22.288	0.000039	0.00089	0.375	0.013	-0.030000	0.01711	3.5	0.300	**0.390**	**0.003**	0.00002	0.00087
(Scupper)																
75	WD1 5231.000	1.00	50.36	22.381	0.000034	0.00075	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.366**	**0.002**	0.00001	0.00074
(Scupper)																
76	WD1 5228.000	1.00	50.36	22.475	0.000034	0.00074	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.365**	**0.002**	0.00001	0.00074
(Scupper)																
77	WD1 5225.000	1.00	50.36	22.569	0.000034	0.00075	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.366**	**0.002**	0.00001	0.00074
78	WD1 5219.500	1.00	50.36	22.741	0.000125	0.00177	0.375	0.013	-0.030000	0.01711	5.5	0.300	**0.505**	**0.006**	0.00016	0.00161
(Scupper)																
79	WD1 5216.500	1.00	50.36	22.834	0.000034	0.00087	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.387**	**0.003**	0.00002	0.00085
(Scupper)																
80	WD1 5213.500	1.00	50.36	22.928	0.000034	0.00077	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.369**	**0.002**	0.00001	0.00076
(Scupper)																
81	WD1 5210.500	1.00	50.36	23.022	0.000035	0.00076	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.369**	**0.002**	0.00001	0.00076
(Scupper)																
82	WD1 5207.500	1.00	50.36	23.116	0.000035	0.00077	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.369**	**0.002**	0.00001	0.00076
(Scupper)																
83	WD1 5204.500	1.00	50.36	23.209	0.000035	0.00077	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.370**	**0.002**	0.00001	0.00076
(Scupper)																
84	WD1 5201.500	1.00	50.36	23.303	0.000035	0.00078	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.371**	**0.002**	0.00001	0.00077
(Scupper)																
85	WD1 5198.500	1.00	50.36	23.397	0.000035	0.00078	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.371**	**0.002**	0.00001	0.00077
(Scupper)																
86	WD1 5195.500	1.00	50.36	23.491	0.000035	0.00078	0.375	0.013	-0.030000	0.01711	3.0	0.300	**0.372**	**0.002**	0.00001	0.00077
(Scupper)																
87	WD1 5192.000	1.00	50.36	23.600	0.000041	0.00093	0.375	0.013	-0.030000	0.01711	3.5	0.300	**0.397**	**0.003**	0.00002	0.00091
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
88	WD1 5174.000	1.00	50.36	24.163	0.000036	0.00316	0.375	0.013	-0.026068	0.01711	18.0	0.300	**0.686**	**0.010**	0.00068	0.00248
(Scupper)																
89	WD1 5171.000	1.00	50.36	24.256	0.000036	0.00136	0.375	0.013	-0.025254	0.01711	3.0	0.300	**0.510**	**0.005**	0.00013	0.00124
(Scupper)																
90	WD1 5168.000	1.00	50.36	24.350	0.000037	0.00093	0.375	0.013	-0.024441	0.01711	3.0	0.300	**0.450**	**0.004**	0.00005	0.00088
(Scupper)																
91	WD1 5165.000	1.00	50.36	24.444	0.000037	0.00087	0.375	0.013	-0.023627	0.01711	3.0	0.300	**0.450**	**0.004**	0.00005	0.00083
(Scupper)																
92	WD1 5162.000	1.00	50.36	24.538	0.000037	0.00088	0.375	0.013	-0.022814	0.01711	3.0	0.300	**0.461**	**0.004**	0.00005	0.00083
(Scupper)																
93	WD1 5159.000	1.00	50.36	17.100	0.000026	0.00073	0.375	0.013	-0.022000	0.01711	3.0	0.300	**0.440**	**0.003**	0.00003	0.00070
(Scupper)																
(Scupper)																
94	WD1 5153.000	1.00	50.36	17.100	0.000026	0.00105	0.375	0.013	-0.020373	0.01711	6.0	0.300	**0.530**	**0.005**	0.00011	0.00094

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept Flow m^3/s
81	WD1 5289.50	3.000	1.00	50.36	20.553	0.000031	0.00350	0.375	0.013	-0.00500	0.01711	-	-	-	-	-	**1.999**	**0.008**	0.817	7.291	0.300	0.073	0.00324	0.00025
(DRAIN)																								
82	WD1 5286.50	3.000	1.00	50.36	20.647	0.000031	0.00272	0.375	0.013	-0.00676	0.01711	-	-	-	-	-	**1.507**	**0.008**	0.817	5.476	0.300	0.096	0.00246	0.00026
(DRAIN)																								
83	WD1 5283.50	3.000	1.00	50.36	20.741	0.000031	0.00199	0.375	0.013	-0.00853	0.01711	-	-	-	-	-	**1.158**	**0.007**	0.817	4.172	0.300	0.126	0.00174	0.00025
(DRAIN)																								
84	WD1 5280.50	3.000	1.00	50.36	20.834	0.000031	0.00139	0.375	0.013	-0.01029	0.01711	-	-	-	-	-	**0.901**	**0.006**	0.817	3.212	0.300	0.162	0.00117	0.00023
(DRAIN)																								
85	WD1 5277.50	3.000	1.00	50.36	20.928	0.000031	0.00099	0.375	0.013	-0.01206	0.01711	-	-	-	-	-	**0.719**	**0.005**	0.817	2.532	0.300	0.203	0.00079	0.00020
(DRAIN)																								
86	WD1 5274.50	3.000	1.00	50.36	21.022	0.000032	0.00076	0.375	0.013	-0.01382	0.01711	-	-	-	-	-	**0.597**	**0.004**	0.817	2.084	0.300	0.244	0.00057	0.00018
(DRAIN)																								
87	WD1 5271.50	3.000	1.00	50.36	21.116	0.000032	0.00064	0.375	0.013	-0.01559	0.01711	-	-	-	-	-	**0.518**	**0.003**	0.817	1.802	0.300	0.280	0.00046	0.00018
(DRAIN)																								
88	WD1 5268.50	3.000	1.00	50.36	21.209	0.000032	0.00057	0.375	0.013	-0.01735	0.01711	-	-	-	-	-	**0.466**	**0.003**	0.817	1.617	0.300	0.309	0.00040	0.00018
(DRAIN)																								
89	WD1 5265.50	3.000	1.00	50.36	21.303	0.000032	0.00054	0.375	0.013	-0.01912	0.01711	-	-	-	-	-	**0.428**	**0.002**	0.817	1.485	0.300	0.334	0.00036	0.00018
(DRAIN)																								
90	WD1 5262.50	3.000	1.00	50.36	21.397	0.000032	0.00051	0.375	0.013	-0.02088	0.01711	-	-	-	-	-	**0.399**	**0.002**	0.817	1.383	0.300	0.356	0.00033	0.00018
(DRAIN)																								
91	WD1 5259.00	3.500	1.00	50.36	21.506	0.000043	0.00065	0.375	0.013	-0.02294	0.01711	-	-	-	-	-	**0.411**	**0.003**	0.817	1.443	0.300	0.343	0.00043	0.00022
(DRAIN)																								
92	WD1 5255.50	3.500	1.00	50.36	21.616	0.000032	0.00053	0.375	0.013	-0.02500	0.01711	-	-	-	-	-	**0.360**	**0.001**	0.817	1.255	0.300	0.388	0.00032	0.00021
(DRAIN)																								
93	WD1 5251.75	3.750	1.00	50.36	21.733	0.000049	0.00071	0.375	0.013	-0.02721	0.01711	-	-	-	-	-	**0.382**	**0.002**	0.817	1.352	0.300	0.363	0.00045	0.00026
94	WD1 5248.75	3.000	1.00	50.36	21.827	0.000065	0.00138	0.375	0.013	-0.02897	0.01711	-	-	-	-	-	**0.470**	**0.005**	0.817	1.718	0.300	0.292	0.00097	0.00040
95	WD1 5245.75	3.000	1.00	50.36	21.920	0.000066	0.00190	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.519**	**0.007**	0.817	1.927	0.300	0.263	0.00140	0.00050
96	WD1 5242.75	3.000	1.00	50.36	22.014	0.000066	0.00233	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.560**	**0.008**	0.817	2.100	0.300	0.242	0.00177	0.00057
(DRAIN)																								
97	WD1 5239.00	3.750	1.00	50.36	22.131	0.000033	0.00081	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.377**	**0.002**	0.817	1.346	0.300	0.365	0.00051	0.00030
(DRAIN)																								
98	WD1 5235.75	3.250	1.00	50.36	22.233	0.000039	0.00058	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.332**	**0.001**	0.817	1.166	0.300	0.414	0.00034	0.00024
(DRAIN)																								
99	WD1 5232.50	3.250	1.00	50.36	22.334	0.000034	0.00049	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.312**	**0.000**	0.817	1.090	0.300	0.440	0.00027	0.00022
(DRAIN)																								
100	WD1 5229.50	3.000	1.00	50.36	22.428	0.000034	0.00048	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.310**	**0.000**	0.817	1.083	0.300	0.442	0.00027	0.00021
(DRAIN)																								
101	WD1 5226.50	3.000	1.00	50.36	22.522	0.000034	0.00048	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.311**	**0.000**	0.817	1.084	0.300	0.442	0.00027	0.00021
(DRAIN)																								
(DRAIN)																								
102	WD1 5218.00	8.500	1.00	50.36	22.788	0.000034	0.00064	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.346**	**0.001**	0.817	1.221	0.300	0.398	0.00039	0.00026
(DRAIN)																								
103	WD1 5215.00	3.000	1.00	50.36	22.881	0.000034	0.00050	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.315**	**0.000**	0.817	1.100	0.300	0.436	0.00028	0.00022
(DRAIN)																								
104	WD1 5212.00	3.000	1.00	50.36	22.975	0.000034	0.00049	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.313**	**0.000**	0.817	1.095	0.300	0.438	0.00028	0.00022
(DRAIN)																								
105	WD1 5209.00	3.000	1.00	50.36	23.069	0.000035	0.00050	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.314**	**0.000**	0.817	1.096	0.300	0.438	0.00028	0.00022
(DRAIN)																								
106	WD1 5206.00	3.000	1.00	50.36	23.163	0.000035	0.00050	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.314**	**0.000**	0.817	1.098	0.300	0.437	0.00028	0.00022
(DRAIN)																								
107	WD1 5203.00	3.000	1.00	50.36	23.256	0.000035	0.00050	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.315**	**0.000**	0.817	1.100	0.300	0.436	0.00028	0.00022
(DRAIN)																								
108	WD1 5200.00	3.000	1.00	50.36	23.350	0.000035	0.00050	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.315**	**0.000**	0.817	1.102	0.300	0.435	0.00028	0.00022
(DRAIN)																								
109	WD1 5197.00	3.000	1.00	50.36	23.444	0.000035	0.00051	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.316**	**0.000**	0.817	1.104	0.300	0.435	0.00029	0.00022
(DRAIN)																								
110	WD1 5193.75	3.250	1.00	50.36	23.545	0.000041	0.00059	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.335**	**0.001**	0.817	1.179	0.300	0.410	0.00035	0.00024
(DRAIN)																								
111	WD1 5190.50	3.250	1.00	50.36	23.647	0.000035	0.00052	0.375	0.013	-0.03000	0.01711	-	-	-	-	-	**0.320**	**0.001**	0.817	1.119	0.300	0.430	0.00030	0.00022
112	WD1 5187.50	3.000	1.00	50.36	23.741	0.000071	0.00130	0.375	0.013	-0.02973	0.01711	-	-	-	-	-	**0.453**	**0.005**	0.817	1.652	0.300	0.303	0.00091	0.00039
113	WD1 5184.50	3.000	1.00	50.36	23.834	0.000072	0.00192	0.375	0.013	-0.02892	0.01711	-	-	-	-	-	**0.533**	**0.007**	0.817	1.976	0.300	0.257	0.00142	0.00049
114	WD1 5181.50	3.000	1.00	50.36	23.928	0.000072	0.00244	0.375	0.013	-0.02810	0.01711	-	-	-	-	-	**0.593**	**0.008**	0.817	2.224	0.300	0.230	0.00188	0.00056
115	WD1 5178.50	3.000	1.00	50.36	24.022	0.000072	0.00289	0.375	0.013	-0.02729	0.01711	-	-	-	-	-	**0.645**	**0.009**	0.817	2.432	0.300	0.211	0.00228	0.00061
116	WD1 5175.50	3.000	1.00	50.36	24.116	0.000072	0.00330	0.375	0.013	-0.02647	0.01711	-	-	-	-	-	**0.690**	**0.010**	0.817	2.619	0.300	0.197	0.00265	0.00065
(DRAIN)																								
117	WD1 5172.50	3.000	1.00	50.36	24.209	0.000036	0.00119	0.375	0.013	-0.02566	0.01711	-	-	-	-	-	**0.481**	**0.005**	0.817	1.741	0.300	0.289	0.00085	0.00034
(DRAIN)																								
118	WD1 5169.50	3.000	1.00	50.36	24.303	0.000036	0.00064	0.375	0.013	-0.02485	0.01711	-	-	-	-	-	**0.389**	**0.002**	0.817	1.367	0.300	0.360	0.00041	0.00023
(DRAIN)																								
119	WD1 5166.50	3.000	1.00	50.36	24.397	0.000037	0.00057	0.375	0.013	-0.02403	0.01711	-	-	-	-	-	**0.378**	**0.002**	0.817	1.323	0.300	0.371	0.00036	0.00021
(DRAIN)																								
120	WD1 5163.50	3.000	1.00	50.36	24.491	0.000037	0.00056	0.375	0.013	-0.02322	0.01711	-	-	-	-	-	**0.386**	**0.002**	0.817	1.349	0.300	0.364	0.00036	0.00021
(DRAIN)																								
121	WD1 5160.50	3.000	1.00	50.36	24.584	0.000037	0.00057	0.375	0.013	-0.02241	0.01711	-	-	-	-	-	**0.397**	**0.002**	0.817	1.387	0.300	0.355	0.00037	0.00020
(DRAIN)																								
122	WD1 5157.50	3.000	1.00	50.36	17.100	0.000026	0.00040	0.375	0.013	-0.02159	0.01711	-	-	-	-	-	**0.354**	**0.001**	0.817	1.215	0.300	0.400	0.00024	0.00016
123	WD1 5154.50	3.000	1.00	50.36	17.100	0.000051	0.00096	0.375	0.013	-0.02078	0.01711	-	-	-	-	-	**0.506**	**0.004**	0.817	1.803	0.300	0.279	0.00069	0.00027
(DRAIN)																								

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
(Scupper)																
95	WD1 5150.000	1.00	50.36	17.100	0.000026	0.00067	0.375	0.013	-0.019559	0.01711	3.0	0.300	**0.458**	**0.003**	0.00004	0.00063
(Scupper)																
96	WD1 5147.000	1.00	50.36	17.100	0.000026	0.00061	0.375	0.013	-0.018746	0.01711	3.0	0.300	**0.455**	**0.003**	0.00003	0.00058
(Scupper)																
97	WD1 5144.000	1.00	50.36	17.100	0.000026	0.00061	0.375	0.013	-0.017932	0.01711	3.0	0.300	**0.468**	**0.003**	0.00004	0.00057
(Scupper)																
98	WD1 5138.000	1.00	50.36	17.100	0.000026	0.00120	0.375	0.015	-0.016305	0.01711	6.0	0.300	**0.675**	**0.006**	0.00025	0.00095
(Scupper)																
99	WD1 5135.000	1.00	50.36	17.100	0.000026	0.00078	0.375	0.015	-0.015492	0.01711	3.0	0.300	**0.594**	**0.005**	0.00012	0.00066
(Scupper)																
100	WD1 5132.000	1.00	50.36	17.100	0.000026	0.00068	0.375	0.015	-0.014678	0.01711	3.0	0.300	**0.584**	**0.004**	0.00010	0.00058
(Scupper)																
101	WD1 5129.000	1.00	50.36	17.100	0.000026	0.00067	0.375	0.015	-0.013864	0.01711	3.0	0.300	**0.601**	**0.004**	0.00011	0.00057
(Scupper)																
102	WD1 5126.000	1.00	50.36	17.100	0.000026	0.00068	0.375	0.015	-0.013051	0.01711	3.0	0.300	**0.627**	**0.004**	0.00012	0.00056
(Scupper)																
103	WD1 5123.000	1.00	50.36	17.100	0.000026	0.00070	0.375	0.015	-0.012237	0.01711	3.0	0.300	**0.659**	**0.004**	0.00014	0.00056
(Scupper)																
104	WD1 5120.000	1.00	50.36	17.100	0.000026	0.00072	0.375	0.015	-0.011424	0.01711	3.0	0.300	**0.695**	**0.005**	0.00016	0.00056
(Scupper)																
105	WD1 5114.500	1.00	50.36	17.100	0.000047	0.00130	0.375	0.015	-0.009932	0.01711	5.5	0.300	**0.949**	**0.006**	0.00047	0.00083
(Scupper)																
106	WD1 5111.500	1.00	50.36	17.100	0.000026	0.00102	0.375	0.015	-0.009119	0.01711	3.0	0.300	**0.914**	**0.006**	0.00035	0.00067
(Scupper)																
107	WD1 5108.500	1.00	50.36	17.100	0.000026	0.00093	0.375	0.015	-0.008305	0.01711	3.0	0.300	**0.934**	**0.005**	0.00033	0.00060
(Scupper)																
108	WD1 5105.500	1.00	50.36	17.100	0.000026	0.00092	0.375	0.015	-0.007492	0.01711	3.0	0.300	**0.991**	**0.005**	0.00035	0.00057
(Scupper)																
(Scupper)																
(Scupper)																
*	WD1 5091.000	1.00	50.36	17.100	0.000120	0.00333	0.375	0.015	-0.006000	0.02003	14.5	-	**1.793**	**0.000**	-	-
**	WD1 5018.000	1.00	50.36	17.100	0.001368	0.02093	0.375	0.015	-0.006000	0.01767	87.5	-	**3.659**	**0.000**	-	-

*Note: Check of flow width at location where shoulder begins transitioning from 0.300m to 3.900m. At this location, the shoulder is 0.300m.
**Note: Check of flow width at end of Type K Barrier. At this location, the shoulder is 3.900m wide

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept Flow m^3/s
124	WD1 5151.50	3.000	1.00	50.36	17.100	0.000026	0.00048	0.375	0.013	-0.01997	0.01711	-	-	-	-	-	**0.398**	**0.002**	0.817	1.374	0.300	0.358	0.00031	0.00017
(DRAIN)																								
125	WD1 5148.50	3.000	1.00	50.36	17.100	0.000026	0.00040	0.375	0.013	-0.01915	0.01711	-	-	-	-	-	**0.383**	**0.002**	0.817	1.311	0.300	0.374	0.00025	0.00015
(DRAIN)																								
126	WD1 5145.50	3.000	1.00	50.36	17.100	0.000026	0.00040	0.375	0.013	-0.01834	0.01711	-	-	-	-	-	**0.392**	**0.002**	0.817	1.340	0.300	0.366	0.00025	0.00015
(DRAIN)																								
127	WD1 5139.50	6.000	1.00	50.36	17.100	0.000077	0.00113	0.375	0.015	-0.01671	0.01711	-	-	-	-	-	**0.648**	**0.006**	0.817	2.015	0.300	0.252	0.00084	0.00028
(DRAIN)																								
128	WD1 5136.50	3.000	1.00	50.36	17.100	0.000026	0.00061	0.375	0.015	-0.01590	0.01711	-	-	-	-	-	**0.533**	**0.004**	0.817	1.609	0.300	0.310	0.00042	0.00019
(DRAIN)																								
129	WD1 5133.50	3.000	1.00	50.36	17.100	0.000026	0.00048	0.375	0.015	-0.01508	0.01711	-	-	-	-	-	**0.503**	**0.003**	0.817	1.501	0.300	0.331	0.00032	0.00016
(DRAIN)																								
130	WD1 5130.50	3.000	1.00	50.36	17.100	0.000026	0.00046	0.375	0.015	-0.01427	0.01711	-	-	-	-	-	**0.512**	**0.003**	0.817	1.523	0.300	0.326	0.00031	0.00015
(DRAIN)																								
131	WD1 5127.50	3.000	1.00	50.36	17.100	0.000026	0.00047	0.375	0.015	-0.01346	0.01711	-	-	-	-	-	**0.534**	**0.003**	0.817	1.587	0.300	0.314	0.00032	0.00015
(DRAIN)																								
132	WD1 5124.50	3.000	1.00	50.36	17.100	0.000026	0.00048	0.375	0.015	-0.01264	0.01711	-	-	-	-	-	**0.562**	**0.003**	0.817	1.669	0.300	0.300	0.00034	0.00014
(DRAIN)																								
133	WD1 5121.50	3.000	1.00	50.36	17.100	0.000026	0.00050	0.375	0.015	-0.01183	0.01711	-	-	-	-	-	**0.594**	**0.003**	0.817	1.763	0.300	0.285	0.00036	0.00014
(DRAIN)																								
134	WD1 5117.25	4.250	1.00	50.36	17.100	0.000047	0.00082	0.375	0.015	-0.01068	0.01711	-	-	-	-	-	**0.763**	**0.005**	0.817	2.311	0.300	0.221	0.00064	0.00018
(DRAIN)																								
135	WD1 5113.00	4.250	1.00	50.36	17.100	0.000026	0.00083	0.375	0.015	-0.00953	0.01711	-	-	-	-	-	**0.824**	**0.005**	0.817	2.490	0.300	0.206	0.00066	0.00017
(DRAIN)																								
136	WD1 5110.00	3.000	1.00	50.36	17.100	0.000026	0.00072	0.375	0.015	-0.00871	0.01711	-	-	-	-	-	**0.822**	**0.005**	0.817	2.464	0.300	0.208	0.00057	0.00015
(DRAIN)																								
137	WD1 5107.00	3.000	1.00	50.36	17.100	0.000026	0.00069	0.375	0.015	-0.00790	0.01711	-	-	-	-	-	**0.863**	**0.004**	0.817	2.576	0.300	0.200	0.00055	0.00014
(DRAIN)																								
138	WD1 5104.00	3.000	1.00	50.36	17.100	0.000026	0.00071	0.375	0.015	-0.00708	0.01711	-	-	-	-	-	**0.934**	**0.004**	0.817	2.782	0.300	0.186	0.00058	0.00013
139	WD1 5101.00	3.000	1.00	50.36	17.100	0.000051	0.00130	0.375	0.015	-0.00627	0.01711	-	-	-	-	-	**1.264**	**0.006**	0.817	3.858	0.300	0.136	0.00113	0.00018
140	WD1 5098.00	3.000	1.00	50.36	17.100	0.000051	0.00185	0.375	0.015	-0.00600	0.01711	-	-	-	-	-	**1.482**	**0.007**	0.817	4.590	0.300	0.115	0.00164	0.00021

WDR1 Line Drainage

Drains Only - 25 Year Intensity

Use Drain Type D-3 (unmodified) at a minimum spacing of 3.0 m.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "WDR1" 51+14.63. The amount of flow crossing the deck is 0.00042 m^3/s.
BDA p.17-3 advises allowing a maximum of 0.003 m^3/s to flow across deck. Therefore, this configuration is more than adequate.

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spacing m	Drain Width m	**T m**	Shoulder Width m	**Depth at Edge of Shldr. m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	WDR1 5160	1.00	60.56	6.4	0	0.00000	0.375	0.013	-0.02314	0.01711	n/a	n/a	**0.0000**	0.600	**n/a**	0.00000	n/a
1	WDR1 5149	1.00	60.56	6.4	0.0000704	0.00119	0.375	0.013	-0.02016	0.01711	n/a	0.400	**0.5588**	0.600	**0.000**	0.00004	0.00115
2	WDR1 5146	1.00	60.56	6.4	0.0000192	0.00037	0.375	0.013	-0.01935	0.01711	3	0.400	**0.3685**	0.600	**0.000**	0.00000	0.00037
3	WDR1 5143	1.00	60.56	6.4	0.0000192	0.00033	0.375	0.013	-0.01853	0.01711	3	0.400	**0.3618**	0.600	**0.000**	0.00000	0.00033
4	WDR1 5140	1.00	60.56	6.4	0.0000192	0.00033	0.375	0.015	-0.01772	0.01711	3	0.400	**0.3926**	0.600	**0.000**	0.00000	0.00033
5	WDR1 5133	1.00	60.56	6.4	0.0000448	0.00076	0.375	0.015	-0.01549	0.01966	7	0.400	**0.5717**	0.600	**0.000**	0.00003	0.00073
6	WDR1 5130	1.00	60.56	6.4	0.0000192	0.00036	0.375	0.015	-0.01296	0.01966	3	0.400	**0.4812**	0.600	**0.000**	0.00000	0.00035
7	WDR1 5127	1.00	60.56	6.4	0.0000192	0.00033	0.375	0.015	-0.01043	0.01966	3	0.400	**0.5347**	0.600	**0.000**	0.00001	0.00032
8	WDR1 5124	1.00	60.56	6.4	0.0000192	0.00033	0.375	0.015	-0.00790	0.01966	3	0.400	**0.6399**	0.600	**0.000**	0.00002	0.00031
9	WDR1 5121	1.00	60.56	6.4	0.0000192	0.00035	0.375	0.015	-0.00537	0.01966	3	0.400	**0.8290**	0.600	**0.001**	0.00006	0.00029
10	WDR1 5118	1.00	60.56	6.4	0.0000192	0.00039	0.375	0.015	-0.00284	0.01966	3	0.400	**1.2808**	0.600	**0.002**	0.00014	0.00024
11	WDR1 5115	1.00	60.56	6.4	0.0000192	0.00047	0.375	0.015	-0.00031	0.01966	3	0.400	**5.5083**	0.600	**0.002**	0.00038	0.00009
0% C.S.	WDR1 5114.63	1.00	60.56	6.4	0.0000024	**0.00042**	0.375	0.015	0.00000	0.01966	-	0.400	**89.8760**	2.400	**0.000**	0.00042	0.00000
-	WDR1 5113	1.00	60.56	6.4	0.0000128	0.00060	0.375	0.015	0.00138	0.01966	-	0.400	**2.3735**	2.400	**0.000**	0.00060	0.00000
-	WDR1 5112	1.00	60.56	6.4	0.0000192	0.00071	0.375	0.015	0.00222	0.01966	-	0.400	**1.8745**	2.400	**0.000**	0.00071	0.00000
-	WDR1 5080	1.00	60.56	6.4	0.0002240	0.00418	0.375	0.015	0.02000	0.01966	-	0.400	**0.9238**	2.400	**0.000**	0.00418	0.00000
12	WDR1 5034	1.00	60.56	6.4	0.0005184	0.00917	0.375	0.015	0.02000	0.01966	-	0.400	**1.2403**	2.400	**0.000**	0.00325	0.00593
13	WDR1 5031	1.00	60.56	6.4	0.0000192	0.00357	0.375	0.015	0.02000	0.01966	3	0.400	**0.8709**	2.400	**0.000**	0.00069	0.00288
-	WDR1 5030	1.00	60.56	6.4	0.0000064	0.00080	0.375	0.015	0.02000	0.01966	-	0.400	**0.4973**	2.400	**0.000**	0.00080	0.00000
-	WDR1 5114.63	Point of Zero Cross Slope							0.00000								

Cross slope at WDR1 51+33.581= -0.016

WDR1 Line Drainage

Drains Only - 10 Year Intensity

Use Drain Type D-3 (unmodified) at a minimum spacing of 3.0 m.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "WDR1" 51+14.63. The amount of flow crossing the deck is 0.00033 m^3/s.
BDA p.17-3 advises allowing a maximum of 0.003 m^3/s to flow across deck. Therefore, this configuration is more than adequate.

Drain No.	Station		C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	Shoulder Width	Depth at Edge of Shldr.	Bypass Flow	Intercept. Flow
	m			mm/hr	m	km^2	m^3/s					m	m	**m**	m	m	m^3/s	m^3/s
-	WDR1	5160	1.00	50.36	6.4	0	0.00000	0.375	0.013	-0.02314	0.01711	n/a	n/a	**0.0000**	0.600	n/a	0.00000	n/a
1	WDR1	5149	1.00	50.36	6.4	0.0000704	0.00099	0.375	0.013	-0.02016	0.01711	n/a	0.400	**0.5215**	0.600	0.000	0.00002	0.00097
2	WDR1	5146	1.00	50.36	6.4	0.0000192	0.00029	0.375	0.013	-0.01935	0.01711	3	0.400	**0.3378**	0.600	0.000	0.00000	0.00029
3	WDR1	5143	1.00	50.36	6.4	0.0000192	0.00027	0.375	0.013	-0.01853	0.01711	3	0.400	**0.3376**	0.600	0.000	0.00000	0.00027
4	WDR1	5140	1.00	50.36	6.4	0.0000192	0.00027	0.375	0.015	-0.01772	0.01711	3	0.400	**0.3664**	0.600	0.000	0.00000	0.00027
5	WDR1	5133	1.00	50.36	6.4	0.0000448	0.00063	0.375	0.015	-0.01549	0.01966	7	0.400	**0.5335**	0.600	0.000	0.00002	0.00062
6	WDR1	5130	1.00	50.36	6.4	0.0000192	0.00029	0.375	0.015	-0.01296	0.01966	3	0.400	**0.4434**	0.600	0.000	0.00000	0.00029
7	WDR1	5127	1.00	50.36	6.4	0.0000192	0.00027	0.375	0.015	-0.01043	0.01966	3	0.400	**0.4976**	0.600	0.000	0.00000	0.00027
8	WDR1	5124	1.00	50.36	6.4	0.0000192	0.00027	0.375	0.015	-0.00790	0.01966	3	0.400	**0.5944**	0.600	0.000	0.00001	0.00026
9	WDR1	5121	1.00	50.36	6.4	0.0000192	0.00028	0.375	0.015	-0.00537	0.01966	3	0.400	**0.7672**	0.600	0.001	0.00004	0.00024
10	WDR1	5118	1.00	50.36	6.4	0.0000192	0.00031	0.375	0.015	-0.00284	0.01966	3	0.400	**1.1806**	0.600	0.002	0.00010	0.00021
11	WDR1	5115	1.00	50.36	6.4	0.0000192	0.00037	0.375	0.015	-0.00031	0.01966	3	0.400	**5.0640**	0.600	0.001	0.00030	0.00007
0% C.S.	WDR1	5114.63	1.00	50.36	6.4	0.0000024	**0.00033**	0.375	0.015	0.00000	0.01966	-	0.400	**82.2345**	2.400	0.000	0.00033	0.00000
-	WDR1	5113	1.00	50.36	6.4	0.0000128	0.00048	0.375	0.015	0.00138	0.01966	-	0.400	**2.1846**	2.400	0.000	0.00048	0.00000
-	WDR1	5112	1.00	50.36	6.4	0.0000192	0.00057	0.375	0.015	0.00222	0.01966	-	0.400	**1.7290**	2.400	0.000	0.00057	0.00000
-	WDR1	5080	1.00	50.36	6.4	0.0002240	0.00346	0.375	0.015	0.02000	0.01966	-	0.400	**0.8604**	2.400	0.000	0.00346	0.00000
12	WDR1	5034	1.00	50.36	6.4	0.0005184	0.00761	0.375	0.015	0.02000	0.01966	-	0.400	**1.1564**	2.400	0.000	0.00245	0.00516
13	WDR1	5031	1.00	50.36	6.4	0.0000192	0.00272	0.375	0.015	0.02000	0.01966	3	0.400	**0.7867**	2.400	0.000	0.00041	0.00231
-	WDR1	5030	1.00	50.36	6.4	0.0000064	0.00050	0.375	0.015	0.02000	0.01966	-	0.400	**0.4166**	2.400	0.000	0.00050	0.00000
-	WDR1	5114.63	Point of Zero Cross Slope							0.00000								

Cross slope at WDR1 51+33.581= -0.016

WDR1 Line Drainage

Drains and Scuppers with Uniform Cross Slope - 25 Year Intensity

Use Drain Type D-3 (unmodified) at a minimum spacing of 3.0 m.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "WDR1" 51+14.63. The amount of flow crossing the deck is 0.00037 m^3/s.
BDA p.17-3 advises allowing a maximum of 0.003 m^2/s to flow across deck. Therefore, this configuration is more than adequate.

Drains:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	**T m**	Shoulder Width m	Depth at Edge of Shldr. m	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	WDR1 5160	1.00	60.56	6.4	0	0.00000	0.375	0.013	-0.02314	0.01711	n/a	n/a	**0.0000**	0.600	n/a	0.00000	n/a
1	WDR1 5149	1.00	60.56	6.4	0.0000704	0.00119	0.375	0.013	-0.02016	0.01711	n/a	0.400	**0.5588**	0.600	0.000	0.00004	0.00115
2	WDR1 5146	1.00	60.56	6.4	0.0000192	0.00037	0.375	0.013	-0.01935	0.01711	3	0.400	**0.3685**	0.600	0.000	0.00000	0.00037
3	WDR1 5143	1.00	60.56	6.4	0.0000192	0.00033	0.375	0.013	-0.01853	0.01711	3	0.400	**0.3618**	0.600	0.000	0.00000	0.00033
4	WDR1 5140	1.00	60.56	6.4	0.0000192	0.00033	0.375	0.015	-0.01772	0.01711	3	0.400	**0.3926**	0.600	0.000	0.00000	0.00033
5	WDR1 5133	1.00	60.56	6.4	0.0000448	0.00076	0.375	0.015	-0.01549	0.01966	7	0.400	**0.5717**	0.600	0.000	0.00003	0.00073
6	WDR1 5130	1.00	60.56	6.4	0.0000192	0.00036	0.375	0.015	-0.01296	0.01966	3	0.400	**0.4812**	0.600	0.000	0.00000	0.00035
7	WDR1 5127	1.00	60.56	6.4	0.0000192	0.00033	0.375	0.015	-0.01043	0.01966	3	0.400	**0.5347**	0.600	0.000	0.00001	0.00032
8	WDR1 5124	1.00	60.56	6.4	0.0000096	0.00027	0.375	0.015	-0.00790	0.01966	3	0.400	**0.5874**	0.600	0.000	0.00001	0.00025
9	WDR1 5121	1.00	60.56	6.4	0.0000096	0.00029	0.375	0.015	-0.00537	0.01966	3	0.400	**0.7683**	0.600	0.001	0.00004	0.00025
10	WDR1 5118	1.00	60.56	6.4	0.0000096	0.00032	0.375	0.015	-0.00284	0.01966	3	0.400	**1.1966**	0.600	0.002	0.00011	0.00021
11	WDR1 5115	1.00	60.56	6.4	0.0000096	0.00040	0.375	0.015	-0.00031	0.01966	3	0.400	**5.2157**	0.600	0.001	0.00033	0.00008
0% C.S.	WDR1 5114.63	1.00	60.56	6.4	0.0000024	**0.00037**	0.375	0.015	0.00000	0.01966	-	0.400	**85.2398**	2.400	0.000	0.00037	0.00000
-	WDR1 5113	1.00	60.56	6.4	0.0000128	0.00054	0.375	0.015	0.00138	0.01966	-	0.400	**2.2884**	2.400	0.000	0.00054	0.00000
-	WDR1 5112	1.00	60.56	6.4	0.0000192	0.00065	0.375	0.015	0.00222	0.01966	-	0.400	**1.8178**	2.400	0.000	0.00065	0.00000
-	WDR1 5080	1.00	60.56	6.4	0.0002240	0.00413	0.375	0.015	0.02000	0.01966	-	0.400	**0.9191**	2.400	0.000	0.00413	0.00000
12	WDR1 5034	1.00	60.56	6.4	0.0005184	0.00912	0.375	0.015	0.02000	0.01966	-	0.400	**1.2375**	2.400	0.000	0.00322	0.00590
13	WDR1 5031	1.00	60.56	6.4	0.0000192	0.00354	0.375	0.015	0.02000	0.01966	3	0.400	**0.8683**	2.400	0.000	0.00068	0.00286
-	WDR1 5030	1.00	60.56	6.4	0.0000064	0.00079	0.375	0.015	0.02000	0.01966	-	0.400	**0.4949**	2.400	0.000	0.00079	0.00000
-	WDR1 5114.63	Point of Zero Cross Slope							0.00000								

Cross slope at WDR1 51+33.581= 0.016

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	**T m**	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
1	WDR1 5125.50	-	1.00	60.56	6.4	0.000010	0.00016	0.375	0.015	-0.00916	0.01966	**0.445**	0.001	0.817	1.337	0.300	0.367	0.00010	0.00006
2	WDR1 5122.50	3.000	1.00	60.56	6.4	0.000010	0.00018	0.375	0.015	-0.00663	0.01966	**0.561**	0.002	0.817	1.675	0.300	0.299	0.00012	0.00005
3	WDR1 5119.50	3.000	1.00	60.56	6.4	0.000010	0.00020	0.375	0.015	-0.00410	0.01966	**0.799**	0.002	0.817	2.376	0.300	0.216	0.00016	0.00004
4	WDR1 5116.50	3.000	1.00	60.56	6.4	0.000010	0.00027	0.375	0.015	-0.00157	0.01966	**1.623**	0.002	0.817	4.772	0.300	0.110	0.00024	0.00003

WDR1 Line Drainage

Drains and Scuppers with Uniform Cross Slope - 10 Year Intensity

Use Drain Type D-3 (unmodified) at a minimum spacing of 3.0 m.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "WDR1" 51+14.63. The amount of flow crossing the deck is 0.00032 m^3/s.
BDA p.17-3 advises allowing a maximum of 0.003 m^3/s to flow across deck. Therefore, this configuration is more than adequate.

Drains:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T **m**	Shoulder Width m	Depth at Edge of Shldr. m	Bypass Flow m^3/s	Intercept Flow m^3/s
-	WDR1 5160	1.00	50.36	6.4	0	0.00000	0.375	0.013	-0.02314	0.01711	n/a	n/a	**0.0000**	0.600	n/a	0.00000	n/a
1	WDR1 5149	1.00	50.36	6.4	0.0000704	0.00099	0.375	0.013	-0.02016	0.01711	n/a	0.400	**0.5215**	0.600	0.000	0.00002	0.00097
2	WDR1 5146	1.00	50.36	6.4	0.0000192	0.00029	0.375	0.013	-0.01935	0.01711	3	0.400	**0.3378**	0.600	0.000	0.00000	0.00029
3	WDR1 5143	1.00	50.36	6.4	0.0000192	0.00027	0.375	0.013	-0.01853	0.01711	3	0.400	**0.3376**	0.600	0.000	0.00000	0.00027
4	WDR1 5140	1.00	50.36	6.4	0.0000192	0.00027	0.375	0.015	-0.01772	0.01711	3	0.400	**0.3664**	0.600	0.000	0.00000	0.00027
5	WDR1 5133	1.00	50.36	6.4	0.0000448	0.00063	0.375	0.015	-0.01549	0.01966	7	0.400	**0.5335**	0.600	0.000	0.00002	0.00062
6	WDR1 5130	1.00	50.36	6.4	0.0000192	0.00029	0.375	0.015	-0.01296	0.01966	3	0.400	**0.4434**	0.600	0.000	0.00000	0.00029
7	WDR1 5127	1.00	50.36	6.4	0.0000192	0.00027	0.375	0.015	-0.01043	0.01966	3	0.400	**0.4976**	0.600	0.000	0.00000	0.00027
8	WDR1 5124	1.00	50.36	6.4	0.0000096	0.00024	0.375	0.015	-0.00790	0.01966	3	0.400	**0.5664**	0.600	0.000	0.00001	0.00023
9	WDR1 5121	1.00	50.36	6.4	0.0000096	0.00026	0.375	0.015	-0.00537	0.01966	3	0.400	**0.7368**	0.600	0.001	0.00003	0.00022
10	WDR1 5118	1.00	50.36	6.4	0.0000096	0.00029	0.375	0.015	-0.00284	0.01966	3	0.400	**1.1463**	0.600	0.002	0.00009	0.00020
11	WDR1 5115	1.00	50.36	6.4	0.0000096	0.00036	0.375	0.015	-0.00031	0.01966	3	0.400	**4.9971**	0.600	0.001	0.00029	0.00007
0% C.S.	WDR1 5114.63	1.00	50.36	6.4	0.0000024	**0.00032**	0.375	0.015	0.00000	0.01966	-	0.400	**81.1742**	2.400	0.000	0.00032	0.00000
-	WDR1 5113	1.00	50.36	6.4	0.0000128	0.00047	0.375	0.015	0.00138	0.01966	-	0.400	**2.1651**	2.400	0.000	0.00047	0.00000
-	WDR1 5112	1.00	50.36	6.4	0.0000192	0.00056	0.375	0.015	0.00222	0.01966	-	0.400	**1.7160**	2.400	0.000	0.00056	0.00000
-	WDR1 5080	1.00	50.36	6.4	0.0002240	0.00345	0.375	0.015	0.02000	0.01966	-	0.400	**0.8593**	2.400	0.000	0.00345	0.00000
12	WDR1 5034	1.00	50.36	6.4	0.0005184	0.00760	0.375	0.015	0.02000	0.01966	-	0.400	**1.1558**	2.400	0.000	0.00245	0.00515
13	WDR1 5031	1.00	50.36	6.4	0.0000192	0.00272	0.375	0.015	0.02000	0.01966	3	0.400	**0.7861**	2.400	0.000	0.00041	0.00231
-	WDR1 5030	1.00	50.36	6.4	0.0000064	0.00050	0.375	0.015	0.02000	0.01966	-	0.400	**0.4161**	2.400	0.000	0.00050	0.00000
-	WDR1 5114.63	Point of Zero Cross Slope							0.00000								

Cross slope at WDR1 51+33.581= 0.016

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	T **m**	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept Flow m^3/s
1	WDR1 5125.50	-	1.00	60.56	6.4	0.000010	0.00017	0.375	0.015	-0.00916	0.01966	**0.449**	0.001	0.817	1.349	0.300	0.364	0.00011	0.00006
2	WDR1 5122.50	3.000	1.00	60.56	6.4	0.000010	0.00017	0.375	0.015	-0.00663	0.01966	**0.556**	0.002	0.817	1.661	0.300	0.301	0.00012	0.00005
3	WDR1 5119.50	3.000	1.00	60.56	6.4	0.000010	0.00019	0.375	0.015	-0.00410	0.01966	**0.787**	0.002	0.817	2.334	0.300	0.219	0.00015	0.00004
4	WDR1 5116.50	3.000	1.00	60.56	6.4	0.000010	0.00025	0.375	0.015	-0.00157	0.01966	**1.583**	0.002	0.817	4.642	0.300	0.113	0.00023	0.00003

ED1 Line Drainage

Drains and Depressed Scuppers - 25 Year Intensity

Use Drain Type D-3, modified to 300 mm width. Use minimum drain spacing of 3.0 m

Place 300mm long scuppers between drains at minimum spacing of 3.0 m on center, and at least 1.5 m from a drain.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "ED1" 52+98 and "ED1" 51+25. The amount of flow crossing the deck is 0.00126 m^3/s and 0.00107 m^3/s respectively. BDA p. 17-3 advises that a maximum of 0.003 m^3/s flow across the deck. Therefore, this configuration is adequate.

Drains:

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	**Depth 0.3m from Curb**	Bypass Flow	Intercept. Flow
	m		mm/hr	m	km^2	m^3/s					m	m	**m**	**m**	m^3/s	m^3/s
-	ED1 5551.837	1.00	60.56	13.84	0.000000	0.00000	0.375	0.013	0.00440	0.01167	n/a	0.300	**0.000**	**0.000**	0.00000	n/a
(Scupper)																
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(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
1	ED1 5519.500	1.00	60.56	13.84	0.000021	0.00058	0.375	0.013	0.00350	0.01410	32.3	0.300	**1.321**	**0.004**	0.00029	0.00029
(Scupper)																
2	ED1 5516.000	1.00	60.56	13.84	0.000028	0.00058	0.375	0.013	0.00350	0.01437	3.5	0.300	**1.315**	**0.004**	0.00029	0.00029
(Scupper)																
3	ED1 5513.000	1.00	60.56	13.84	0.000021	0.00046	0.375	0.013	0.00350	0.01461	3.0	0.300	**1.206**	**0.003**	0.00022	0.00025
(Scupper)																
4	ED1 5508.000	1.00	60.56	13.84	0.000035	0.00077	0.375	0.013	0.00350	0.01499	5.0	0.300	**1.450**	**0.004**	0.00041	0.00035
(Scupper)																
5	ED1 5505.000	1.00	60.56	13.84	0.000021	0.00052	0.375	0.013	0.00350	0.01522	3.0	0.300	**1.248**	**0.003**	0.00025	0.00027
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
6	ED1 5487.000	1.00	60.56	13.84	0.000021	0.00063	0.375	0.013	0.00790	0.01661	18.0	0.300	**0.795**	**0.004**	0.00018	0.00045
(Scupper)																
7	ED1 5484.000	1.00	60.56	13.84	0.000021	0.00043	0.375	0.013	0.00955	0.01685	3.0	0.300	**0.608**	**0.003**	0.00007	0.00036
(Scupper)																
8	ED1 5481.000	1.00	60.56	13.84	0.000021	0.00039	0.375	0.013	0.01120	0.01708	3.0	0.300	**0.531**	**0.003**	0.00004	0.00035
(Scupper)																
9	ED1 5478.000	1.00	60.56	13.84	0.000021	0.00038	0.375	0.013	0.01285	0.01731	3.0	0.300	**0.483**	**0.002**	0.00003	0.00035
(Scupper)																
10	ED1 5475.000	1.00	60.56	13.84	0.000021	0.00038	0.375	0.013	0.01450	0.01754	3.0	0.300	**0.445**	**0.002**	0.00002	0.00036
(Scupper)																
11	ED1 5472.000	1.00	60.56	13.84	0.000021	0.00038	0.375	0.013	0.01615	0.01777	3.0	0.300	**0.414**	**0.002**	0.00001	0.00036
(Scupper)																
12	ED1 5469.000	1.00	60.56	13.84	0.000021	0.00037	0.375	0.013	0.01780	0.01800	3.0	0.300	**0.387**	**0.002**	0.00001	0.00037
(Scupper)																
13	ED1 5462.500	1.00	60.56	13.84	0.000021	0.00071	0.375	0.013	0.02000	0.01851	6.5	0.300	**0.456**	**0.003**	0.00004	0.00067
(Scupper)																
14	ED1 5459.500	1.00	60.56	13.84	0.000021	0.00038	0.375	0.013	0.02000	0.01874	3.0	0.300	**0.360**	**0.001**	0.00000	0.00038
(Scupper)																
15	ED1 5456.500	1.00	60.56	13.84	0.000021	0.00037	0.375	0.013	0.02000	0.01897	3.0	0.300	**0.356**	**0.001**	0.00000	0.00037
(Scupper)																
16	ED1 5453.000	1.00	60.56	13.876	0.000024	0.00045	0.375	0.013	0.02000	0.01924	3.5	0.300	**0.380**	**0.002**	0.00001	0.00044

Scuppers:

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	**Depth 0.3m from Curb**	K	L_T	L	E	Bypass Flow	Intercept Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		**m**	**m**		m	m		m^3/s	m^3/s
-	ED1 5545.20	-	1.00	60.56	13.840	0.000092	0.00156	0.375	0.013	0.00440	0.01212	-	-	-	-	-	**1.705**	**0.006**	-	-	-	-	-	-
1	ED1 5545.00	-	1.00	60.56	13.840	0.000095	0.00160	0.375	0.013	0.00440	0.01213	0.038	0.300	0.1311	0.00433	YES	0.207	0.000	0.817	0.668	0.300	0.658	0.00055	0.00106
-	ED1 5542.20	-	1.00	60.56	13.840	0.000039	0.00121	0.375	0.013	0.00440	0.01235	-	-	-	-	-	**1.544**	**0.005**	-	-	-	-	-	-
2	ED1 5542.00	3.000	1.00	60.56	13.840	0.000042	0.00125	0.375	0.013	0.00440	0.01237	0.038	0.300	0.1311	0.00438	YES	0.188	0.000	0.817	0.606	0.300	0.708	0.00037	0.00089
-	ED1 5539.20	-	1.00	60.56	13.840	0.000039	0.00102	0.375	0.013	0.00440	0.01258	-	-	-	-	-	**1.446**	**0.005**	-	-	-	-	-	-
3	ED1 5539.00	3.000	1.00	60.56	13.840	0.000042	0.00107	0.375	0.013	0.00440	0.01260	0.038	0.300	0.1311	0.00442	YES	0.176	0.000	0.817	0.570	0.300	0.740	0.00028	0.00079
-	ED1 5536.20	-	1.00	60.56	13.840	0.000039	0.00094	0.375	0.013	0.00440	0.01281	-	-	-	-	-	**1.394**	**0.005**	-	-	-	-	-	-
4	ED1 5536.00	3.000	1.00	60.56	13.840	0.000042	0.00098	0.375	0.013	0.00440	0.01283	0.038	0.300	0.1311	0.00446	YES	0.170	0.000	0.817	0.553	0.300	0.755	0.00024	0.00074
-	ED1 5533.20	-	1.00	60.56	13.840	0.000039	0.00090	0.375	0.013	0.00440	0.01305	-	-	-	-	-	**1.368**	**0.005**	-	-	-	-	-	-
5	ED1 5533.00	3.000	1.00	60.56	13.840	0.000042	0.00094	0.375	0.013	0.00440	0.01306	0.038	0.300	0.1311	0.00450	YES	0.167	0.000	0.817	0.547	0.300	0.761	0.00023	0.00072
-	ED1 5530.20	-	1.00	60.56	13.840	0.000039	0.00088	0.375	0.013	0.00440	0.01328	-	-	-	-	-	**1.355**	**0.005**	-	-	-	-	-	-
6	ED1 5530.00	3.000	1.00	60.56	13.840	0.000042	0.00093	0.375	0.013	0.00440	0.01329	0.038	0.300	0.1311	0.00454	YES	0.166	0.000	0.817	0.546	0.300	0.762	0.00022	0.00071
-	ED1 5527.20	-	1.00	60.56	13.840	0.000039	0.00088	0.375	0.013	0.00440	0.01351	-	-	-	-	-	**1.348**	**0.005**	-	-	-	-	-	-
7	ED1 5527.00	3.000	1.00	60.56	13.840	0.000042	0.00093	0.375	0.013	0.00440	0.01352	0.038	0.300	0.1311	0.00458	YES	0.165	0.000	0.817	0.548	0.300	0.760	0.00022	0.00070
-	ED1 5524.20	-	1.00	60.56	13.840	0.000039	0.00088	0.375	0.013	0.00440	0.01374	-	-	-	-	-	**1.344**	**0.005**	-	-	-	-	-	-
8	ED1 5524.00	3.000	1.00	60.56	13.840	0.000042	0.00093	0.375	0.013	0.00440	0.01376	0.038	0.300	0.1311	0.00461	YES	0.164	0.000	0.817	0.551	0.300	0.758	0.00022	0.00070
-	ED1 5521.20	-	1.00	60.56	13.840	0.000039	0.00088	0.375	0.013	0.00440	0.01397	-	-	-	-	-	**1.341**	**0.005**	-	-	-	-	-	-
9	ED1 5521.00	3.000	1.00	60.56	13.840	0.000042	0.00093	0.375	0.013	0.00440	0.01399	0.038	0.300	0.1311	0.00465	YES	0.164	0.000	0.817	0.554	0.300	0.754	0.00023	0.00070
(DRAIN)																								
-	ED1 5518.20	-	1.00	60.56	13.840	0.000018	0.00060	0.375	0.013	0.00350	0.01420	-	-	-	-	-	**1.333**	**0.004**	-	-	-	-	-	-
10	ED1 5518.00	3.000	1.00	60.56	13.840	0.000021	0.00064	0.375	0.013	0.00350	0.01422	0.038	0.300	0.1302	0.00464	YES	0.143	0.000	0.817	0.479	0.300	0.830	0.00011	0.00053
(DRAIN)																								
-	ED1 5514.70	-	1.00	60.56	13.840	0.000018	0.00060	0.375	0.013	0.00350	0.01447	-	-	-	-	-	**1.327**	**0.004**	-	-	-	-	-	-
11	ED1 5514.50	3.500	1.00	60.56	13.840	0.000021	0.00064	0.375	0.013	0.00350	0.01449	0.038	0.300	0.1302	0.00468	YES	0.142	0.000	0.817	0.482	0.300	0.827	0.00011	0.00053
(DRAIN)																								
-	ED1 5510.70	-	1.00	60.56	13.840	0.000032	0.00076	0.375	0.013	0.00350	0.01478	-	-	-	-	-	**1.445**	**0.004**	-	-	-	-	-	-
12	ED1 5510.50	4.000	1.00	60.56	13.840	0.000035	0.00080	0.375	0.013	0.00350	0.01480	0.038	0.300	0.1302	0.00473	YES	0.154	0.000	0.817	0.532	0.300	0.775	0.00018	0.00062
(DRAIN)																								
-	ED1 5506.70	-	1.00	60.56	13.840	0.000018	0.00072	0.375	0.013	0.00350	0.01509	-	-	-	-	-	**1.413**	**0.004**	-	-	-	-	-	-
13	ED1 5506.50	4.000	1.00	60.56	13.840	0.000021	0.00077	0.375	0.013	0.00350	0.01511	0.038	0.300	0.1302	0.00478	YES	0.151	0.000	0.817	0.525	0.300	0.782	0.00017	0.00060
(DRAIN)																								
-	ED1 5500.70	-	1.00	60.56	13.840	0.000060	0.00126	0.375	0.013	0.00350	0.01556	-	-	-	-	-	**1.733**	**0.005**	-	-	-	-	-	-
14	ED1 5500.50	6.000	1.00	60.56	13.840	0.000062	0.00131	0.375	0.013	0.00350	0.01557	0.038	0.300	0.1302	0.00485	YES	0.183	0.000	0.817	0.663	0.300	0.662	0.00044	0.00086
-	ED1 5497.70	-	1.00	60.56	13.840	0.000039	0.00110	0.375	0.013	0.00350	0.01579	-	-	-	-	-	**1.643**	**0.005**	-	-	-	-	-	-
15	ED1 5497.50	3.000	1.00	60.56	13.840	0.000042	0.00115	0.375	0.013	0.00350	0.01580	0.038	0.300	0.1302	0.00489	YES	0.174	0.000	0.817	0.630	0.300	0.688	0.00036	0.00079
-	ED1 5494.70	-	1.00	60.56	13.840	0.000039	0.00101	0.375	0.013	0.00367	0.01602	-	-	-	-	-	**1.545**	**0.005**	-	-	-	-	-	-
16	ED1 5494.50	3.000	1.00	60.56	13.840	0.000042	0.00106	0.375	0.013	0.00378	0.01603	0.038	0.300	0.1304	0.00494	YES	0.169	0.000	0.817	0.612	0.300	0.702	0.00032	0.00075
-	ED1 5491.70	-	1.00	60.56	13.840	0.000039	0.00097	0.375	0.013	0.00532	0.01625	-	-	-	-	-	**1.203**	**0.005**	-	-	-	-	-	-
17	ED1 5491.50	3.000	1.00	60.56	13.840	0.000042	0.00102	0.375	0.013	0.00543	0.01627	0.038	0.300	0.1321	0.00508	YES	0.164	0.000	0.817	0.600	0.300	0.713	0.00029	0.00073
-	ED1 5488.70	-	1.00	60.56	13.840	0.000039	0.00095	0.375	0.013	0.00697	0.01648	-	-	-	-	-	**1.004**	**0.005**	-	-	-	-	-	-
18	ED1 5488.50	3.000	1.00	60.56	13.840	0.000042	0.00100	0.375	0.013	0.00708	0.01650	0.038	0.300	0.1337	0.00523	YES	0.161	0.000	0.817	0.593	0.300	0.719	0.00028	0.00072
(DRAIN)																								
-	ED1 5485.70	-	1.00	60.56	13.840	0.000018	0.00048	0.375	0.013	0.00862	0.01671	-	-	-	-	-	**0.681**	**0.003**	-	-	-	-	-	-
19	ED1 5485.50	3.000	1.00	60.56	13.840	0.000021	0.00053	0.375	0.013	0.00873	0.01673	0.038	0.300	0.1354	0.00537	YES	0.126	0.000	0.817	0.453	0.300	0.858	0.00008	0.00046
(DRAIN)																								
-	ED1 5482.70	-	1.00	60.56	13.840	0.000018	0.00037	0.375	0.013	0.01027	0.01695	-	-	-	-	-	**0.553**	**0.003**	-	-	-	-	-	-
20	ED1 5482.50	3.000	1.00	60.56	13.840	0.000021	0.00042	0.375	0.013	0.01038	0.01696	0.038	0.300	0.1370	0.00552	YES	0.114	0.000	0.817	0.410	0.300	0.906	0.00004	0.00038
(DRAIN)																								
-	ED1 5479.70	-	1.00	60.56	13.840	0.000018	0.00035	0.375	0.013	0.01192	0.01718	-	-	-	-	-	**0.488**	**0.002**	-	-	-	-	-	-
21	ED1 5479.50	3.000	1.00	60.56	13.840	0.000021	0.00039	0.375	0.013	0.01203	0.01719	0.038	0.300	0.1387	0.00567	YES	0.110	0.000	0.817	0.398	0.300	0.920	0.00003	0.00036
(DRAIN)																								
-	ED1 5476.70	-	1.00	60.56	13.840	0.000018	0.00033	0.375	0.013	0.01357	0.01741	-	-	-	-	-	**0.442**	**0.002**	-	-	-	-	-	-
22	ED1 5476.50	3.000	1.00	60.56	13.840	0.000021	0.00038	0.375	0.013	0.01368	0.01743	0.038	0.300	0.1403	0.00582	YES	0.108	0.000	0.817	0.391	0.300	0.928	0.00003	0.00035
(DRAIN)																								
-	ED1 5473.70	-	1.00	60.56	13.840	0.000018	0.00032	0.375	0.013	0.01522	0.01764	-	-	-	-	-	**0.406**	**0.002**	-	-	-	-	-	-
23	ED1 5473.50	3.000	1.00	60.56	13.840	0.000021	0.00037	0.375	0.013	0.01533	0.01766	0.038	0.300	0.1420	0.00597	YES	0.106	0.000	0.817	0.385	0.300	0.934	0.00002	0.00035
(DRAIN)																								
-	ED1 5470.50	-	1.00	60.56	13.840	0.000021	0.00036	0.375	0.013	0.01698	0.01789	-	-	-	-	-	**0.395**	**0.002**	-	-	-	-	-	-
24	ED1 5470.50	3.000	1.00	60.56	13.840	0.000021	0.00036	0.375	0.013	0.01698	0.01789	0.038	0.300	0.1436	0.00613	YES	0.104	0.000	0.817	0.381	0.300	0.938	0.00002	0.00034
(DRAIN)																								
-	ED1 5464.20	-	1.00	60.56	13.840	0.000066	0.00113	0.375	0.013	0.02000	0.01838	-	-	-	-	-	**0.543**	**0.005**	-	-	-	-	-	-
25	ED1 5464.00	6.500	1.00	60.56	13.840	0.000069	0.00118	0.375	0.013	0.02000	0.01839	0.038	0.300	0.1467	0.00644	YES	0.159	0.000	0.817	0.622	0.300	0.694	0.00036	0.00082
(DRAIN)																								
-	ED1 5461.20	-	1.00	60.56	13.840	0.000018	0.00035	0.375	0.013	0.02000	0.01861	-	-	-	-	-	**0.347**	**0.001**	-	-	-	-	-	-
26	ED1 5461.00	3.000	1.00	60.56	13.840	0.000021	0.00039	0.375	0.013	0.02000	0.01862	0.038	0.300	0.1467	0.00648	YES	0.105	0.000	0.817	0.393	0.300	0.925	0.00003	0.00036
(DRAIN)																								
-	ED1 5458.20	-	1.00	60.56	13.840	0.000018	0.00031	0.375	0.013	0.02000	0.01884	-	-	-	-	-	**0.332**	**0.001**	-	-	-	-	-	-
27	ED1 5458.00	3.000	1.00	60.56	13.840	0.000021	0.00036	0.375	0.013	0.02000	0.01885	0.038	0.300	0.1467	0.00652	YES	0.101	0.000	0.817	0.378	0.300	0.941	0.00002	0.00033
(DRAIN)																								
-	ED1 5454.95	-	1.00	60.56	13.850	0.000021	0.00037	0.375	0.013	0.02000	0.01909	-	-	-	-	-	**0.353**	**0.001**	-	-	-	-	-	-
28	ED1 5454.75	3.250	1.00	60.56	13.852	0.000024	0.00041	0.375	0.013	0.02000	0.01911	0.038	0.300	0.1467	0.00656	YES	0.106	0.000	0.817	0.405	0.300	0.912	0.00004	0.00038
(DRAIN)																								

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T **m**	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept Flow m^3/s
(Scupper)																
17	ED1 5449.500	1.00	60.56	13.923	0.000024	0.00045	0.375	0.013	0.02000	0.01951	3.5	0.300	**0.381**	**0.002**	0.00001	0.00044
(Scupper)																
18	ED1 5446.500	1.00	60.56	13.9634	0.000021	0.00038	0.375	0.013	0.02000	0.01974	3.0	0.300	**0.356**	**0.001**	0.00000	0.00038
(Scupper)																
19	ED1 5443.500	1.00	60.56	14.0037	0.000021	0.00038	0.375	0.013	0.02000	0.01997	3.0	0.300	**0.355**	**0.001**	0.00000	0.00038
(Scupper)																
20	ED1 5440.500	1.00	60.56	14.0441	0.000021	0.00038	0.375	0.013	0.02000	0.02021	3.0	0.300	**0.355**	**0.001**	0.00000	0.00038
(Scupper)																
21	ED1 5437.500	1.00	60.56	14.0844	0.000021	0.00038	0.375	0.013	0.02000	0.02044	3.0	0.300	**0.355**	**0.001**	0.00000	0.00038
(Scupper)																
22	ED1 5434.500	1.00	60.56	14.1248	0.000021	0.00039	0.375	0.013	0.02000	0.02067	3.0	0.300	**0.355**	**0.001**	0.00000	0.00038
(Scupper)																
23	ED1 5431.500	1.00	60.56	14.1651	0.000021	0.00039	0.375	0.013	0.02000	0.02090	3.0	0.300	**0.355**	**0.001**	0.00000	0.00038
(Scupper)																
24	ED1 5428.500	1.00	60.56	14.2054	0.000021	0.00039	0.375	0.013	0.02000	0.02113	3.0	0.300	**0.355**	**0.001**	0.00000	0.00039
(Scupper)																
25	ED1 5425.500	1.00	60.56	14.2458	0.000021	0.00039	0.375	0.013	0.02000	0.02136	3.0	0.300	**0.354**	**0.001**	0.00000	0.00039
(Scupper)																
26	ED1 5422.500	1.00	60.56	14.2861	0.000021	0.00039	0.375	0.013	0.02000	0.02160	3.0	0.300	**0.354**	**0.001**	0.00000	0.00039
(Scupper)																
27	ED1 5419.500	1.00	60.56	14.3265	0.000021	0.00039	0.375	0.013	0.02000	0.02183	3.0	0.300	**0.354**	**0.001**	0.00000	0.00039
(Scupper)																
28	ED1 5416.500	1.00	60.56	14.3668	0.000022	0.00040	0.375	0.013	0.02000	0.02206	3.0	0.300	**0.354**	**0.001**	0.00000	0.00039
(Scupper)																
29	ED1 5413.000	1.00	60.56	14.4139	0.000025	0.00048	0.375	0.013	0.02000	0.02233	3.5	0.300	**0.379**	**0.002**	0.00001	0.00047
(Scupper)																
30	ED1 5409.500	1.00	60.56	14.4609	0.000025	0.00048	0.375	0.013	0.02000	0.02260	3.5	0.300	**0.379**	**0.002**	0.00001	0.00047
(Scupper)																
31	ED1 5406.500	1.00	60.56	14.5013	0.000022	0.00040	0.375	0.013	0.02000	0.02283	3.0	0.300	**0.354**	**0.001**	0.00000	0.00040
(Scupper)																
32	ED1 5403.500	1.00	60.56	14.5416	0.000022	0.00040	0.375	0.013	0.02000	0.02306	3.0	0.300	**0.354**	**0.001**	0.00000	0.00040
(Scupper)																
33	ED1 5400.000	1.00	60.56	14.5887	0.000026	0.00049	0.375	0.013	0.02000	0.02333	3.5	0.300	**0.379**	**0.002**	0.00001	0.00048
(Scupper)																
34	ED1 5396.500	1.00	60.56	14.6358	0.000026	0.00049	0.375	0.013	0.02000	0.02361	3.5	0.300	**0.379**	**0.002**	0.00001	0.00048
(Scupper)																
(Scupper)																
(Scupper)																
35	ED1 5380.500	1.00	60.56	14.8509	0.000030	0.00086	0.375	0.013	0.02000	0.02403	16.0	0.300	**0.467**	**0.003**	0.00006	0.00081
(Scupper)																
36	ED1 5377.500	1.00	60.56	14.8913	0.000022	0.00044	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.361**	**0.001**	0.00000	0.00043
(Scupper)																
37	ED1 5374.500	1.00	60.56	14.9389	0.000022	0.00042	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.356**	**0.001**	0.00000	0.00042
(Scupper)																
38	ED1 5371.500	1.00	60.56	14.9918	0.000022	0.00042	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.357**	**0.001**	0.00000	0.00042
(Scupper)																
39	ED1 5368.500	1.00	60.56	15.0447	0.000023	0.00042	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.357**	**0.001**	0.00000	0.00042
(Scupper)																
40	ED1 5365.500	1.00	60.56	15.0976	0.000023	0.00043	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.358**	**0.001**	0.00000	0.00042
(Scupper)																
41	ED1 5362.500	1.00	60.56	15.1505	0.000023	0.00043	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.358**	**0.001**	0.00000	0.00042
(Scupper)																
42	ED1 5359.500	1.00	60.56	15.2034	0.000023	0.00043	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.359**	**0.001**	0.00000	0.00043
(Scupper)																
43	ED1 5356.500	1.00	60.56	15.2562	0.000023	0.00043	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.360**	**0.001**	0.00000	0.00043

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T **m**	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept Flow m^3/s
-	ED1 5451.45	-	1.00	60.56	13.897	0.000022	0.00037	0.375	0.013	0.02000	0.01936	-	-	-	-	-	**0.355**	**0.001**	-	-	-	-	-	-
29	ED1 5451.25	3.500	1.00	60.56	13.900	0.000024	0.00042	0.375	0.013	0.02000	0.01938	0.038	0.300	0.1467	0.00661	YES	0.107	0.000	0.817	0.409	0.300	0.907	0.00004	0.00038
(DRAIN)																								
-	ED1 5448.20	-	1.00	60.56	13.941	0.000018	0.00031	0.375	0.013	0.02000	0.01961	-	-	-	-	-	**0.332**	**0.001**	-	-	-	-	-	-
30	ED1 5448.00	3.250	1.00	60.56	13.943	0.000021	0.00036	0.375	0.013	0.02000	0.01963	0.038	0.300	0.1467	0.00665	YES	0.101	0.000	0.817	0.386	0.300	0.933	0.00002	0.00034
(DRAIN)																								
-	ED1 5445.20	-	1.00	60.56	13.981	0.000018	0.00031	0.375	0.013	0.02000	0.01984	-	-	-	-	-	**0.330**	**0.001**	-	-	-	-	-	-
31	ED1 5445.00	3.000	1.00	60.56	13.984	0.000021	0.00036	0.375	0.013	0.02000	0.01986	0.038	0.300	0.1467	0.00669	YES	0.100	0.000	0.817	0.386	0.300	0.933	0.00002	0.00033
(DRAIN)																								
-	ED1 5442.20	-	1.00	60.56	14.021	0.000018	0.00031	0.375	0.013	0.02000	0.02007	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-
32	ED1 5442.00	3.000	1.00	60.56	14.024	0.000021	0.00036	0.375	0.013	0.02000	0.02009	0.038	0.300	0.1467	0.00673	YES	0.100	0.000	0.817	0.388	0.300	0.931	0.00002	0.00033
(DRAIN)																								
-	ED1 5439.20	-	1.00	60.56	14.062	0.000018	0.00031	0.375	0.013	0.02000	0.02031	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-
33	ED1 5439.00	3.000	1.00	60.56	14.064	0.000021	0.00036	0.375	0.013	0.02000	0.02032	0.038	0.300	0.1467	0.00677	YES	0.100	0.000	0.817	0.389	0.300	0.929	0.00003	0.00033
(DRAIN)																								
-	ED1 5436.20	-	1.00	60.56	14.102	0.000018	0.00031	0.375	0.013	0.02000	0.02054	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-
34	ED1 5436.00	3.000	1.00	60.56	14.105	0.000021	0.00036	0.375	0.013	0.02000	0.02055	0.038	0.300	0.1467	0.00680	YES	0.100	0.000	0.817	0.391	0.300	0.927	0.00003	0.00034
(DRAIN)																								
-	ED1 5433.20	-	1.00	60.56	14.142	0.000018	0.00031	0.375	0.013	0.02000	0.02077	-	-	-	-	-	**0.328**	**0.001**	-	-	-	-	-	-
35	ED1 5433.00	3.000	1.00	60.56	14.145	0.000021	0.00036	0.375	0.013	0.02000	0.02079	0.038	0.300	0.1467	0.00684	YES	0.100	0.000	0.817	0.393	0.300	0.925	0.00003	0.00034
(DRAIN)																								
-	ED1 5430.20	-	1.00	60.56	14.183	0.000018	0.00032	0.375	0.013	0.02000	0.02100	-	-	-	-	-	**0.328**	**0.001**	-	-	-	-	-	-
36	ED1 5430.00	3.000	1.00	60.56	14.185	0.000021	0.00036	0.375	0.013	0.02000	0.02102	0.038	0.300	0.1467	0.00688	YES	0.100	0.000	0.817	0.395	0.300	0.923	0.00003	0.00034
(DRAIN)																								
-	ED1 5427.20	-	1.00	60.56	14.223	0.000018	0.00032	0.375	0.013	0.02000	0.02123	-	-	-	-	-	**0.328**	**0.001**	-	-	-	-	-	-
37	ED1 5427.00	3.000	1.00	60.56	14.226	0.000021	0.00036	0.375	0.013	0.02000	0.02125	0.038	0.300	0.1467	0.00692	YES	0.099	0.000	0.817	0.396	0.300	0.922	0.00003	0.00034
(DRAIN)																								
-	ED1 5424.20	-	1.00	60.56	14.263	0.000019	0.00032	0.375	0.013	0.02000	0.02147	-	-	-	-	-	**0.327**	**0.001**	-	-	-	-	-	-
38	ED1 5424.00	3.000	1.00	60.56	14.266	0.000021	0.00037	0.375	0.013	0.02000	0.02148	0.038	0.300	0.1467	0.00696	YES	0.099	0.000	0.817	0.398	0.300	0.920	0.00003	0.00034
(DRAIN)																								
-	ED1 5421.20	-	1.00	60.56	14.304	0.000019	0.00032	0.375	0.013	0.02000	0.02170	-	-	-	-	-	**0.327**	**0.001**	-	-	-	-	-	-
39	ED1 5421.00	3.000	1.00	60.56	14.306	0.000021	0.00037	0.375	0.013	0.02000	0.02171	0.038	0.300	0.1467	0.00699	YES	0.099	0.000	0.817	0.400	0.300	0.918	0.00003	0.00034
(DRAIN)																								
-	ED1 5418.20	-	1.00	60.56	14.344	0.000019	0.00032	0.375	0.013	0.02000	0.02193	-	-	-	-	-	**0.327**	**0.001**	-	-	-	-	-	-
40	ED1 5418.00	3.000	1.00	60.56	14.347	0.000022	0.00037	0.375	0.013	0.02000	0.02194	0.038	0.300	0.1467	0.00703	YES	0.099	0.000	0.817	0.402	0.300	0.916	0.00003	0.00034
(DRAIN)																								
-	ED1 5414.95	-	1.00	60.56	14.388	0.000022	0.00038	0.375	0.013	0.02000	0.02218	-	-	-	-	-	**0.349**	**0.001**	-	-	-	-	-	-
41	ED1 5414.75	3.250	1.00	60.56	14.390	0.000025	0.00043	0.375	0.013	0.02000	0.02220	0.038	0.300	0.1467	0.00707	YES	0.105	0.000	0.817	0.430	0.300	0.883	0.00005	0.00038
(DRAIN)																								
-	ED1 5411.45	-	1.00	60.56	14.435	0.000022	0.00039	0.375	0.013	0.02000	0.02245	-	-	-	-	-	**0.350**	**0.001**	-	-	-	-	-	-
42	ED1 5411.25	3.500	1.00	60.56	14.437	0.000025	0.00044	0.375	0.013	0.02000	0.02247	0.038	0.300	0.1467	0.00711	YES	0.105	0.000	0.817	0.434	0.300	0.879	0.00005	0.00038
(DRAIN)																								
-	ED1 5408.20	-	1.00	60.56	14.478	0.000019	0.00033	0.375	0.013	0.02000	0.02270	-	-	-	-	-	**0.328**	**0.001**	-	-	-	-	-	-
43	ED1 5408.00	3.250	1.00	60.56	14.481	0.000022	0.00038	0.375	0.013	0.02000	0.02272	0.038	0.300	0.1467	0.00715	YES	0.099	0.000	0.817	0.410	0.300	0.907	0.00004	0.00034
(DRAIN)																								
-	ED1 5405.20	-	1.00	60.56	14.519	0.000019	0.00032	0.375	0.013	0.02000	0.02293	-	-	-	-	-	**0.326**	**0.001**	-	-	-	-	-	-
44	ED1 5405.00	3.000	1.00	60.56	14.521	0.000022	0.00037	0.375	0.013	0.02000	0.02295	0.038	0.300	0.1467	0.00719	YES	0.099	0.000	0.817	0.409	0.300	0.907	0.00003	0.00034
(DRAIN)																								
-	ED1 5401.95	-	1.00	60.56	14.562	0.000023	0.00039	0.375	0.013	0.02000	0.02318	-	-	-	-	-	**0.347**	**0.001**	-	-	-	-	-	-
45	ED1 5401.75	3.250	1.00	60.56	14.565	0.000025	0.00043	0.375	0.013	0.02000	0.02320	0.038	0.300	0.1467	0.00723	YES	0.105	0.000	0.817	0.438	0.300	0.875	0.00005	0.00038
(DRAIN)																								
-	ED1 5398.45	-	1.00	60.56	14.610	0.000023	0.00039	0.375	0.013	0.02000	0.02345	-	-	-	-	-	**0.348**	**0.001**	-	-	-	-	-	-
46	ED1 5398.25	3.500	1.00	60.56	14.612	0.000026	0.00044	0.375	0.013	0.02000	0.02347	0.038	0.300	0.1467	0.00727	YES	0.105	0.000	0.817	0.442	0.300	0.870	0.00006	0.00038
(DRAIN)																								
-	ED1 5394.70	-	1.00	60.56	14.660	0.000026	0.00045	0.375	0.013	0.02000	0.02374	-	-	-	-	-	**0.368**	**0.001**	-	-	-	-	-	-
47	ED1 5394.50	3.750	1.00	60.56	14.663	0.000029	0.00050	0.375	0.013	0.02000	0.02376	0.038	0.300	0.1467	0.00732	YES	0.110	0.000	0.817	0.470	0.300	0.840	0.00008	0.00042
-	ED1 5391.70	-	1.00	60.56	14.700	0.000041	0.00078	0.375	0.013	0.02000	0.02398	-	-	-	-	-	**0.449**	**0.003**	-	-	-	-	-	-
48	ED1 5391.50	3.000	1.00	60.56	14.703	0.000044	0.00083	0.375	0.013	0.02000	0.02399	0.038	0.300	0.1467	0.00735	YES	0.132	0.000	0.817	0.581	0.300	0.730	0.00022	0.00061
-	ED1 5388.70	-	1.00	60.56	14.741	0.000041	0.00092	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.479**	**0.004**	-	-	-	-	-	-
49	ED1 5388.50	3.000	1.00	60.56	14.743	0.000044	0.00097	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.141	0.000	0.817	0.622	0.300	0.695	0.00030	0.00068
-	ED1 5385.70	-	1.00	60.56	14.781	0.000041	0.00100	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.493**	**0.004**	-	-	-	-	-	-
50	ED1 5385.50	3.000	1.00	60.56	14.784	0.000044	0.00105	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.145	0.000	0.817	0.641	0.300	0.679	0.00034	0.00071
-	ED1 5382.70	-	1.00	60.56	14.821	0.000041	0.00104	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.501**	**0.004**	-	-	-	-	-	-
51	ED1 5382.50	3.000	1.00	60.56	14.824	0.000044	0.00109	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.147	0.000	0.817	0.652	0.300	0.670	0.00036	0.00073
(DRAIN)																								
-	ED1 5379.20	-	1.00	60.56	14.868	0.000019	0.00038	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.344**	**0.001**	-	-	-	-	-	-
52	ED1 5379.00	3.500	1.00	60.56	14.871	0.000022	0.00043	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.104	0.000	0.817	0.442	0.300	0.870	0.00006	0.00038
(DRAIN)																								
-	ED1 5376.20	-	1.00	60.56	14.909	0.000019	0.00033	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.326**	**0.001**	-	-	-	-	-	-
53	ED1 5376.00	3.000	1.00	60.56	14.912	0.000022	0.00038	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.099	0.000	0.817	0.420	0.300	0.895	0.00004	0.00034
(DRAIN)																								
-	ED1 5373.20	-	1.00	60.56	14.962	0.000019	0.00033	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.326**	**0.001**	-	-	-	-	-	-
54	ED1 5373.00	3.000	1.00	60.56	14.965	0.000022	0.00038	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.099	0.000	0.817	0.420	0.300	0.895	0.00004	0.00034
(DRAIN)																								
-	ED1 5370.20	-	1.00	60.56	15.015	0.000020	0.00033	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.327**	**0.001**	-	-	-	-	-	-
55	ED1 5370.00	3.000	1.00	60.56	15.018	0.000023	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.099	0.000	0.817	0.421	0.300	0.894	0.00004	0.00034
(DRAIN)																								
-	ED1 5367.20	-	1.00	60.56	15.068	0.000020	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.327**	**0.001**	-	-	-	-	-	-
56	ED1 5367.00	3.000	1.00	60.56	15.071	0.000023	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.099	0.000	0.817	0.422	0.300	0.893	0.00004	0.00035
(DRAIN)																								
-	ED1 5364.20	-	1.00	60.56	15.121	0.000020	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.328**	**0.001**	-	-	-	-	-	-
57	ED1 5364.00	3.000	1.00	60.56	15.124	0.000023	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.100	0.000	0.817	0.422	0.300	0.893	0.00004	0.00035
(DRAIN)																								
-	ED1 5361.20	-	1.00	60.56	15.173	0.000020	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.328**	**0.001**	-	-	-	-	-	-
58	ED1 5361.00	3.000	1.00	60.56	15.177	0.000023	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.100	0.000	0.817	0.423	0.300	0.892	0.00004	0.00035
(DRAIN)																								
-	ED1 5358.20	-	1.00	60.56	15.226	0.000020	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-
59	ED1 5358.00	3.000	1.00	60.56	15.230	0.000023	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.100	0.000	0.817	0.424	0.300	0.891	0.00004	0.00035
(DRAIN)																								
-	ED1 5355.20	-	1.00	60.56	15.279	0.000020	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa	Drain Width	T	**Depth 0.3m from Curb**	Bypass Flow	Intercept. Flow
	m		mm/hr	m	km^2	m^3/s					m	m	m	**m**	m^3/s	m^3/s
(Scupper)																
44	ED1 5353.500	1.00	60.56	15.3091	0.000023	0.00043	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.360**	**0.001**	0.00000	0.00043
(Scupper)																
45	ED1 5350.500	1.00	60.56	15.362	0.000023	0.00043	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.361**	**0.001**	0.00000	0.00043
(Scupper)																
46	ED1 5347.000	1.00	60.56	15.4237	0.000027	0.00052	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.387**	**0.002**	0.00001	0.00051
(Scupper)																
47	ED1 5343.500	1.00	60.56	15.4854	0.000027	0.00053	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.388**	**0.002**	0.00001	0.00052
(Scupper)																
48	ED1 5340.500	1.00	60.56	15.5383	0.000023	0.00044	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.363**	**0.001**	0.00000	0.00044
(Scupper)																
49	ED1 5337.500	1.00	60.56	15.5912	0.000023	0.00044	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.363**	**0.001**	0.00000	0.00044
(Scupper)																
50	ED1 5334.000	1.00	60.56	15.6529	0.000027	0.00053	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.389**	**0.002**	0.00001	0.00052
(Scupper)																
51	ED1 5330.500	1.00	60.56	15.7146	0.000028	0.00054	0.375	0.013	0.01910	0.02403	3.5	0.300	**0.402**	**0.002**	0.00001	0.00052
(Scupper)																
52	ED1 5327.500	1.00	60.56	15.7674	0.000024	0.00045	0.375	0.013	0.01729	0.02403	3.0	0.300	**0.401**	**0.002**	0.00001	0.00044
(Scupper)																
53	ED1 5324.500	1.00	60.56	15.8203	0.000024	0.00046	0.375	0.013	0.01548	0.02403	3.0	0.300	**0.431**	**0.002**	0.00002	0.00044
(Scupper)																
54	ED1 5321.000	1.00	60.56	15.882	0.000028	0.00055	0.375	0.013	0.01338	0.02403	3.5	0.300	**0.508**	**0.003**	0.00005	0.00050
(Scupper)																
55	ED1 5318.000	1.00	60.56	15.9349	0.000024	0.00048	0.375	0.013	0.01157	0.02403	3.0	0.300	**0.526**	**0.003**	0.00005	0.00043
(Scupper)																
56	ED1 5315.000	1.00	60.56	15.9878	0.000024	0.00048	0.375	0.013	0.00976	0.02403	3.0	0.300	**0.586**	**0.003**	0.00007	0.00041
(Scupper)																
57	ED1 5312.000	1.00	60.56	16.0407	0.000024	0.00049	0.375	0.013	0.00796	0.02403	3.0	0.300	**0.672**	**0.003**	0.00010	0.00039
(Scupper)																
58	ED1 5294.000	1.00	60.56	16.3033	0.000024	0.00098	0.375	0.013	-0.00288	0.02403	18.0	0.300	**1.645**	**0.004**	0.00058	0.00041
(Scupper)																
59	ED1 5291.000	1.00	60.56	16.2984	0.000024	0.00076	0.375	0.013	-0.00469	0.02403	3.0	0.300	**1.099**	**0.004**	0.00032	0.00043
(Scupper)																
60	ED1 5288.000	1.00	60.56	16.2935	0.000024	0.00062	0.375	0.013	-0.00650	0.02403	3.0	0.300	**0.832**	**0.003**	0.00019	0.00043
(Scupper)																
61	ED1 5285.000	1.00	60.56	16.2886	0.000024	0.00055	0.375	0.013	-0.00830	0.02403	3.0	0.300	**0.684**	**0.003**	0.00012	0.00043
(Scupper)																
62	ED1 5282.000	1.00	60.56	16.2836	0.000024	0.00052	0.375	0.013	-0.01011	0.02403	3.0	0.300	**0.591**	**0.003**	0.00008	0.00044
(Scupper)																
63	ED1 5279.000	1.00	60.56	16.2787	0.000024	0.00050	0.375	0.013	-0.01192	0.02383	3.0	0.300	**0.527**	**0.003**	0.00005	0.00045
(Scupper)																
64	ED1 5276.000	1.00	60.56	16.2738	0.000024	0.00049	0.375	0.013	-0.01372	0.02321	3.0	0.300	**0.480**	**0.002**	0.00004	0.00045
(Scupper)																
65	ED1 5273.000	1.00	60.56	16.2689	0.000024	0.00048	0.375	0.013	-0.01553	0.02260	3.0	0.300	**0.443**	**0.002**	0.00002	0.00045
(Scupper)																
66	ED1 5270.000	1.00	60.56	16.2639	0.000024	0.00047	0.375	0.013	-0.01733	0.02198	3.0	0.300	**0.413**	**0.002**	0.00001	0.00045
(Scupper)																
67	ED1 5267.000	1.00	60.56	16.259	0.000024	0.00046	0.375	0.013	-0.01914	0.02137	3.0	0.300	**0.388**	**0.002**	0.00001	0.00045
(Scupper)																
68	ED1 5264.000	1.00	60.56	16.2541	0.000024	0.00046	0.375	0.013	-0.02095	0.02076	3.0	0.300	**0.367**	**0.001**	0.00000	0.00045
(Scupper)																
69	ED1 5261.000	1.00	60.56	16.2491	0.000024	0.00045	0.375	0.013	-0.02275	0.02014	3.0	0.300	**0.350**	**0.001**	0.00000	0.00045
(Scupper)																
70	ED1 5257.000	1.00	60.56	16.2426	0.000032	0.00063	0.375	0.013	-0.02516	0.01933	4.0	0.300	**0.374**	**0.002**	0.00001	0.00062

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	**Depth 0.3m from Curb**	K	L_T	L	E	Bypass Flow	Intercept. Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		**m**	**m**		m	m		m^3/s	m^3/s
60	ED1 5355.00	3.000	1.00	60.56	15.283	0.000023	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.100	0.000	0.817	0.424	0.300	0.890	0.00004	0.00035
(DRAIN)																								
-	ED1 5352.20	-	1.00	60.56	15.332	0.000020	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.330**	**0.001**	-	-	-	-	-	-
61	ED1 5352.00	3.000	1.00	60.56	15.336	0.000023	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.100	0.000	0.817	0.425	0.300	0.890	0.00004	0.00035
(DRAIN)																								
-	ED1 5348.95	-	1.00	60.56	15.389	0.000024	0.00041	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.352**	**0.001**	-	-	-	-	-	-
62	ED1 5348.75	3.250	1.00	60.56	15.393	0.000027	0.00046	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.106	0.000	0.817	0.454	0.300	0.857	0.00007	0.00039
(DRAIN)																								
-	ED1 5345.45	-	1.00	60.56	15.451	0.000024	0.00042	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.355**	**0.001**	-	-	-	-	-	-
63	ED1 5345.25	3.500	1.00	60.56	15.455	0.000027	0.00047	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.107	0.000	0.817	0.457	0.300	0.854	0.00007	0.00040
(DRAIN)																								
-	ED1 5342.20	-	1.00	60.56	15.508	0.000020	0.00035	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.333**	**0.001**	-	-	-	-	-	-
64	ED1 5342.00	3.250	1.00	60.56	15.512	0.000023	0.00040	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.101	0.000	0.817	0.430	0.300	0.884	0.00005	0.00036
(DRAIN)																								
-	ED1 5339.20	-	1.00	60.56	15.561	0.000020	0.00035	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.332**	**0.001**	-	-	-	-	-	-
65	ED1 5339.00	3.000	1.00	60.56	15.565	0.000023	0.00040	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.101	0.000	0.817	0.428	0.300	0.886	0.00005	0.00035
(DRAIN)																								
-	ED1 5335.95	-	1.00	60.56	15.618	0.000024	0.00041	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.354**	**0.001**	-	-	-	-	-	-
66	ED1 5335.75	3.250	1.00	60.56	15.622	0.000027	0.00047	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.107	0.000	0.817	0.457	0.300	0.854	0.00007	0.00040
(DRAIN)																								
-	ED1 5332.45	-	1.00	60.56	15.680	0.000024	0.00042	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.357**	**0.001**	-	-	-	-	-	-
67	ED1 5332.25	3.500	1.00	60.56	15.684	0.000027	0.00048	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.107	0.000	0.817	0.460	0.300	0.850	0.00007	0.00040
(DRAIN)																								
-	ED1 5329.20	-	1.00	60.56	15.737	0.000020	0.00036	0.375	0.013	0.01831	0.02403	-	-	-	-	-	**0.355**	**0.001**	-	-	-	-	-	-
68	ED1 5329.00	3.250	1.00	60.56	15.741	0.000024	0.00041	0.375	0.013	0.01819	0.02403	0.038	0.300	0.1449	0.00721	YES	0.103	0.000	0.817	0.437	0.300	0.876	0.00005	0.00036
(DRAIN)																								
-	ED1 5326.20	-	1.00	60.56	15.790	0.000021	0.00036	0.375	0.013	0.01651	0.02403	-	-	-	-	-	**0.379**	**0.001**	-	-	-	-	-	-
69	ED1 5326.00	3.000	1.00	60.56	15.794	0.000024	0.00041	0.375	0.013	0.01639	0.02403	0.038	0.300	0.1431	0.00706	YES	0.104	0.000	0.817	0.440	0.300	0.873	0.00005	0.00036
(DRAIN)																								
-	ED1 5322.95	-	1.00	60.56	15.848	0.000025	0.00044	0.375	0.013	0.01455	0.02403	-	-	-	-	-	**0.440**	**0.002**	-	-	-	-	-	-
70	ED1 5322.75	3.250	1.00	60.56	15.851	0.000028	0.00049	0.375	0.013	0.01443	0.02403	0.038	0.300	0.1411	0.00690	YES	0.111	0.000	0.817	0.476	0.300	0.833	0.00008	0.00041
(DRAIN)																								
-	ED1 5319.70	-	1.00	60.56	15.905	0.000021	0.00040	0.375	0.013	0.01259	0.02403	-	-	-	-	-	**0.468**	**0.002**	-	-	-	-	-	-
71	ED1 5319.50	3.250	1.00	60.56	15.908	0.000024	0.00046	0.375	0.013	0.01247	0.02403	0.038	0.300	0.1391	0.00674	YES	0.109	0.000	0.817	0.466	0.300	0.844	0.00007	0.00038
(DRAIN)																								
-	ED1 5316.70	-	1.00	60.56	15.958	0.000021	0.00040	0.375	0.013	0.01079	0.02403	-	-	-	-	-	**0.515**	**0.002**	-	-	-	-	-	-
72	ED1 5316.50	3.000	1.00	60.56	15.961	0.000024	0.00046	0.375	0.013	0.01067	0.02403	0.038	0.300	0.1373	0.00659	YES	0.110	0.000	0.817	0.470	0.300	0.840	0.00007	0.00038
(DRAIN)																								
-	ED1 5313.70	-	1.00	60.56	16.011	0.000021	0.00042	0.375	0.013	0.00898	0.02403	-	-	-	-	-	**0.589**	**0.003**	-	-	-	-	-	-
73	ED1 5313.50	3.000	1.00	60.56	16.014	0.000024	0.00048	0.375	0.013	0.00886	0.02403	0.038	0.300	0.1355	0.00645	YES	0.113	0.000	0.817	0.483	0.300	0.825	0.00008	0.00039
(DRAIN)																								
-	ED1 5310.70	-	1.00	60.56	16.064	0.000021	0.00046	0.375	0.013	0.00717	0.02403	-	-	-	-	-	**0.697**	**0.003**	-	-	-	-	-	-
74	ED1 5310.50	3.000	1.00	60.56	16.067	0.000024	0.00051	0.375	0.013	0.00705	0.02403	0.038	0.300	0.1337	0.00631	YES	0.117	0.000	0.817	0.501	0.300	0.807	0.00010	0.00041
-	ED1 5307.70	-	1.00	60.56	16.116	0.000045	0.00086	0.375	0.013	0.00537	0.02403	-	-	-	-	-	**1.062**	**0.004**	-	-	-	-	-	-
75	ED1 5307.50	3.000	1.00	60.56	16.120	0.000048	0.00092	0.375	0.013	0.00525	0.02403	0.038	0.300	0.1319	0.00617	YES	0.147	0.000	0.817	0.646	0.300	0.675	0.00030	0.00062
-	ED1 5304.70	-	1.00	60.56	16.169	0.000045	0.00107	0.375	0.013	0.00356	0.02403	-	-	-	-	-	**1.485**	**0.004**	-	-	-	-	-	-
76	ED1 5304.50	3.000	1.00	60.56	16.173	0.000049	0.00112	0.375	0.013	0.00344	0.02403	0.038	0.300	0.1301	0.00602	YES	0.160	0.000	0.817	0.709	0.300	0.629	0.00042	0.00071
-	ED1 5301.70	-	1.00	60.56	16.222	0.000045	0.00119	0.375	0.013	0.00175	0.02403	-	-	-	-	-	**2.406**	**0.004**	-	-	-	-	-	-
77	ED1 5301.50	3.000	1.00	60.56	16.226	0.000049	0.00124	0.375	0.013	0.00163	0.02403	0.038	0.300	0.1283	0.00589	YES	0.167	0.000	0.817	0.746	0.300	0.604	0.00049	0.00075
-	ED1 5298.70	-	1.00	60.56	16.275	0.000046	**0.00126**	0.375	0.013	-0.00005	0.02403	-	-	-	-	-	**22.151**	**0.001**	-	-	-	-	-	-
78	ED1 5298.50	3.000	1.00	60.56	16.279	0.000049	0.00132	0.375	0.013	-0.00017	0.02403	0.038	0.300	0.1268	0.00577	YES	0.172	0.000	0.817	0.770	0.300	0.588	0.00054	0.00078
-	ED1 5295.70	-	1.00	60.56	16.306	0.000046	0.00132	0.375	0.013	-0.00186	0.02403	-	-	-	-	-	**2.414**	**0.004**	-	-	-	-	-	-
79	ED1 5295.50	3.000	1.00	60.56	16.306	0.000049	0.00137	0.375	0.013	-0.00198	0.02403	0.038	0.300	0.1286	0.00591	YES	0.173	0.000	0.817	0.777	0.300	0.585	0.00057	0.00080
(DRAIN)																								
-	ED1 5292.70	-	1.00	60.56	16.301	0.000021	0.00094	0.375	0.013	-0.00367	0.02403	-	-	-	-	-	**1.389**	**0.004**	-	-	-	-	-	-
80	ED1 5292.50	3.000	1.00	60.56	16.301	0.000024	0.00099	0.375	0.013	-0.00379	0.02403	0.038	0.300	0.1305	0.00605	YES	0.152	0.000	0.817	0.671	0.300	0.655	0.00034	0.00065
(DRAIN)																								
-	ED1 5289.70	-	1.00	60.56	16.296	0.000021	0.00068	0.375	0.013	-0.00547	0.02403	-	-	-	-	-	**0.960**	**0.004**	-	-	-	-	-	-
81	ED1 5289.50	3.000	1.00	60.56	16.296	0.000024	0.00074	0.375	0.013	-0.00559	0.02403	0.038	0.300	0.1323	0.00619	YES	0.135	0.000	0.817	0.588	0.300	0.723	0.00020	0.00053
(DRAIN)																								
-	ED1 5286.70	-	1.00	60.56	16.291	0.000021	0.00055	0.375	0.013	-0.00728	0.02403	-	-	-	-	-	**0.740**	**0.003**	-	-	-	-	-	-
82	ED1 5286.50	3.000	1.00	60.56	16.291	0.000024	0.00060	0.375	0.013	-0.00740	0.02403	0.038	0.300	0.1341	0.00633	YES	0.124	0.000	0.817	0.536	0.300	0.772	0.00014	0.00046
(DRAIN)																								
-	ED1 5283.70	-	1.00	60.56	16.286	0.000021	0.00048	0.375	0.013	-0.00908	0.02403	-	-	-	-	-	**0.612**	**0.003**	-	-	-	-	-	-
83	ED1 5283.50	3.000	1.00	60.56	16.286	0.000024	0.00053	0.375	0.013	-0.00921	0.02403	0.038	0.300	0.1359	0.00648	YES	0.118	0.000	0.817	0.505	0.300	0.803	0.00011	0.00043
(DRAIN)																								
-	ED1 5280.70	-	1.00	60.56	16.282	0.000021	0.00044	0.375	0.013	-0.01089	0.02403	-	-	-	-	-	**0.529**	**0.002**	-	-	-	-	-	-
84	ED1 5280.50	3.000	1.00	60.56	16.281	0.000024	0.00049	0.375	0.013	-0.01101	0.02403	0.038	0.300	0.1377	0.00662	YES	0.113	0.000	0.817	0.485	0.300	0.824	0.00009	0.00041
(DRAIN)																								
-	ED1 5277.70	-	1.00	60.56	16.277	0.000021	0.00041	0.375	0.013	-0.01270	0.02356	-	-	-	-	-	**0.471**	**0.002**	-	-	-	-	-	-
85	ED1 5277.50	3.000	1.00	60.56	16.276	0.000024	0.00047	0.375	0.013	-0.01282	0.02352	0.038	0.300	0.1395	0.00669	YES	0.111	0.000	0.817	0.467	0.300	0.843	0.00007	0.00039
(DRAIN)																								
-	ED1 5274.70	-	1.00	60.56	16.272	0.000021	0.00039	0.375	0.013	-0.01450	0.02295	-	-	-	-	-	**0.429**	**0.002**	-	-	-	-	-	-
86	ED1 5274.50	3.000	1.00	60.56	16.271	0.000024	0.00045	0.375	0.013	-0.01462	0.02290	0.038	0.300	0.1413	0.00675	YES	0.109	0.000	0.817	0.453	0.300	0.859	0.00006	0.00039
(DRAIN)																								
-	ED1 5271.70	-	1.00	60.56	16.267	0.000021	0.00038	0.375	0.013	-0.01631	0.02233	-	-	-	-	-	**0.396**	**0.002**	-	-	-	-	-	-
87	ED1 5271.50	3.000	1.00	60.56	16.266	0.000024	0.00044	0.375	0.013	-0.01643	0.02229	0.038	0.300	0.1431	0.00680	YES	0.107	0.000	0.817	0.441	0.300	0.872	0.00006	0.00038
(DRAIN)																								
-	ED1 5268.70	-	1.00	60.56	16.262	0.000021	0.00037	0.375	0.013	-0.01812	0.02172	-	-	-	-	-	**0.369**	**0.001**	-	-	-	-	-	-
88	ED1 5268.50	3.000	1.00	60.56	16.261	0.000024	0.00043	0.375	0.013	-0.01824	0.02168	0.038	0.300	0.1449	0.00685	YES	0.106	0.000	0.817	0.430	0.300	0.884	0.00005	0.00038
(DRAIN)																								
-	ED1 5265.70	-	1.00	60.56	16.257	0.000021	0.00037	0.375	0.013	-0.01992	0.02110	-	-	-	-	-	**0.348**	**0.001**	-	-	-	-	-	-
89	ED1 5265.50	3.000	1.00	60.56	16.257	0.000024	0.00042	0.375	0.013	-0.02004	0.02106	0.038	0.300	0.1467	0.00689	YES	0.105	0.000	0.817	0.421	0.300	0.894	0.00004	0.00038
(DRAIN)																								
-	ED1 5262.70	-	1.00	60.56	16.252	0.000021	0.00036	0.375	0.013	-0.02173	0.02049	-	-	-	-	-	**0.330**	**0.001**	-	-	-	-	-	-
90	ED1 5262.50	3.000	1.00	60.56	16.252	0.000024	0.00042	0.375	0.013	-0.02185	0.02045	0.038	0.300	0.1485	0.00693	YES	0.105	0.000	0.817	0.412	0.300	0.904	0.00004	0.00038
(DRAIN)																								
-	ED1 5259.20	-	1.00	60.56	16.246	0.000029	0.00050	0.375	0.013	-0.02384	0.01978	-	-	-	-	-	**0.353**	**0.001**	-	-	-	-	-	-
91	ED1 5259.00	3.500	1.00	60.56	16.246	0.000032	0.00055	0.375	0.013	-0.02396	0.01973	0.038	0.300	0.1506	0.00697	YES	0.116	0.000	0.817	0.455	0.300	0.856	0.00008	0.00047
(DRAIN)																								

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km²	Q m³/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	Depth 0.3m from Curb m	Bypass Flow m³/s	Intercept. Flow m³/s
(Scupper)																
71	ED1 5254.000	1.00	60.56	16.2377	0.000024	0.00045	0.375	0.013	-0.02697	0.01871	3.0	0.300	**0.317**	**0.000**	0.00000	0.00045
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
72	ED1 5240.500	1.00	60.56	16.2155	0.000036	0.00088	0.375	0.013	-0.03000	0.01595	13.5	0.300	**0.395**	**0.003**	0.00002	0.00086
(Scupper)																
73	ED1 5237.500	1.00	60.56	16.2106	0.000024	0.00044	0.375	0.013	-0.03000	0.01534	3.0	0.300	**0.305**	**0.000**	0.00000	0.00044
(Scupper)																
74	ED1 5234.000	1.00	60.56	16.2048	0.000028	0.00051	0.375	0.013	-0.03000	0.01462	3.5	0.300	**0.327**	**0.001**	0.00000	0.00051
(Scupper)																
75	ED1 5231.000	1.00	60.56	16.1999	0.000024	0.00043	0.375	0.013	-0.03000	0.01401	3.0	0.300	**0.308**	**0.000**	0.00000	0.00043
(Scupper)																
76	ED1 5228.000	1.00	60.56	16.195	0.000024	0.00042	0.375	0.013	-0.03000	0.01339	3.0	0.300	**0.310**	**0.000**	0.00000	0.00042
(Scupper)																
77	ED1 5225.000	1.00	60.56	16.19	0.000024	0.00042	0.375	0.013	-0.03000	0.01278	3.0	0.300	**0.312**	**0.000**	0.00000	0.00042
78	ED1 5219.500	1.00	60.56	16.181	0.000089	0.00151	0.375	0.013	-0.03000	0.01165	5.5	0.300	**0.511**	**0.006**	0.00014	0.00137
(Scupper)																
79	ED1 5216.500	1.00	60.56	16.181	0.000024	0.00044	0.375	0.013	-0.03000	0.01104	3.0	0.300	**0.326**	**0.001**	0.00000	0.00044
(Scupper)																
80	ED1 5213.500	1.00	60.56	16.181	0.000024	0.00042	0.375	0.013	-0.03000	0.01043	3.0	0.300	**0.322**	**0.001**	0.00000	0.00042
(Scupper)																
81	ED1 5210.500	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00981	3.0	0.300	**0.325**	**0.001**	0.00000	0.00041
(Scupper)																
82	ED1 5207.500	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00920	3.0	0.300	**0.329**	**0.001**	0.00000	0.00041
(Scupper)																
83	ED1 5204.500	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00859	3.0	0.300	**0.333**	**0.001**	0.00000	0.00041
(Scupper)																
84	ED1 5201.500	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00797	3.0	0.300	**0.337**	**0.001**	0.00000	0.00041
(Scupper)																
85	ED1 5198.500	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00736	3.0	0.300	**0.343**	**0.001**	0.00000	0.00041
(Scupper)																
86	ED1 5195.500	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00674	3.0	0.300	**0.348**	**0.001**	0.00000	0.00041
(Scupper)																
87	ED1 5192.500	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00613	3.0	0.300	**0.354**	**0.002**	0.00000	0.00041
(Scupper)																
(Scupper)																
(Scupper)																

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km²	Q m³/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m³/s	Q< Q_w?	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m³/s	Intercept Flow m³/s
-	ED1 5255.70	-	1.00	60.56	16.240	0.000021	0.00037	0.375	0.013	-0.02595	0.01906	-	-	-	-	-	**0.300**	**0.000**	-	-	-	-	-	-
92	ED1 5255.50	3.500	1.00	60.56	16.240	0.000024	0.00042	0.375	0.013	-0.02607	0.01902	0.038	0.300	0.1527	0.00700	YES	0.105	0.000	0.817	0.398	0.300	0.920	0.00003	0.00039
(DRAIN)																								
-	ED1 5251.95	-	1.00	60.56	16.234	0.000033	0.00056	0.375	0.013	-0.02820	0.01829	-	-	-	-	-	**0.338**	**0.001**	-	-	-	-	-	-
93	ED1 5251.75	3.750	1.00	60.56	16.234	0.000037	0.00062	0.375	0.013	-0.02832	0.01825	0.038	0.300	0.1550	0.00703	YES	0.121	0.000	0.817	0.458	0.300	0.853	0.00009	0.00053
-	ED1 5248.95	-	1.00	60.56	16.229	0.000045	0.00086	0.375	0.013	-0.03000	0.01768	-	-	-	-	-	**0.383**	**0.003**	-	-	-	-	-	-
94	ED1 5248.75	3.000	1.00	60.56	16.229	0.000049	0.00092	0.375	0.013	-0.03000	0.01764	0.038	0.300	0.1567	0.00703	YES	0.140	0.000	0.817	0.531	0.300	0.777	0.00020	0.00071
-	ED1 5245.95	-	1.00	60.56	16.224	0.000045	0.00098	0.375	0.013	-0.03000	0.01706	-	-	-	-	-	**0.404**	**0.003**	-	-	-	-	-	-
95	ED1 5245.75	3.000	1.00	60.56	16.224	0.000049	0.00103	0.375	0.013	-0.03000	0.01702	0.038	0.300	0.1567	0.00691	YES	0.147	0.000	0.817	0.552	0.300	0.757	0.00025	0.00078
-	ED1 5242.95	-	1.00	60.56	16.220	0.000045	0.00102	0.375	0.013	-0.03000	0.01645	-	-	-	-	-	**0.414**	**0.003**	-	-	-	-	-	-
96	ED1 5242.75	3.000	1.00	60.56	16.219	0.000049	0.00108	0.375	0.013	-0.03000	0.01641	0.038	0.300	0.1567	0.00679	YES	0.150	0.000	0.817	0.556	0.300	0.753	0.00027	0.00081
(DRAIN)																								
-	ED1 5239.20	-	1.00	60.56	16.213	0.000021	0.00038	0.375	0.013	-0.03000	0.01568	-	-	-	-	-	**0.288**	**0.000**	-	-	-	-	-	-
97	ED1 5239.00	3.750	1.00	60.56	16.213	0.000024	0.00043	0.375	0.013	-0.03000	0.01564	0.038	0.300	0.1567	0.00663	YES	0.108	0.000	0.817	0.373	0.300	0.947	0.00002	0.00041
(DRAIN)																								
-	ED1 5235.95	-	1.00	60.56	16.208	0.000025	0.00043	0.375	0.013	-0.03000	0.01502	-	-	-	-	-	**0.304**	**0.000**	-	-	-	-	-	-
98	ED1 5235.75	3.250	1.00	60.56	16.208	0.000028	0.00048	0.375	0.013	-0.03000	0.01498	0.038	0.300	0.1567	0.00648	YES	0.113	0.000	0.817	0.385	0.300	0.934	0.00003	0.00045
(DRAIN)																								
-	ED1 5232.70	-	1.00	60.56	16.203	0.000021	0.00036	0.375	0.013	-0.03000	0.01435	-	-	-	-	-	**0.287**	**0.000**	-	-	-	-	-	-
99	ED1 5232.50	3.250	1.00	60.56	16.202	0.000024	0.00041	0.375	0.013	-0.03000	0.01431	0.038	0.300	0.1567	0.00634	YES	0.108	0.000	0.817	0.357	0.300	0.964	0.00002	0.00040
(DRAIN)																								
-	ED1 5229.70	-	1.00	60.56	16.198	0.000021	0.00036	0.375	0.013	-0.03000	0.01374	-	-	-	-	-	**0.289**	**0.000**	-	-	-	-	-	-
100	ED1 5229.50	3.000	1.00	60.56	16.197	0.000024	0.00041	0.375	0.013	-0.03000	0.01370	0.038	0.300	0.1567	0.00620	YES	0.109	0.000	0.817	0.352	0.300	0.968	0.00001	0.00040
(DRAIN)																								
-	ED1 5226.70	-	1.00	60.56	16.193	0.000021	0.00036	0.375	0.013	-0.03000	0.01313	-	-	-	-	-	**0.291**	**0.000**	-	-	-	-	-	-
101	ED1 5226.50	3.000	1.00	60.56	16.192	0.000024	0.00041	0.375	0.013	-0.03000	0.01309	0.038	0.300	0.1567	0.00606	YES	0.109	0.000	0.817	0.347	0.300	0.973	0.00001	0.00040
(DRAIN)																								
(DRAIN)																								
-	ED1 5218.20	-	1.00	60.56	16.181	0.000021	0.00050	0.375	0.013	-0.03000	0.01139	-	-	-	-	-	**0.339**	**0.001**	-	-	-	-	-	-
102	ED1 5218.00	8.500	1.00	60.56	16.181	0.000024	0.00055	0.375	0.013	-0.03000	0.01135	0.038	0.300	0.1567	0.00564	YES	0.126	0.000	0.817	0.377	0.300	0.943	0.00003	0.00052
(DRAIN)																								
-	ED1 5215.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.01077	-	-	-	-	-	**0.302**	**0.000**	-	-	-	-	-	-
103	ED1 5215.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.01073	0.038	0.300	0.1567	0.00549	YES	0.114	0.000	0.817	0.327	0.300	0.989	0.00000	0.00041
(DRAIN)																								
-	ED1 5212.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.01016	-	-	-	-	-	**0.306**	**0.000**	-	-	-	-	-	-
104	ED1 5212.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.01012	0.038	0.300	0.1567	0.00533	YES	0.115	0.000	0.817	0.321	0.300	0.993	0.00000	0.00041
(DRAIN)																								
-	ED1 5209.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.00955	-	-	-	-	-	**0.309**	**0.000**	-	-	-	-	-	-
105	ED1 5209.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00951	0.038	0.300	0.1567	0.00516	YES	0.116	0.000	0.817	0.315	0.300	0.996	0.00000	0.00041
(DRAIN)																								
-	ED1 5206.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.00893	-	-	-	-	-	**0.313**	**0.000**	-	-	-	-	-	-
106	ED1 5206.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00889	0.038	0.300	0.1567	0.00500	YES	0.118	0.000	0.817	0.309	0.300	0.998	0.00000	0.00041
(DRAIN)																								
-	ED1 5203.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.00832	-	-	-	-	-	**0.318**	**0.001**	-	-	-	-	-	-
107	ED1 5203.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00828	0.038	0.300	0.1567	0.00482	YES	0.119	0.000	0.817	0.302	0.300	1.000	0.00000	0.00041
(DRAIN)																								
-	ED1 5200.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.00771	-	-	-	-	-	**0.322**	**0.001**	-	-	-	-	-	-
108	ED1 5200.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00767	0.038	0.300	0.1567	0.00464	YES	0.121	0.000	0.817	0.296	0.300	1.000	0.00000	0.00041
(DRAIN)																								
-	ED1 5197.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.00709	-	-	-	-	-	**0.327**	**0.001**	-	-	-	-	-	-
109	ED1 5197.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00705	0.038	0.300	0.1567	0.00445	YES	0.123	0.000	0.817	0.288	0.300	1.000	0.00000	0.00041
(DRAIN)																								
-	ED1 5194.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.00648	-	-	-	-	-	**0.333**	**0.001**	-	-	-	-	-	-
110	ED1 5194.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00644	0.038	0.300	0.1567	0.00425	YES	0.125	0.000	0.817	0.281	0.300	1.000	0.00000	0.00041
(DRAIN)																								
-	ED1 5191.20	-	1.00	60.56	16.181	0.000021	0.00036	0.375	0.013	-0.03000	0.00586	-	-	-	-	-	**0.340**	**0.001**	-	-	-	-	-	-
111	ED1 5191.00	3.000	1.00	60.56	16.181	0.000024	0.00041	0.375	0.013	-0.03000	0.00582	0.038	0.300	0.1567	0.00404	YES	0.128	0.000	0.817	0.273	0.300	1.000	0.00000	0.00041
-	ED1 5188.20	-	1.00	60.56	16.181	0.000045	0.00077	0.375	0.013	-0.03000	0.00525	-	-	-	-	-	**0.461**	**0.005**	-	-	-	-	-	-
112	ED1 5188.00	3.000	1.00	60.56	16.181	0.000049	0.00082	0.375	0.013	-0.03000	0.00521	0.038	0.300	0.1567	0.00382	YES	0.169	0.000	0.817	0.352	0.300	0.968	0.00003	0.00080
-	ED1 5185.20	-	1.00	60.56	16.181	0.000045	0.00079	0.375	0.013	-0.03000	0.00464	-	-	-	-	-	**0.478**	**0.005**	-	-	-	-	-	-
113	ED1 5185.00	3.000	1.00	60.56	16.181	0.000049	0.00085	0.375	0.013	-0.03000	0.00460	0.038	0.300	0.1567	0.00359	YES	0.175	0.000	0.817	0.343	0.300	0.976	0.00002	0.00083
-	ED1 5182.20	-	1.00	60.56	16.181	0.000045	0.00079	0.375	0.013	-0.03000	0.00402	-	-	-	-	-	**0.490**	**0.006**	-	-	-	-	-	-
114	ED1 5182.00	3.000	1.00	60.56	16.181	0.000049	0.00084	0.375	0.013	-0.03000	0.00398	0.038	0.300	0.1567	0.00334	YES	0.179	0.000	0.817	0.328	0.300	0.988	0.00001	0.00083
-	ED1 5179.20	-	1.00	60.56	16.181	0.000045	0.00078	0.375	0.013	-0.03000	0.00341	-	-	-	-	-	**0.502**	**0.006**	-	-	-	-	-	-
115	ED1 5179.00	3.000	1.00	60.56	16.181	0.000049	0.00083	0.375	0.013	-0.03000	0.00337	0.038	0.300	0.1567	0.00307	YES	0.184	0.000	0.817	0.310	0.300	0.998	0.00000	0.00083
-	ED1 5176.20	-	1.00	60.56	16.181	0.000045	0.00077	0.375	0.013	-0.03000	0.00280	-	-	-	-	-	**0.519**	**0.007**	-	-	-	-	-	-
Low Point (116)	ED1 5176.00	3.000	1.00	60.56	16.181	0.000049	**0.00082**	0.375	0.013	-0.03000	0.00276	-	-	-	-	-	-	-	-	-	-	-	-	-

Find location of Low Point at the North Curb:

Station		S_x	S	Elevation at Profile	Elevation at N. Curb
ED1 5176.20		-0.03000	0.00280	50.73811	50.4816
ED1 5176.10		-0.03000	0.00278	50.73783	50.4813
ED1 5176.00	**Low Point at North Curb**	-0.03000	0.00276	50.73755	**50.4811**
ED1 5175.90		-0.02994	0.00274	50.73728	50.4813
ED1 5175.80		-0.02988	0.00271	50.73701	50.4815
ED1 5170.00		-0.02647	0.00153	50.72470	50.4984
ED1 5162.53	Low Point on Profile	-0.02208	0.00000	50.71900	50.5302
ED1 5160.00		-0.02059	-0.00052	50.71965	50.5436

The Low Point at the north curb occurs at a location where a drain would conflict with a stringer. Therefore, a scupper is provided at the Low Point.

Cross slope transition - There are no drains near 0% cross slope, but check amount of water flowing across deck:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S	T m
BB	ED1 5120								0.00294		
-	ED1 5124	1.00	60.56	12.586	0.0000503	0.00085	0.375	0.016	0.00059	-0.00788	**5.6096**
-	ED1 5125	1.00	60.56	12.586	0.0000629	**0.00107**	0.375	0.016	0.00000	-0.00768	**#DIV/0!**
-	ED1 5126	1.00	60.56	12.586	0.0000755	0.00128	0.375	0.016	-0.00059	-0.00747	**6.5964**

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S	Spacing m	Shoulder Width m	T **m**	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept Flow m^3/s
BB	ED1 5120															
100	ED1 5136	1.00	60.56	12.586	0.0002014	0.00341	0.375	0.016	-0.00647	-0.00543	16	0.300	**2.2606**	**0.0127**	0.00234	0.00108
(Scupper)																
99	ED1 5139	1.00	60.56	12.586	0.0000189	0.00256	0.375	0.016	-0.00824	-0.00481	3	0.300	**1.7840**	**0.0122**	0.00156	0.00099
98	ED1 5144	1.00	60.56	16.181	0.0000809	0.00294	0.375	0.016	-0.01118	-0.00379	5	0.300	**1.6238**	**0.0148**	0.00170	0.00123
(Scupper)																
97	ED1 5147	1.00	60.56	16.181	0.0000243	0.00082	0.375	0.016	-0.01294	-0.00318	3	0.300	**0.9470**	**0.0084**	0.00030	0.00052
(Scupper)																
96	ED1 5150	1.00	60.56	16.181	0.0000243	0.00041	0.375	0.016	-0.01471	-0.00256	3	0.300	**0.7045**	**0.0059**	0.00009	0.00032
(Scupper)																
95	ED1 5153	1.00	60.56	16.181	0.0000243	0.00041	0.375	0.016	-0.01647	-0.00195	3	0.300	**0.6909**	**0.0064**	0.00009	0.00032
(Scupper)																
94	ED1 5156	1.00	60.56	16.181	0.0000243	0.00041	0.375	0.016	-0.01824	-0.00134	3	0.300	**0.6959**	**0.0072**	0.00009	0.00032
(Scupper)																
93	ED1 5159	1.00	60.56	16.181	0.0000243	0.00041	0.375	0.016	-0.02000	-0.00072	3	0.300	**0.7372**	**0.0087**	0.00010	0.00031
(Scupper)																
*92	ED1 5162	1.00	60.56	16.181	0.0000243	0.00099	0.375	0.016	-0.02176	-0.00011	3	0.300	**1.3853**	**0.0236**	0.00051	0.00047
(Scupper)																
91	ED1 5165	1.00	60.56	16.181	0.0000243	0.00041	0.375	0.016	-0.02353	0.00051	3	0.300	**0.7121**	**0.0097**	0.00010	0.00032
(Scupper)																
90	ED1 5168	1.00	60.56	16.181	0.0000243	0.00041	0.375	0.016	-0.02529	0.00112	3	0.300	**0.5864**	**0.0072**	0.00006	0.00035
(Scupper)																
89	ED1 5171	1.00	60.56	16.181	0.0000243	0.00041	0.375	0.016	-0.02706	0.00173	3	0.300	**0.5179**	**0.0059**	0.00004	0.00037
(Scupper)																
88	ED1 5174	1.00	60.56	16.181	0.0000243	0.00041	0.375	0.016	-0.02882	0.00235	3	0.300	**0.4703**	**0.0049**	0.00003	0.00038
(Scupper)																

Total Flow at Low Point = 0.00140 m^3/s

Check scupper at low point by hand.

*Note: The flow demand for Drain 92 contains the bypass flow coming from the EDR1 ramp. See EDR1 spreadsheet for origin of value:

EDR1 Bypass = 0.00058 m^3/sec

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T **m**	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept Flow m^3/s
(DRAIN)																								
-	ED1 5137.30	-	1.00	60.56	12.586	0.000016	0.00261	0.375	0.015	-0.00724	-0.00516	-	-	-	-	-	**1.879**	**0.011**	-	-	-	-	-	-
127	ED1 5137.50	-	1.00	60.56	12.586	0.000019	0.00266	0.375	0.015	-0.00735	-0.00512	-	-	-	-	-	**1.874**	**0.012**	0.817	3.293	0.300	0.158	0.00224	0.00042
(DRAIN)																								
(DRAIN)																								
-	ED1 5145.30	-	1.00	60.56	16.181	0.000021	0.00206	0.375	0.013	-0.01194	-0.00352	-	-	-	-	-	**1.279**	**0.012**	-	-	-	-	-	-
126	ED1 5145.50	8.000	1.00	60.56	16.181	0.000024	0.00211	0.375	0.013	-0.01206	-0.00348	0.038	0.300	0.1387	0.00255	YES	**0.280**	0.000	0.817	0.499	0.300	0.809	0.00040	0.00171
(DRAIN)																								
-	ED1 5148.30	-	1.00	60.56	16.181	0.000021	0.00065	0.375	0.013	-0.01371	-0.00291	-	-	-	-	-	**0.790**	**0.007**	-	-	-	-	-	-
125	ED1 5148.50	3.000	1.00	60.56	16.181	0.000024	0.00071	0.375	0.013	-0.01382	-0.00287	0.038	0.300	0.1405	0.00237	YES	**0.191**	0.000	0.817	0.295	0.300	1.000	0.00000	0.00071
(DRAIN)																								
-	ED1 5151.30	-	1.00	60.56	16.181	0.000021	0.00045	0.375	0.013	-0.01547	-0.00230	-	-	-	-	-	**0.667**	**0.006**	-	-	-	-	-	-
124	ED1 5151.50	3.000	1.00	60.56	16.181	0.000024	0.00051	0.375	0.013	-0.01559	-0.00226	0.038	0.300	0.1423	0.00214	YES	**0.175**	0.000	0.817	0.236	0.300	1.000	0.00000	0.00051
(DRAIN)																								
-	ED1 5154.30	-	1.00	60.56	16.181	0.000021	0.00045	0.375	0.013	-0.01724	-0.00168	-	-	-	-	-	**0.659**	**0.006**	-	-	-	-	-	-
123	ED1 5154.50	3.000	1.00	60.56	16.181	0.000024	0.00050	0.375	0.013	-0.01735	-0.00164	0.038	0.300	0.1440	0.00187	YES	**0.183**	0.000	0.817	0.213	0.300	1.000	0.00000	0.00050
(DRAIN)																								
-	ED1 5157.30	-	1.00	60.56	16.181	0.000021	0.00045	0.375	0.013	-0.01900	-0.00107	-	-	-	-	-	**0.675**	**0.007**	-	-	-	-	-	-
122	ED1 5157.50	3.000	1.00	60.56	16.181	0.000024	0.00050	0.375	0.013	-0.01912	-0.00103	0.038	0.300	0.1458	0.00151	YES	**0.199**	0.000	0.817	0.184	0.300	1.000	0.00000	0.00050
(DRAIN)																								
-	ED1 5160.30	-	1.00	60.56	16.181	0.000021	0.00046	0.375	0.013	-0.02076	-0.00046	-	-	-	-	-	**0.756**	**0.009**	-	-	-	-	-	-
121	ED1 5160.50	3.000	1.00	60.56	16.181	0.000024	0.00051	0.375	0.013	-0.02088	-0.00042	0.038	0.300	0.1475	0.00098	YES	**0.236**	0.000	0.817	0.140	0.300	1.000	0.00000	0.00051
(DRAIN)																								
-	ED1 5163.30	-	1.00	60.56	16.181	0.000021	0.00087	0.375	0.013	-0.02253	0.00016	-	-	-	-	-	**1.116**	**0.018**	-	-	-	-	-	-
120	ED1 5163.50	3.000	1.00	60.56	16.181	0.000024	0.00093	0.375	0.013	-0.02265	0.00020	0.038	0.300	0.1493	0.00069	NO	**0.335**	0.001	0.817	0.143	0.300	1.000	0.00000	0.00093
(DRAIN)																								
-	ED1 5166.30	-	1.00	60.56	16.181	0.000021	0.00045	0.375	0.013	-0.02429	0.00077	-	-	-	-	-	**0.618**	**0.008**	-	-	-	-	-	-
119	ED1 5166.50	3.000	1.00	60.56	16.181	0.000024	0.00051	0.375	0.013	-0.02441	0.00081	0.038	0.300	0.1511	0.00142	YES	**0.204**	0.000	0.817	0.168	0.300	1.000	0.00000	0.00051
(DRAIN)																								
-	ED1 5169.30	-	1.00	60.56	16.181	0.000021	0.00042	0.375	0.013	-0.02606	0.00138	-	-	-	-	-	**0.514**	**0.006**	-	-	-	-	-	-
118	ED1 5169.50	3.000	1.00	60.56	16.181	0.000024	0.00047	0.375	0.013	-0.02618	0.00143	0.038	0.300	0.1528	0.00192	YES	**0.177**	0.000	0.817	0.192	0.300	1.000	0.00000	0.00047
(DRAIN)																								
-	ED1 5172.30	-	1.00	60.56	16.181	0.000021	0.00040	0.375	0.013	-0.02782	0.00200	-	-	-	-	-	**0.452**	**0.004**	-	-	-	-	-	-
117	ED1 5172.50	3.000	1.00	60.56	16.181	0.000024	0.00045	0.375	0.013	-0.02794	0.00204	0.038	0.300	0.1546	0.00234	YES	**0.162**	0.000	0.817	0.208	0.300	1.000	0.00000	0.00045
(DRAIN)																								
-	ED1 5175.80	-	1.00	60.56	16.181	0.000029	0.00052	0.375	0.013	-0.02988	0.00271	-	-	-	-	-	**0.452**	**0.005**	-	-	-	-	-	-
Low Point (116)	ED1 5176.00	3.500	1.00	60.56	16.181	0.000032	**0.00058**	-	-	-0.03000	-	0.038	0.300	0.1567	-	-	-	-	-	-	-	-	-	-

ED1 Line Drainage

Drains and Depressed Scuppers - 25 Year Intensity

Use Drain Type D-3, modified to 300 mm width. Use minimum drain spacing of 3.0 m.

Place 300mm long scuppers between drains at minimum spacing of 3.0 m on center, and at least 1.5 m from a drain.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "ED1" 52+98 and "ED1" 51+25. The amount of flow crossing the deck is 0.00126 m^3/s and 0.00107 m^3/s respectively. BDA p. 17-3 advises that a maximum of 0.003 m3/s flow across the deck. Therefore, this configuration is adequate.

Drains:

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	**Depth 0.3m from Curb**	Bypass Flow	Intercept Flow
	m		mm/hr	m	km^2	m^3/s					m	m	**m**	**m**	m^3/s	m^3/s
-	ED1 5551.837	1.00	50.36	13.84	0.000000	0.00000	0.375	0.013	0.00440	0.01167	n/a	0.300	**0.000**	**0.000**	0.00000	n/a
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
1	ED1 5519.500	1.00	50.36	13.84	0.000021	0.00043	0.375	0.013	0.00350	0.01410	32.3	0.300	**1.179**	**0.003**	0.00020	0.00023
(Scupper)																
2	ED1 5516.000	1.00	50.36	13.84	0.000028	0.00045	0.375	0.013	0.00350	0.01437	3.5	0.300	**1.192**	**0.003**	0.00021	0.00024
(Scupper)																
3	ED1 5513.000	1.00	50.36	13.84	0.000021	0.00035	0.375	0.013	0.00350	0.01461	3.0	0.300	**1.088**	**0.003**	0.00015	0.00020
(Scupper)																
4	ED1 5508.000	1.00	50.36	13.84	0.000035	0.00060	0.375	0.013	0.00350	0.01499	5.0	0.300	**1.321**	**0.004**	0.00030	0.00030
(Scupper)																
5	ED1 5505.000	1.00	50.36	13.84	0.000021	0.00039	0.375	0.013	0.00350	0.01522	3.0	0.300	**1.121**	**0.003**	0.00017	0.00022
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
6	ED1 5487.000	1.00	50.36	13.84	0.000021	0.00046	0.375	0.013	0.00790	0.01661	16.0	0.300	**0.707**	**0.003**	0.00011	0.00036
(Scupper)																
7	ED1 5484.000	1.00	50.36	13.84	0.000021	0.00033	0.375	0.013	0.00955	0.01685	3.0	0.300	**0.550**	**0.002**	0.00004	0.00029
(Scupper)																
8	ED1 5481.000	1.00	50.36	13.84	0.000021	0.00031	0.375	0.013	0.01120	0.01708	3.0	0.300	**0.487**	**0.002**	0.00002	0.00029
(Scupper)																
9	ED1 5478.000	1.00	50.36	13.84	0.000021	0.00031	0.375	0.013	0.01285	0.01731	3.0	0.300	**0.444**	**0.002**	0.00002	0.00029
(Scupper)																
10	ED1 5475.000	1.00	50.36	13.84	0.000021	0.00030	0.375	0.013	0.01450	0.01754	3.0	0.300	**0.409**	**0.002**	0.00001	0.00030
(Scupper)																
11	ED1 5472.000	1.00	50.36	13.84	0.000021	0.00030	0.375	0.013	0.01615	0.01777	3.0	0.300	**0.381**	**0.001**	0.00000	0.00030
(Scupper)																
12	ED1 5469.000	1.00	50.36	13.84	0.000021	0.00030	0.375	0.013	0.01780	0.01800	3.0	0.300	**0.357**	**0.001**	0.00000	0.00030
(Scupper)																
13	ED1 5462.500	1.00	50.36	13.84	0.000021	0.00055	0.375	0.013	0.02000	0.01851	6.5	0.300	**0.414**	**0.002**	0.00002	0.00053
(Scupper)																
14	ED1 5459.500	1.00	50.36	13.84	0.000021	0.00030	0.375	0.013	0.02000	0.01874	3.0	0.300	**0.331**	**0.001**	0.00000	0.00030
(Scupper)																
15	ED1 5456.500	1.00	50.36	13.84	0.000021	0.00030	0.375	0.013	0.02000	0.01897	3.0	0.300	**0.329**	**0.001**	0.00000	0.00030

Scuppers:

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	**Depth 0.3m from Curb**	K	L_T	L	E	Bypass Flow	Intercept Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		**m**	**m**		m	m		m^3/s	m^3/s
-	ED1 5545.20	-	1.00	50.36	13.840	0.000092	0.00130	0.375	0.013	0.00440	0.01212	-	-	-	-	-	**1.591**	**0.006**	-	-	-	-	-	-
1	ED1 5545.00	-	1.00	50.36	13.840	0.000095	0.00133	0.375	0.013	0.00440	0.01213	0.038	0.300	0.1311	0.00433	YES	0.193	0.000	0.817	0.618	0.300	0.697	0.00040	0.00093
-	ED1 5542.20	-	1.00	50.36	13.840	0.000039	0.00095	0.375	0.013	0.00440	0.01235	-	-	-	-	-	**1.412**	**0.005**	-	-	-	-	-	-
2	ED1 5542.00	3.000	1.00	50.36	13.840	0.000042	0.00099	0.375	0.013	0.00440	0.01237	0.038	0.300	0.1311	0.00438	YES	0.172	0.000	0.817	0.548	0.300	0.760	0.00024	0.00075
-	ED1 5539.20	-	1.00	50.36	13.840	0.000039	0.00078	0.375	0.013	0.00440	0.01258	-	-	-	-	-	**1.309**	**0.004**	-	-	-	-	-	-
3	ED1 5539.00	3.000	1.00	50.36	13.840	0.000042	0.00082	0.375	0.013	0.00440	0.01260	0.038	0.300	0.1311	0.00442	YES	0.160	0.000	0.817	0.510	0.300	0.797	0.00017	0.00066
-	ED1 5536.20	-	1.00	50.36	13.840	0.000039	0.00071	0.375	0.013	0.00440	0.01281	-	-	-	-	-	**1.259**	**0.004**	-	-	-	-	-	-
4	ED1 5536.00	3.000	1.00	50.36	13.840	0.000042	0.00075	0.375	0.013	0.00440	0.01283	0.038	0.300	0.1311	0.00446	YES	0.154	0.000	0.817	0.494	0.300	0.814	0.00014	0.00061
-	ED1 5533.20	-	1.00	50.36	13.840	0.000039	0.00069	0.375	0.013	0.00440	0.01305	-	-	-	-	-	**1.237**	**0.004**	-	-	-	-	-	-
5	ED1 5533.00	3.000	1.00	50.36	13.840	0.000042	0.00073	0.375	0.013	0.00440	0.01306	0.038	0.300	0.1311	0.00450	YES	0.151	0.000	0.817	0.489	0.300	0.819	0.00013	0.00059
-	ED1 5530.20	-	1.00	50.36	13.840	0.000039	0.00068	0.375	0.013	0.00440	0.01328	-	-	-	-	-	**1.227**	**0.004**	-	-	-	-	-	-
6	ED1 5530.00	3.000	1.00	50.36	13.840	0.000042	0.00072	0.375	0.013	0.00440	0.01329	0.038	0.300	0.1311	0.00454	YES	0.150	0.000	0.817	0.489	0.300	0.819	0.00013	0.00059
-	ED1 5527.20	-	1.00	50.36	13.840	0.000039	0.00068	0.375	0.013	0.00440	0.01351	-	-	-	-	-	**1.222**	**0.004**	-	-	-	-	-	-
7	ED1 5527.00	3.000	1.00	50.36	13.840	0.000042	0.00072	0.375	0.013	0.00440	0.01352	0.038	0.300	0.1311	0.00458	YES	0.150	0.000	0.817	0.492	0.300	0.817	0.00013	0.00058
-	ED1 5524.20	-	1.00	50.36	13.840	0.000039	0.00068	0.375	0.013	0.00440	0.01374	-	-	-	-	-	**1.219**	**0.004**	-	-	-	-	-	-
8	ED1 5524.00	3.000	1.00	50.36	13.840	0.000042	0.00072	0.375	0.013	0.00440	0.01376	0.038	0.300	0.1311	0.00461	YES	0.149	0.000	0.817	0.494	0.300	0.814	0.00013	0.00058
-	ED1 5521.20	-	1.00	50.36	13.840	0.000039	0.00068	0.375	0.013	0.00440	0.01397	-	-	-	-	-	**1.217**	**0.004**	-	-	-	-	-	-
9	ED1 5521.00	3.000	1.00	50.36	13.840	0.000042	0.00072	0.375	0.013	0.00440	0.01399	0.038	0.300	0.1311	0.00465	YES	0.149	0.000	0.817	0.498	0.300	0.810	0.00014	0.00058
(DRAIN)																								
-	ED1 5518.20	-	1.00	50.36	13.840	0.000018	0.00045	0.375	0.013	0.00350	0.01420	-	-	-	-	-	**1.199**	**0.003**	-	-	-	-	-	-
10	ED1 5518.00	3.000	1.00	50.36	13.840	0.000021	0.00049	0.375	0.013	0.00350	0.01422	0.038	0.300	0.1302	0.00464	YES	0.129	0.000	0.817	0.427	0.300	0.887	0.00006	0.00043
(DRAIN)																								
-	ED1 5514.70	-	1.00	50.36	13.840	0.000018	0.00046	0.375	0.013	0.00350	0.01447	-	-	-	-	-	**1.204**	**0.003**	-	-	-	-	-	-
11	ED1 5514.50	3.500	1.00	50.36	13.840	0.000021	0.00050	0.375	0.013	0.00350	0.01449	0.038	0.300	0.1302	0.00468	YES	0.130	0.000	0.817	0.433	0.300	0.881	0.00006	0.00044
(DRAIN)																								
-	ED1 5510.70	-	1.00	50.36	13.840	0.000032	0.00060	0.375	0.013	0.00350	0.01478	-	-	-	-	-	**1.324**	**0.004**	-	-	-	-	-	-
12	ED1 5510.50	4.000	1.00	50.36	13.840	0.000035	0.00064	0.375	0.013	0.00350	0.01480	0.038	0.300	0.1302	0.00473	YES	0.141	0.000	0.817	0.483	0.300	0.826	0.00011	0.00053
(DRAIN)																								
-	ED1 5506.70	-	1.00	50.36	13.840	0.000018	0.00056	0.375	0.013	0.00350	0.01509	-	-	-	-	-	**1.282**	**0.003**	-	-	-	-	-	-
13	ED1 5506.50	4.000	1.00	50.36	13.840	0.000021	0.00059	0.375	0.013	0.00350	0.01511	0.038	0.300	0.1302	0.00478	YES	0.137	0.000	0.817	0.472	0.300	0.838	0.00010	0.00050
(DRAIN)																								
-	ED1 5500.70	-	1.00	50.36	13.840	0.000060	0.00101	0.375	0.013	0.00350	0.01556	-	-	-	-	-	**1.595**	**0.005**	-	-	-	-	-	-
14	ED1 5500.50	6.000	1.00	50.36	13.840	0.000062	0.00105	0.375	0.013	0.00350	0.01557	0.038	0.300	0.1302	0.00485	YES	0.169	0.000	0.817	0.604	0.300	0.709	0.00030	0.00074
-	ED1 5497.70	-	1.00	50.36	13.840	0.000039	0.00085	0.375	0.013	0.00350	0.01579	-	-	-	-	-	**1.493**	**0.004**	-	-	-	-	-	-
15	ED1 5497.50	3.000	1.00	50.36	13.840	0.000042	0.00089	0.375	0.013	0.00350	0.01580	0.038	0.300	0.1302	0.00489	YES	0.158	0.000	0.817	0.567	0.300	0.742	0.00023	0.00066
-	ED1 5494.70	-	1.00	50.36	13.840	0.000039	0.00078	0.375	0.013	0.00367	0.01602	-	-	-	-	-	**1.397**	**0.004**	-	-	-	-	-	-
16	ED1 5494.50	3.000	1.00	50.36	13.840	0.000042	0.00082	0.375	0.013	0.00378	0.01603	0.038	0.300	0.1304	0.00494	YES	0.153	0.000	0.817	0.548	0.300	0.760	0.00020	0.00062
-	ED1 5491.70	-	1.00	50.36	13.840	0.000039	0.00074	0.375	0.013	0.00532	0.01625	-	-	-	-	-	**1.086**	**0.004**	-	-	-	-	-	-
17	ED1 5491.50	3.000	1.00	50.36	13.840	0.000042	0.00078	0.375	0.013	0.00543	0.01627	0.038	0.300	0.1321	0.00508	YES	0.149	0.000	0.817	0.537	0.300	0.771	0.00018	0.00060
-	ED1 5488.70	-	1.00	50.36	13.840	0.000039	0.00073	0.375	0.013	0.00697	0.01648	-	-	-	-	-	**0.907**	**0.004**	-	-	-	-	-	-
18	ED1 5488.50	3.000	1.00	50.36	13.840	0.000042	0.00076	0.375	0.013	0.00708	0.01650	0.038	0.300	0.1337	0.00523	YES	0.146	0.000	0.817	0.530	0.300	0.777	0.00017	0.00059
(DRAIN)																								
-	ED1 5485.70	-	1.00	50.36	13.840	0.000018	0.00036	0.375	0.013	0.00862	0.01671	-	-	-	-	-	**0.609**	**0.003**	-	-	-	-	-	-
19	ED1 5485.50	3.000	1.00	50.36	13.840	0.000021	0.00040	0.375	0.013	0.00873	0.01673	0.038	0.300	0.1354	0.00537	YES	0.113	0.000	0.817	0.402	0.300	0.915	0.00003	0.00037
(DRAIN)																								
-	ED1 5482.70	-	1.00	50.36	13.840	0.000018	0.00029	0.375	0.013	0.01027	0.01695	-	-	-	-	-	**0.504**	**0.002**	-	-	-	-	-	-
20	ED1 5482.50	3.000	1.00	50.36	13.840	0.000021	0.00033	0.375	0.013	0.01038	0.01696	0.038	0.300	0.1370	0.00552	YES	0.105	0.000	0.817	0.371	0.300	0.949	0.00002	0.00032
(DRAIN)																								
-	ED1 5479.70	-	1.00	50.36	13.840	0.000018	0.00028	0.375	0.013	0.01192	0.01718	-	-	-	-	-	**0.449**	**0.002**	-	-	-	-	-	-
21	ED1 5479.50	3.000	1.00	50.36	13.840	0.000021	0.00032	0.375	0.013	0.01203	0.01719	0.038	0.300	0.1387	0.00567	YES	0.102	0.000	0.817	0.363	0.300	0.958	0.00001	0.00030
(DRAIN)																								
-	ED1 5476.70	-	1.00	50.36	13.840	0.000018	0.00027	0.375	0.013	0.01357	0.01741	-	-	-	-	-	**0.408**	**0.001**	-	-	-	-	-	-
22	ED1 5476.50	3.000	1.00	50.36	13.840	0.000021	0.00031	0.375	0.013	0.01368	0.01743	0.038	0.300	0.1403	0.00582	YES	0.100	0.000	0.817	0.357	0.300	0.963	0.00001	0.00030
(DRAIN)																								
-	ED1 5473.70	-	1.00	50.36	13.840	0.000018	0.00026	0.375	0.013	0.01522	0.01764	-	-	-	-	-	**0.376**	**0.001**	-	-	-	-	-	-
23	ED1 5473.50	3.000	1.00	50.36	13.840	0.000021	0.00030	0.375	0.013	0.01533	0.01766	0.038	0.300	0.1420	0.00597	YES	0.098	0.000	0.817	0.353	0.300	0.967	0.00001	0.00029
(DRAIN)																								
-	ED1 5470.50	-	1.00	50.36	13.840	0.000021	0.00030	0.375	0.013	0.01698	0.01789	-	-	-	-	-	**0.367**	**0.001**	-	-	-	-	-	-
24	ED1 5470.50	3.000	1.00	50.36	13.840	0.000021	0.00030	0.375	0.013	0.01698	0.01789	0.038	0.300	0.1436	0.00613	YES	0.096	0.000	0.817	0.350	0.300	0.970	0.00001	0.00029
(DRAIN)																								
-	ED1 5464.20	-	1.00	50.36	13.840	0.000066	0.00094	0.375	0.013	0.02000	0.01838	-	-	-	-	-	**0.506**	**0.004**	-	-	-	-	-	-
25	ED1 5464.00	6.500	1.00	50.36	13.840	0.000069	0.00098	0.375	0.013	0.02000	0.01839	0.038	0.300	0.1467	0.00644	YES	0.148	0.000	0.817	0.575	0.300	0.735	0.00026	0.00072
(DRAIN)																								
-	ED1 5461.20	-	1.00	50.36	13.840	0.000018	0.00027	0.375	0.013	0.02000	0.01861	-	-	-	-	-	**0.317**	**0.000**	-	-	-	-	-	-
26	ED1 5461.00	3.000	1.00	50.36	13.840	0.000021	0.00031	0.375	0.013	0.02000	0.01862	0.038	0.300	0.1467	0.00648	YES	0.096	0.000	0.817	0.356	0.300	0.964	0.00001	0.00030
(DRAIN)																								
-	ED1 5458.20	-	1.00	50.36	13.840	0.000018	0.00025	0.375	0.013	0.02000	0.01884	-	-	-	-	-	**0.309**	**0.000**	-	-	-	-	-	-
27	ED1 5458.00	3.000	1.00	50.36	13.840	0.000021	0.00029	0.375	0.013	0.02000	0.01885	0.038	0.300	0.1467	0.00652	YES	0.094	0.000	0.817	0.349	0.300	0.971	0.00001	0.00028
(DRAIN)																								
-	ED1 5454.95	-	1.00	50.36	13.850	0.000021	0.00030	0.375	0.013	0.02000	0.01909	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa	Drain Width	T	Depth 0.3m from Curb	Bypass Flow	Intercept Flow
	m		mm/hr	m	km^2	m^3/s					m	m	m	m	m^3/s	m^3/s
(Scupper)																
16	ED1 5453.000	1.00	50.36	13.876	0.000024	0.00036	0.375	0.013	0.02000	0.01924	3.5	0.300	**0.351**	**0.001**	0.00000	0.00036
(Scupper)																
17	ED1 5449.500	1.00	50.36	13.923	0.000024	0.00036	0.375	0.013	0.02000	0.01951	3.5	0.300	**0.351**	**0.001**	0.00000	0.00036
(Scupper)																
18	ED1 5446.500	1.00	50.36	13.9634	0.000021	0.00031	0.375	0.013	0.02000	0.01974	3.0	0.300	**0.328**	**0.001**	0.00000	0.00031
(Scupper)																
19	ED1 5443.500	1.00	50.36	14.0037	0.000021	0.00031	0.375	0.013	0.02000	0.01997	3.0	0.300	**0.328**	**0.001**	0.00000	0.00031
(Scupper)																
20	ED1 5440.500	1.00	50.36	14.0441	0.000021	0.00031	0.375	0.013	0.02000	0.02021	3.0	0.300	**0.328**	**0.001**	0.00000	0.00031
(Scupper)																
21	ED1 5437.500	1.00	50.36	14.0844	0.000021	0.00031	0.375	0.013	0.02000	0.02044	3.0	0.300	**0.327**	**0.001**	0.00000	0.00031
(Scupper)																
22	ED1 5434.500	1.00	50.36	14.1248	0.000021	0.00031	0.375	0.013	0.02000	0.02067	3.0	0.300	**0.327**	**0.001**	0.00000	0.00031
(Scupper)																
23	ED1 5431.500	1.00	50.36	14.1651	0.000021	0.00031	0.375	0.013	0.02000	0.02090	3.0	0.300	**0.327**	**0.001**	0.00000	0.00031
(Scupper)																
24	ED1 5428.500	1.00	50.36	14.2054	0.000021	0.00031	0.375	0.013	0.02000	0.02113	3.0	0.300	**0.327**	**0.001**	0.00000	0.00031
(Scupper)																
25	ED1 5425.500	1.00	50.36	14.2458	0.000021	0.00032	0.375	0.013	0.02000	0.02136	3.0	0.300	**0.327**	**0.001**	0.00000	0.00031
(Scupper)																
26	ED1 5422.500	1.00	50.36	14.2861	0.000021	0.00032	0.375	0.013	0.02000	0.02160	3.0	0.300	**0.327**	**0.001**	0.00000	0.00032
(Scupper)																
27	ED1 5419.500	1.00	50.36	14.3265	0.000021	0.00032	0.375	0.013	0.02000	0.02183	3.0	0.300	**0.327**	**0.001**	0.00000	0.00032
(Scupper)																
28	ED1 5416.500	1.00	50.36	14.3668	0.000022	0.00032	0.375	0.013	0.02000	0.02206	3.0	0.300	**0.327**	**0.001**	0.00000	0.00032
(Scupper)																
29	ED1 5413.000	1.00	50.36	14.4139	0.000025	0.00038	0.375	0.013	0.02000	0.02233	3.5	0.300	**0.349**	**0.001**	0.00000	0.00038
(Scupper)																
30	ED1 5409.500	1.00	50.36	14.4609	0.000025	0.00039	0.375	0.013	0.02000	0.02260	3.5	0.300	**0.349**	**0.001**	0.00000	0.00038
(Scupper)																
31	ED1 5406.500	1.00	50.36	14.5013	0.000022	0.00032	0.375	0.013	0.02000	0.02283	3.0	0.300	**0.326**	**0.001**	0.00000	0.00032
(Scupper)																
32	ED1 5403.500	1.00	50.36	14.5416	0.000022	0.00033	0.375	0.013	0.02000	0.02306	3.0	0.300	**0.326**	**0.001**	0.00000	0.00033
(Scupper)																
33	ED1 5400.000	1.00	50.36	14.5887	0.000026	0.00039	0.375	0.013	0.02000	0.02333	3.5	0.300	**0.349**	**0.001**	0.00000	0.00039
(Scupper)																
34	ED1 5396.500	1.00	50.36	14.6358	0.000026	0.00039	0.375	0.013	0.02000	0.02361	3.5	0.300	**0.349**	**0.001**	0.00000	0.00039
(Scupper)																
35	ED1 5380.500	1.00	50.36	14.8509	0.000030	0.00065	0.375	0.013	0.02000	0.02403	16.0	0.300	**0.420**	**0.002**	0.00002	0.00063
(Scupper)																
36	ED1 5377.500	1.00	50.36	14.8913	0.000022	0.00034	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.330**	**0.001**	0.00000	0.00034
(Scupper)																
37	ED1 5374.500	1.00	50.36	14.9389	0.000022	0.00034	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.328**	**0.001**	0.00000	0.00034
(Scupper)																
38	ED1 5371.500	1.00	50.36	14.9918	0.000022	0.00034	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.329**	**0.001**	0.00000	0.00034
(Scupper)																
39	ED1 5368.500	1.00	50.36	15.0447	0.000023	0.00034	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.329**	**0.001**	0.00000	0.00034
(Scupper)																
40	ED1 5365.500	1.00	50.36	15.0976	0.000023	0.00034	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.330**	**0.001**	0.00000	0.00034
(Scupper)																
41	ED1 5362.500	1.00	50.36	15.1505	0.000023	0.00034	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.330**	**0.001**	0.00000	0.00034
(Scupper)																

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	Depth 0.3m from Curb	K	L_T	L	E	Bypass Flow	Intercept Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		m	m		m	m		m^3/s	m^3/s
28	ED1 5454.75	3.250	1.00	50.36	13.852	0.000024	0.00034	0.375	0.013	0.02000	0.01911	0.038	0.300	0.1467	0.00656	YES	0.099	0.000	0.817	0.374	0.300	0.946	0.00002	0.00032
(DRAIN)																								
-	ED1 5451.45	-	1.00	50.36	13.897	0.000022	0.00031	0.375	0.013	0.02000	0.01936	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-
29	ED1 5451.25	3.500	1.00	50.36	13.900	0.000024	0.00035	0.375	0.013	0.02000	0.01938	0.038	0.300	0.1467	0.00661	YES	0.099	0.000	0.817	0.377	0.300	0.943	0.00002	0.00033
(DRAIN)																								
-	ED1 5448.20	-	1.00	50.36	13.941	0.000018	0.00026	0.375	0.013	0.02000	0.01961	-	-	-	-	-	**0.308**	**0.000**	-	-	-	-	-	-
30	ED1 5448.00	3.250	1.00	50.36	13.943	0.000021	0.00030	0.375	0.013	0.02000	0.01963	0.038	0.300	0.1467	0.00665	YES	0.094	0.000	0.817	0.355	0.300	0.965	0.00001	0.00029
(DRAIN)																								
-	ED1 5445.20	-	1.00	50.36	13.981	0.000018	0.00026	0.375	0.013	0.02000	0.01984	-	-	-	-	-	**0.307**	**0.000**	-	-	-	-	-	-
31	ED1 5445.00	3.000	1.00	50.36	13.984	0.000021	0.00030	0.375	0.013	0.02000	0.01986	0.038	0.300	0.1467	0.00669	YES	0.093	0.000	0.817	0.356	0.300	0.964	0.00001	0.00029
(DRAIN)																								
-	ED1 5442.20	-	1.00	50.36	14.021	0.000018	0.00026	0.375	0.013	0.02000	0.02007	-	-	-	-	-	**0.307**	**0.000**	-	-	-	-	-	-
32	ED1 5442.00	3.000	1.00	50.36	14.024	0.000021	0.00030	0.375	0.013	0.02000	0.02009	0.038	0.300	0.1467	0.00673	YES	0.093	0.000	0.817	0.358	0.300	0.962	0.00001	0.00029
(DRAIN)																								
-	ED1 5439.20	-	1.00	50.36	14.062	0.000018	0.00026	0.375	0.013	0.02000	0.02031	-	-	-	-	-	**0.306**	**0.000**	-	-	-	-	-	-
33	ED1 5439.00	3.000	1.00	50.36	14.064	0.000021	0.00030	0.375	0.013	0.02000	0.02032	0.038	0.300	0.1467	0.00677	YES	0.093	0.000	0.817	0.359	0.300	0.961	0.00001	0.00029
(DRAIN)																								
-	ED1 5436.20	-	1.00	50.36	14.102	0.000018	0.00026	0.375	0.013	0.02000	0.02054	-	-	-	-	-	**0.306**	**0.000**	-	-	-	-	-	-
34	ED1 5436.00	3.000	1.00	50.36	14.105	0.000021	0.00030	0.375	0.013	0.02000	0.02055	0.038	0.300	0.1467	0.00680	YES	0.093	0.000	0.817	0.361	0.300	0.959	0.00001	0.00029
(DRAIN)																								
-	ED1 5433.20	-	1.00	50.36	14.142	0.000018	0.00026	0.375	0.013	0.02000	0.02077	-	-	-	-	-	**0.306**	**0.000**	-	-	-	-	-	-
35	ED1 5433.00	3.000	1.00	50.36	14.145	0.000021	0.00030	0.375	0.013	0.02000	0.02079	0.038	0.300	0.1467	0.00684	YES	0.093	0.000	0.817	0.363	0.300	0.958	0.00001	0.00029
(DRAIN)																								
-	ED1 5430.20	-	1.00	50.36	14.183	0.000018	0.00026	0.375	0.013	0.02000	0.02100	-	-	-	-	-	**0.305**	**0.000**	-	-	-	-	-	-
36	ED1 5430.00	3.000	1.00	50.36	14.185	0.000021	0.00030	0.375	0.013	0.02000	0.02102	0.038	0.300	0.1467	0.00688	YES	0.093	0.000	0.817	0.364	0.300	0.956	0.00001	0.00029
(DRAIN)																								
-	ED1 5427.20	-	1.00	50.36	14.223	0.000018	0.00026	0.375	0.013	0.02000	0.02123	-	-	-	-	-	**0.305**	**0.000**	-	-	-	-	-	-
37	ED1 5427.00	3.000	1.00	50.36	14.226	0.000021	0.00030	0.375	0.013	0.02000	0.02125	0.038	0.300	0.1467	0.00692	YES	0.093	0.000	0.817	0.366	0.300	0.954	0.00001	0.00029
(DRAIN)																								
-	ED1 5424.20	-	1.00	50.36	14.263	0.000019	0.00026	0.375	0.013	0.02000	0.02147	-	-	-	-	-	**0.305**	**0.000**	-	-	-	-	-	-
38	ED1 5424.00	3.000	1.00	50.36	14.266	0.000021	0.00030	0.375	0.013	0.02000	0.02148	0.038	0.300	0.1467	0.00696	YES	0.093	0.000	0.817	0.368	0.300	0.953	0.00001	0.00029
(DRAIN)																								
-	ED1 5421.20	-	1.00	50.36	14.304	0.000019	0.00026	0.375	0.013	0.02000	0.02170	-	-	-	-	-	**0.304**	**0.000**	-	-	-	-	-	-
39	ED1 5421.00	3.000	1.00	50.36	14.306	0.000021	0.00030	0.375	0.013	0.02000	0.02171	0.038	0.300	0.1467	0.00699	YES	0.092	0.000	0.817	0.369	0.300	0.951	0.00001	0.00029
(DRAIN)																								
-	ED1 5418.20	-	1.00	50.36	14.344	0.000019	0.00026	0.375	0.013	0.02000	0.02193	-	-	-	-	-	**0.304**	**0.000**	-	-	-	-	-	-
40	ED1 5418.00	3.000	1.00	50.36	14.347	0.000022	0.00030	0.375	0.013	0.02000	0.02194	0.038	0.300	0.1467	0.00703	YES	0.092	0.000	0.817	0.371	0.300	0.949	0.00002	0.00029
(DRAIN)																								
-	ED1 5414.95	-	1.00	50.36	14.388	0.000022	0.00031	0.375	0.013	0.02000	0.02218	-	-	-	-	-	**0.325**	**0.000**	-	-	-	-	-	-
41	ED1 5414.75	3.250	1.00	50.36	14.390	0.000025	0.00036	0.375	0.013	0.02000	0.02220	0.038	0.300	0.1467	0.00707	YES	0.098	0.000	0.817	0.397	0.300	0.920	0.00003	0.00033
(DRAIN)																								
-	ED1 5411.45	-	1.00	50.36	14.435	0.000022	0.00032	0.375	0.013	0.02000	0.02245	-	-	-	-	-	**0.325**	**0.000**	-	-	-	-	-	-
42	ED1 5411.25	3.500	1.00	50.36	14.437	0.000025	0.00036	0.375	0.013	0.02000	0.02247	0.038	0.300	0.1467	0.00711	YES	0.098	0.000	0.817	0.400	0.300	0.917	0.00003	0.00033
(DRAIN)																								
-	ED1 5408.20	-	1.00	50.36	14.478	0.000019	0.00027	0.375	0.013	0.02000	0.02270	-	-	-	-	-	**0.304**	**0.000**	-	-	-	-	-	-
43	ED1 5408.00	3.250	1.00	50.36	14.481	0.000022	0.00031	0.375	0.013	0.02000	0.02272	0.038	0.300	0.1467	0.00715	YES	0.092	0.000	0.817	0.377	0.300	0.943	0.00002	0.00029
(DRAIN)																								
-	ED1 5405.20	-	1.00	50.36	14.519	0.000019	0.00027	0.375	0.013	0.02000	0.02293	-	-	-	-	-	**0.303**	**0.000**	-	-	-	-	-	-
44	ED1 5405.00	3.000	1.00	50.36	14.521	0.000022	0.00031	0.375	0.013	0.02000	0.02295	0.038	0.300	0.1467	0.00719	YES	0.092	0.000	0.817	0.378	0.300	0.942	0.00002	0.00029
(DRAIN)																								
-	ED1 5401.95	-	1.00	50.36	14.562	0.000023	0.00032	0.375	0.013	0.02000	0.02318	-	-	-	-	-	**0.323**	**0.000**	-	-	-	-	-	-
45	ED1 5401.75	3.250	1.00	50.36	14.565	0.000025	0.00036	0.375	0.013	0.02000	0.02320	0.038	0.300	0.1467	0.00723	YES	0.097	0.000	0.817	0.405	0.300	0.912	0.00003	0.00033
(DRAIN)																								
-	ED1 5398.45	-	1.00	50.36	14.610	0.000023	0.00032	0.375	0.013	0.02000	0.02345	-	-	-	-	-	**0.324**	**0.000**	-	-	-	-	-	-
46	ED1 5398.25	3.500	1.00	50.36	14.612	0.000026	0.00036	0.375	0.013	0.02000	0.02347	0.038	0.300	0.1467	0.00727	YES	0.097	0.000	0.817	0.408	0.300	0.909	0.00003	0.00033
(DRAIN)																								
-	ED1 5394.70	-	1.00	50.36	14.660	0.000026	0.00037	0.375	0.013	0.02000	0.02374	-	-	-	-	-	**0.342**	**0.001**	-	-	-	-	-	-
47	ED1 5394.50	3.750	1.00	50.36	14.663	0.000029	0.00042	0.375	0.013	0.02000	0.02376	0.038	0.300	0.1467	0.00732	YES	0.102	0.000	0.817	0.433	0.300	0.880	0.00005	0.00037
-	ED1 5391.70	-	1.00	50.36	14.700	0.000041	0.00063	0.375	0.013	0.02000	0.02398	-	-	-	-	-	**0.415**	**0.002**	-	-	-	-	-	-
48	ED1 5391.50	3.000	1.00	50.36	14.703	0.000044	0.00067	0.375	0.013	0.02000	0.02399	0.038	0.300	0.1467	0.00735	YES	0.122	0.000	0.817	0.531	0.300	0.776	0.00015	0.00052
-	ED1 5388.70	-	1.00	50.36	14.741	0.000041	0.00073	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.439**	**0.003**	-	-	-	-	-	-
49	ED1 5388.50	3.000	1.00	50.36	14.743	0.000044	0.00077	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.129	0.000	0.817	0.564	0.300	0.745	0.00020	0.00058
-	ED1 5385.70	-	1.00	50.36	14.781	0.000041	0.00078	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.450**	**0.003**	-	-	-	-	-	-
50	ED1 5385.50	3.000	1.00	50.36	14.784	0.000044	0.00082	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.132	0.000	0.817	0.579	0.300	0.731	0.00022	0.00060
-	ED1 5382.70	-	1.00	50.36	14.821	0.000041	0.00081	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.455**	**0.003**	-	-	-	-	-	-
51	ED1 5382.50	3.000	1.00	50.36	14.824	0.000044	0.00085	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.133	0.000	0.817	0.587	0.300	0.725	0.00023	0.00061
(DRAIN)																								
-	ED1 5379.20	-	1.00	50.36	14.868	0.000019	0.00030	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.312**	**0.000**	-	-	-	-	-	-
52	ED1 5379.00	3.500	1.00	50.36	14.871	0.000022	0.00034	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.094	0.000	0.817	0.398	0.300	0.919	0.00003	0.00031
(DRAIN)																								
-	ED1 5376.20	-	1.00	50.36	14.909	0.000019	0.00027	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.303**	**0.000**	-	-	-	-	-	-
53	ED1 5376.00	3.000	1.00	50.36	14.912	0.000022	0.00032	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.092	0.000	0.817	0.387	0.300	0.931	0.00002	0.00029
(DRAIN)																								
-	ED1 5373.20	-	1.00	50.36	14.962	0.000019	0.00027	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.304**	**0.000**	-	-	-	-	-	-
54	ED1 5373.00	3.000	1.00	50.36	14.965	0.000022	0.00032	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.092	0.000	0.817	0.388	0.300	0.931	0.00002	0.00030
(DRAIN)																								
-	ED1 5370.20	-	1.00	50.36	15.015	0.000020	0.00028	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.304**	**0.000**	-	-	-	-	-	-
55	ED1 5370.00	3.000	1.00	50.36	15.018	0.000023	0.00032	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.092	0.000	0.817	0.389	0.300	0.930	0.00002	0.00030
(DRAIN)																								
-	ED1 5367.20	-	1.00	50.36	15.068	0.000020	0.00028	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.305**	**0.000**	-	-	-	-	-	-
56	ED1 5367.00	3.000	1.00	50.36	15.071	0.000023	0.00032	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.093	0.000	0.817	0.389	0.300	0.930	0.00002	0.00030
(DRAIN)																								
-	ED1 5364.20	-	1.00	50.36	15.121	0.000020	0.00028	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.305**	**0.000**	-	-	-	-	-	-
57	ED1 5364.00	3.000	1.00	50.36	15.124	0.000023	0.00032	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.093	0.000	0.817	0.390	0.300	0.929	0.00002	0.00030
(DRAIN)																								
-	ED1 5361.20	-	1.00	50.36	15.173	0.000020	0.00028	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.305**	**0.000**	-	-	-	-	-	-
58	ED1 5361.00	3.000	1.00	50.36	15.177	0.000023	0.00032	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.093	0.000	0.817	0.390	0.300	0.928	0.00002	0.00030

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	**Depth 0.3m from Curb**	Bypass Flow	Intercept. Flow
	m		mm/hr	m	km^2	m^3/s					m	m	**m**	**m**	m^3/s	m^3/s
42	ED1 5359.500	1.00	50.36	15.2034	0.000023	0.00034	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.331**	**0.001**	0.00000	0.00034
(Scupper)																
43	ED1 5356.500	1.00	50.36	15.2562	0.000023	0.00035	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.331**	**0.001**	0.00000	0.00035
(Scupper)																
44	ED1 5353.500	1.00	50.36	15.3091	0.000023	0.00035	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.332**	**0.001**	0.00000	0.00035
(Scupper)																
45	ED1 5350.500	1.00	50.36	15.362	0.000023	0.00035	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.332**	**0.001**	0.00000	0.00035
(Scupper)																
46	ED1 5347.000	1.00	50.36	15.4237	0.000027	0.00042	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.356**	**0.001**	0.00000	0.00042
(Scupper)																
47	ED1 5343.500	1.00	50.36	15.4854	0.000027	0.00042	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.357**	**0.001**	0.00000	0.00042
(Scupper)																
48	ED1 5340.500	1.00	50.36	15.5383	0.000023	0.00035	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.334**	**0.001**	0.00000	0.00035
(Scupper)																
49	ED1 5337.500	1.00	50.36	15.5912	0.000023	0.00035	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.334**	**0.001**	0.00000	0.00035
(Scupper)																
50	ED1 5334.000	1.00	50.36	15.6529	0.000027	0.00043	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.359**	**0.001**	0.00000	0.00042
(Scupper)																
51	ED1 5330.500	1.00	50.36	15.7146	0.000028	0.00043	0.375	0.013	0.01910	0.02403	3.5	0.300	**0.370**	**0.001**	0.00001	0.00043
(Scupper)																
52	ED1 5327.500	1.00	50.36	15.7674	0.000024	0.00036	0.375	0.013	0.01729	0.02403	3.0	0.300	**0.369**	**0.001**	0.00000	0.00036
(Scupper)																
53	ED1 5324.500	1.00	50.36	15.8203	0.000024	0.00036	0.375	0.013	0.01548	0.02403	3.0	0.300	**0.396**	**0.001**	0.00001	0.00036
(Scupper)																
54	ED1 5321.000	1.00	50.36	15.882	0.000028	0.00044	0.375	0.013	0.01338	0.02403	3.5	0.300	**0.467**	**0.002**	0.00003	0.00041
(Scupper)																
55	ED1 5318.000	1.00	50.36	15.9349	0.000024	0.00038	0.375	0.013	0.01157	0.02403	3.0	0.300	**0.482**	**0.002**	0.00003	0.00035
(Scupper)																
56	ED1 5315.000	1.00	50.36	15.9878	0.000024	0.00038	0.375	0.013	0.00976	0.02403	3.0	0.300	**0.537**	**0.002**	0.00004	0.00034
(Scupper)																
57	ED1 5312.000	1.00	50.36	16.0407	0.000024	0.00039	0.375	0.013	0.00796	0.02403	3.0	0.300	**0.615**	**0.003**	0.00007	0.00032
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
58	ED1 5294.000	1.00	50.36	16.3033	0.000024	0.00073	0.375	0.013	-0.00286	0.02403	18.0	0.300	**1.470**	**0.003**	0.00040	0.00033
(Scupper)																
59	ED1 5291.000	1.00	50.36	16.2984	0.000024	0.00055	0.375	0.013	-0.00469	0.02403	3.0	0.300	**0.978**	**0.003**	0.00021	0.00035
(Scupper)																
60	ED1 5288.000	1.00	50.36	16.2935	0.000024	0.00046	0.375	0.013	-0.00650	0.02403	3.0	0.300	**0.746**	**0.003**	0.00012	0.00035
(Scupper)																
61	ED1 5285.000	1.00	50.36	16.2886	0.000024	0.00042	0.375	0.013	-0.00830	0.02403	3.0	0.300	**0.619**	**0.003**	0.00007	0.00035
(Scupper)																
62	ED1 5282.000	1.00	50.36	16.2836	0.000024	0.00040	0.375	0.013	-0.01011	0.02403	3.0	0.300	**0.538**	**0.002**	0.00005	0.00036
(Scupper)																
63	ED1 5279.000	1.00	50.36	16.2787	0.000024	0.00039	0.375	0.013	-0.01192	0.02383	3.0	0.300	**0.481**	**0.002**	0.00003	0.00036
(Scupper)																
64	ED1 5276.000	1.00	50.36	16.2738	0.000024	0.00039	0.375	0.013	-0.01372	0.02321	3.0	0.300	**0.439**	**0.002**	0.00002	0.00037
(Scupper)																
65	ED1 5273.000	1.00	50.36	16.2689	0.000024	0.00038	0.375	0.013	-0.01553	0.02260	3.0	0.300	**0.406**	**0.002**	0.00001	0.00037
(Scupper)																
66	ED1 5270.000	1.00	50.36	16.2639	0.000024	0.00037	0.375	0.013	-0.01733	0.02198	3.0	0.300	**0.379**	**0.001**	0.00001	0.00037
(Scupper)																
67	ED1 5267.000	1.00	50.36	16.259	0.000024	0.00037	0.375	0.013	-0.01914	0.02137	3.0	0.300	**0.357**	**0.001**	0.00000	0.00037

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	a	W	S_w	Q_w	Q< Q_w?	T	**Depth 0.3m from Curb**	K	L_T	L	E	Bypass Flow	Intercept. Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m^3/s		**m**	**m**		m	m		m^3/s	m^3/s
(DRAIN)																								
-	ED1 5358.20	-	1.00	50.36	15.226	0.000020	0.00028	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.306**	**0.000**	-	-	-	-	-	-
59	ED1 5358.00	3.000	1.00	50.36	15.230	0.000023	0.00032	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.093	0.000	0.817	0.391	0.300	0.928	0.00002	0.00030
(DRAIN)																								
-	ED1 5355.20	-	1.00	50.36	15.279	0.000020	0.00028	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.306**	**0.000**	-	-	-	-	-	-
60	ED1 5355.00	3.000	1.00	50.36	15.283	0.000023	0.00032	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.093	0.000	0.817	0.391	0.300	0.927	0.00002	0.00030
(DRAIN)																								
-	ED1 5352.20	-	1.00	50.36	15.332	0.000020	0.00028	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.307**	**0.000**	-	-	-	-	-	-
61	ED1 5352.00	3.000	1.00	50.36	15.336	0.000023	0.00033	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.093	0.000	0.817	0.392	0.300	0.926	0.00002	0.00030
(DRAIN)																								
-	ED1 5348.95	-	1.00	50.36	15.389	0.000024	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.328**	**0.001**	-	-	-	-	-	-
62	ED1 5348.75	3.250	1.00	50.36	15.393	0.000027	0.00038	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.099	0.000	0.817	0.419	0.300	0.896	0.00004	0.00034
(DRAIN)																								
-	ED1 5345.45	-	1.00	50.36	15.451	0.000024	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-
63	ED1 5345.25	3.500	1.00	50.36	15.455	0.000027	0.00038	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.099	0.000	0.817	0.421	0.300	0.894	0.00004	0.00034
(DRAIN)																								
-	ED1 5342.20	-	1.00	50.36	15.508	0.000020	0.00029	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.309**	**0.000**	-	-	-	-	-	-
64	ED1 5342.00	3.250	1.00	50.36	15.512	0.000023	0.00033	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.094	0.000	0.817	0.395	0.300	0.923	0.00003	0.00031
(DRAIN)																								
-	ED1 5339.20	-	1.00	50.36	15.561	0.000020	0.00029	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.308**	**0.000**	-	-	-	-	-	-
65	ED1 5339.00	3.000	1.00	50.36	15.565	0.000023	0.00033	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.094	0.000	0.817	0.395	0.300	0.924	0.00003	0.00030
(DRAIN)																								
-	ED1 5335.95	-	1.00	50.36	15.618	0.000024	0.00034	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.330**	**0.001**	-	-	-	-	-	-
66	ED1 5335.75	3.250	1.00	50.36	15.622	0.000027	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.099	0.000	0.817	0.422	0.300	0.893	0.00004	0.00035
(DRAIN)																								
-	ED1 5332.45	-	1.00	50.36	15.680	0.000024	0.00035	0.375	0.013	0.02000	0.02403	-	-	-	-	-	**0.331**	**0.001**	-	-	-	-	-	-
67	ED1 5332.25	3.500	1.00	50.36	15.684	0.000027	0.00039	0.375	0.013	0.02000	0.02403	0.038	0.300	0.1467	0.00736	YES	0.100	0.000	0.817	0.423	0.300	0.891	0.00004	0.00035
(DRAIN)																								
-	ED1 5329.20	-	1.00	50.36	15.737	0.000020	0.00029	0.375	0.013	0.01831	0.02403	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-
68	ED1 5329.00	3.250	1.00	50.36	15.741	0.000024	0.00034	0.375	0.013	0.01819	0.02403	0.038	0.300	0.1449	0.00721	YES	0.095	0.000	0.817	0.401	0.300	0.916	0.00003	0.00031
(DRAIN)																								
-	ED1 5326.20	-	1.00	50.36	15.790	0.000021	0.00029	0.375	0.013	0.01651	0.02403	-	-	-	-	-	**0.351**	**0.001**	-	-	-	-	-	-
69	ED1 5326.00	3.000	1.00	50.36	15.794	0.000024	0.00034	0.375	0.013	0.01639	0.02403	0.038	0.300	0.1431	0.00706	YES	0.096	0.000	0.817	0.405	0.300	0.912	0.00003	0.00031
(DRAIN)																								
-	ED1 5322.95	-	1.00	50.36	15.848	0.000025	0.00035	0.375	0.013	0.01455	0.02403	-	-	-	-	-	**0.408**	**0.002**	-	-	-	-	-	-
70	ED1 5322.75	3.250	1.00	50.36	15.851	0.000028	0.00040	0.375	0.013	0.01443	0.02403	0.038	0.300	0.1411	0.00690	YES	0.103	0.000	0.817	0.438	0.300	0.875	0.00005	0.00035
(DRAIN)																								
-	ED1 5319.70	-	1.00	50.36	15.905	0.000021	0.00032	0.375	0.013	0.01259	0.02403	-	-	-	-	-	**0.429**	**0.002**	-	-	-	-	-	-
71	ED1 5319.50	3.250	1.00	50.36	15.908	0.000024	0.00036	0.375	0.013	0.01247	0.02403	0.038	0.300	0.1391	0.00674	YES	0.101	0.000	0.817	0.425	0.300	0.890	0.00004	0.00032
(DRAIN)																								
-	ED1 5316.70	-	1.00	50.36	15.958	0.000021	0.00032	0.375	0.013	0.01079	0.02403	-	-	-	-	-	**0.473**	**0.002**	-	-	-	-	-	-
72	ED1 5316.50	3.000	1.00	50.36	15.961	0.000024	0.00037	0.375	0.013	0.01067	0.02403	0.038	0.300	0.1373	0.00659	YES	0.101	0.000	0.817	0.428	0.300	0.886	0.00004	0.00032
(DRAIN)																								
-	ED1 5313.70	-	1.00	50.36	16.011	0.000021	0.00034	0.375	0.013	0.00898	0.02403	-	-	-	-	-	**0.541**	**0.002**	-	-	-	-	-	-
73	ED1 5313.50	3.000	1.00	50.36	16.014	0.000024	0.00038	0.375	0.013	0.00886	0.02403	0.038	0.300	0.1355	0.00645	YES	0.104	0.000	0.817	0.440	0.300	0.873	0.00005	0.00033
(DRAIN)																								
-	ED1 5310.70	-	1.00	50.36	16.064	0.000021	0.00036	0.375	0.013	0.00717	0.02403	-	-	-	-	-	**0.638**	**0.002**	-	-	-	-	-	-
74	ED1 5310.50	3.000	1.00	50.36	16.067	0.000024	0.00040	0.375	0.013	0.00705	0.02403	0.038	0.300	0.1337	0.00631	YES	0.107	0.000	0.817	0.454	0.300	0.857	0.00006	0.00035
-	ED1 5307.70	-	1.00	50.36	16.116	0.000045	0.00069	0.375	0.013	0.00537	0.02403	-	-	-	-	-	**0.979**	**0.004**	-	-	-	-	-	-
75	ED1 5307.50	3.000	1.00	50.36	16.120	0.000048	0.00074	0.375	0.013	0.00525	0.02403	0.038	0.300	0.1319	0.00617	YES	0.135	0.000	0.817	0.590	0.300	0.721	0.00021	0.00053
-	ED1 5304.70	-	1.00	50.36	16.169	0.000045	0.00084	0.375	0.013	0.00356	0.02403	-	-	-	-	-	**1.361**	**0.004**	-	-	-	-	-	-
76	ED1 5304.50	3.000	1.00	50.36	16.173	0.000049	0.00089	0.375	0.013	0.00344	0.02403	0.038	0.300	0.1301	0.00602	YES	0.146	0.000	0.817	0.643	0.300	0.677	0.00029	0.00060
-	ED1 5301.70	-	1.00	50.36	16.222	0.000045	0.00093	0.375	0.013	0.00175	0.02403	-	-	-	-	-	**2.194**	**0.003**	-	-	-	-	-	-
77	ED1 5301.50	3.000	1.00	50.36	16.226	0.000049	0.00097	0.375	0.013	0.00163	0.02403	0.038	0.300	0.1283	0.00589	YES	0.153	0.000	0.817	0.673	0.300	0.654	0.00034	0.00064
-	ED1 5298.70	-	1.00	50.36	16.275	0.000046	**0.00098**	0.375	0.013	-0.00005	0.02403	-	-	-	-	-	**20.128**	**0.001**	-	-	-	-	-	-
78	ED1 5298.50	3.000	1.00	50.36	16.279	0.000049	0.00103	0.375	0.013	-0.00017	0.02403	0.038	0.300	0.1268	0.00577	YES	0.157	0.000	0.817	0.693	0.300	0.640	0.00037	0.00066
-	ED1 5295.70	-	1.00	50.36	16.306	0.000046	0.00101	0.375	0.013	-0.00186	0.02403	-	-	-	-	-	**2.188**	**0.004**	-	-	-	-	-	-
79	ED1 5295.50	3.000	1.00	50.36	16.306	0.000049	0.00106	0.375	0.013	-0.00198	0.02403	0.038	0.300	0.1286	0.00591	YES	0.157	0.000	0.817	0.697	0.300	0.637	0.00038	0.00068
(DRAIN)																								
-	ED1 5292.70	-	1.00	50.36	16.301	0.000021	0.00070	0.375	0.013	-0.00367	0.02403	-	-	-	-	-	**1.243**	**0.003**	-	-	-	-	-	-
80	ED1 5292.50	3.000	1.00	50.36	16.301	0.000024	0.00074	0.375	0.013	-0.00379	0.02403	0.038	0.300	0.1305	0.00605	YES	0.137	0.000	0.817	0.595	0.300	0.717	0.00021	0.00053
(DRAIN)																								
-	ED1 5289.70	-	1.00	50.36	16.296	0.000021	0.00051	0.375	0.013	-0.00547	0.02403	-	-	-	-	-	**0.860**	**0.003**	-	-	-	-	-	-
81	ED1 5289.50	3.000	1.00	50.36	16.296	0.000024	0.00055	0.375	0.013	-0.00559	0.02403	0.038	0.300	0.1323	0.00619	YES	0.121	0.000	0.817	0.522	0.300	0.786	0.00012	0.00043
(DRAIN)																								
-	ED1 5286.70	-	1.00	50.36	16.291	0.000021	0.00042	0.375	0.013	-0.00728	0.02403	-	-	-	-	-	**0.668**	**0.003**	-	-	-	-	-	-
82	ED1 5286.50	3.000	1.00	50.36	16.291	0.000024	0.00046	0.375	0.013	-0.00740	0.02403	0.038	0.300	0.1341	0.00633	YES	0.112	0.000	0.817	0.480	0.300	0.829	0.00008	0.00038
(DRAIN)																								
-	ED1 5283.70	-	1.00	50.36	16.286	0.000021	0.00037	0.375	0.013	-0.00908	0.02403	-	-	-	-	-	**0.557**	**0.002**	-	-	-	-	-	-
83	ED1 5283.50	3.000	1.00	50.36	16.286	0.000024	0.00042	0.375	0.013	-0.00921	0.02403	0.038	0.300	0.1359	0.00648	YES	0.107	0.000	0.817	0.456	0.300	0.855	0.00006	0.00036
(DRAIN)																								
-	ED1 5280.70	-	1.00	50.36	16.282	0.000021	0.00034	0.375	0.013	-0.01089	0.02403	-	-	-	-	-	**0.483**	**0.002**	-	-	-	-	-	-
84	ED1 5280.50	3.000	1.00	50.36	16.281	0.000024	0.00039	0.375	0.013	-0.01101	0.02403	0.038	0.300	0.1377	0.00662	YES	0.104	0.000	0.817	0.440	0.300	0.873	0.00005	0.00034
(DRAIN)																								
-	ED1 5277.70	-	1.00	50.36	16.277	0.000021	0.00033	0.375	0.013	-0.01270	0.02356	-	-	-	-	-	**0.433**	**0.002**	-	-	-	-	-	-
85	ED1 5277.50	3.000	1.00	50.36	16.276	0.000024	0.00037	0.375	0.013	-0.01282	0.02352	0.038	0.300	0.1395	0.00669	YES	0.102	0.000	0.817	0.426	0.300	0.889	0.00004	0.00033
(DRAIN)																								
-	ED1 5274.70	-	1.00	50.36	16.272	0.000021	0.00032	0.375	0.013	-0.01450	0.02295	-	-	-	-	-	**0.395**	**0.001**	-	-	-	-	-	-
86	ED1 5274.50	3.000	1.00	50.36	16.271	0.000024	0.00036	0.375	0.013	-0.01462	0.02290	0.038	0.300	0.1413	0.00675	YES	0.100	0.000	0.817	0.414	0.300	0.902	0.00004	0.00033
(DRAIN)																								
-	ED1 5271.70	-	1.00	50.36	16.267	0.000021	0.00031	0.375	0.013	-0.01631	0.02233	-	-	-	-	-	**0.365**	**0.001**	-	-	-	-	-	-
87	ED1 5271.50	3.000	1.00	50.36	16.266	0.000024	0.00035	0.375	0.013	-0.01643	0.02229	0.038	0.300	0.1431	0.00680	YES	0.099	0.000	0.817	0.404	0.300	0.914	0.00003	0.00032
(DRAIN)																								
-	ED1 5268.70	-	1.00	50.36	16.262	0.000021	0.00030	0.375	0.013	-0.01812	0.02172	-	-	-	-	-	**0.342**	**0.001**	-	-	-	-	-	-
88	ED1 5268.50	3.000	1.00	50.36	16.261	0.000024	0.00035	0.375	0.013	-0.01824	0.02168	0.038	0.300	0.1449	0.00685	YES	0.098	0.000	0.817	0.395	0.300	0.923	0.00003	0.00032
(DRAIN)																								
-	ED1 5265.70	-	1.00	50.36	16.257	0.000021	0.00030	0.375	0.013	-0.01992	0.02110	-	-	-	-	-	**0.323**	**0.000**	-	-	-	-	-	-

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km²	Q m³/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m³/s	Intercept Flow m³/s
(Scupper)																
68	ED1 5264.000	1.00	50.36	16.2541	0.000024	0.00037	0.375	0.013	-0.02095	0.02076	3.0	0.300	**0.338**	**0.001**	0.00000	0.00037
(Scupper)																
69	ED1 5261.000	1.00	50.36	16.2491	0.000024	0.00036	0.375	0.013	-0.02275	0.02014	3.0	0.300	**0.322**	**0.001**	0.00000	0.00036
(Scupper)																
70	ED1 5257.000	1.00	50.36	16.2426	0.000032	0.00051	0.375	0.013	-0.02516	0.01933	4.0	0.300	**0.345**	**0.001**	0.00000	0.00050
(Scupper)																
71	ED1 5254.000	1.00	50.36	16.2377	0.000024	0.00036	0.375	0.013	-0.02697	0.01871	3.0	0.300	**0.292**	**0.000**	0.00000	0.00036
(Scupper)																
(Scupper)																
(Scupper)																
72	ED1 5240.500	1.00	50.36	16.2155	0.000036	0.00068	0.375	0.013	-0.03000	0.01595	13.5	0.300	**0.357**	**0.002**	0.00001	0.00067
(Scupper)																
73	ED1 5237.500	1.00	50.36	16.2106	0.000024	0.00035	0.375	0.013	-0.03000	0.01534	3.0	0.300	**0.281**	**0.000**	0.00000	0.00035
(Scupper)																
74	ED1 5234.000	1.00	50.36	16.2048	0.000028	0.00041	0.375	0.013	-0.03000	0.01462	3.5	0.300	**0.302**	**0.000**	0.00000	0.00041
(Scupper)																
75	ED1 5231.000	1.00	50.36	16.1999	0.000024	0.00035	0.375	0.013	-0.03000	0.01401	3.0	0.300	**0.285**	**0.000**	0.00000	0.00035
(Scupper)																
76	ED1 5228.000	1.00	50.36	16.195	0.000024	0.00035	0.375	0.013	-0.03000	0.01339	3.0	0.300	**0.287**	**0.000**	0.00000	0.00035
(Scupper)																
77	ED1 5225.000	1.00	50.36	16.19	0.000024	0.00034	0.375	0.013	-0.03000	0.01278	3.0	0.300	**0.289**	**0.000**	0.00000	0.00034
78	ED1 5219.500	1.00	50.36	16.181	0.000089	0.00125	0.375	0.013	-0.03000	0.01165	5.5	0.300	**0.477**	**0.005**	0.00009	0.00117
(Scupper)																
79	ED1 5216.500	1.00	50.36	16.181	0.000024	0.00035	0.375	0.013	-0.03000	0.01104	3.0	0.300	**0.299**	**0.000**	0.00000	0.00035
(Scupper)																
80	ED1 5213.500	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.01043	3.0	0.300	**0.299**	**0.000**	0.00000	0.00034
(Scupper)																
81	ED1 5210.500	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00981	3.0	0.300	**0.303**	**0.000**	0.00000	0.00034
(Scupper)																
82	ED1 5207.500	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00920	3.0	0.300	**0.307**	**0.000**	0.00000	0.00034
(Scupper)																
83	ED1 5204.500	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00859	3.0	0.300	**0.311**	**0.000**	0.00000	0.00034
(Scupper)																
84	ED1 5201.500	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00797	3.0	0.300	**0.315**	**0.000**	0.00000	0.00034
(Scupper)																
85	ED1 5198.500	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00736	3.0	0.300	**0.320**	**0.001**	0.00000	0.00034
(Scupper)																
86	ED1 5195.500	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00674	3.0	0.300	**0.325**	**0.001**	0.00000	0.00034
(Scupper)																
87	ED1 5192.500	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00613	3.0	0.300	**0.331**	**0.001**	0.00000	0.00034
(Scupper)																
(Scupper)																
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(Scupper)																
(Scupper)	-															

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km²	Q m³/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m³/s	Q< Q_w?	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m³/s	Intercept Flow m³/s
89	ED1 5265.50	3.000	1.00	50.36	16.257	0.000024	0.00035	0.375	0.013	-0.02004	0.02106	0.038	0.300	0.1467	0.00689	YES	0.098	0.000	0.817	0.387	0.300	0.932	0.00002	0.00032
(DRAIN)																								
-	ED1 5262.70	-	1.00	50.36	16.252	0.000021	0.00030	0.375	0.013	-0.02173	0.02049	-	-	-	-	-	**0.307**	**0.000**	-	-	-	-	-	-
90	ED1 5262.50	3.000	1.00	50.36	16.252	0.000024	0.00034	0.375	0.013	-0.02185	0.02045	0.038	0.300	0.1485	0.00693	YES	0.097	0.000	0.817	0.380	0.300	0.939	0.00002	0.00032
(DRAIN)																								
-	ED1 5259.20	-	1.00	50.36	16.246	0.000029	0.00041	0.375	0.013	-0.02384	0.01978	-	-	-	-	-	**0.329**	**0.001**	-	-	-	-	-	-
91	ED1 5259.00	3.500	1.00	50.36	16.246	0.000032	0.00046	0.375	0.013	-0.02396	0.01973	0.038	0.300	0.1506	0.00697	YES	0.108	0.000	0.817	0.420	0.300	0.895	0.00005	0.00041
(DRAIN)																								
-	ED1 5255.70	-	1.00	50.36	16.240	0.000021	0.00030	0.375	0.013	-0.02555	0.01906	-	-	-	-	-	**0.279**	**0.000**	-	-	-	-	-	-
92	ED1 5255.50	3.500	1.00	50.36	16.240	0.000024	0.00035	0.375	0.013	-0.02607	0.01902	0.038	0.300	0.1527	0.00700	YES	0.097	0.000	0.817	0.366	0.300	0.954	0.00002	0.00033
(DRAIN)																								
-	ED1 5251.95	-	1.00	50.36	16.234	0.000033	0.00047	0.375	0.013	-0.02820	0.01829	-	-	-	-	-	**0.315**	**0.000**	-	-	-	-	-	-
93	ED1 5251.75	3.750	1.00	50.36	16.234	0.000037	0.00052	0.375	0.013	-0.02832	0.01825	0.038	0.300	0.1550	0.00703	YES	0.113	0.000	0.817	0.424	0.300	0.891	0.00006	0.00046
-	ED1 5248.95	-	1.00	50.36	16.229	0.000045	0.00070	0.375	0.013	-0.03000	0.01768	-	-	-	-	-	**0.364**	**0.002**	-	-	-	-	-	-
94	ED1 5248.75	3.000	1.00	50.36	16.229	0.000049	0.00074	0.375	0.013	-0.03000	0.01764	0.038	0.300	0.1567	0.00703	YES	0.129	0.000	0.817	0.486	0.300	0.823	0.00013	0.00061
-	ED1 5245.95	-	1.00	50.36	16.224	0.000045	0.00077	0.375	0.013	-0.03000	0.01706	-	-	-	-	-	**0.370**	**0.002**	-	-	-	-	-	-
95	ED1 5245.75	3.000	1.00	50.36	16.224	0.000049	0.00082	0.375	0.013	-0.03000	0.01702	0.038	0.300	0.1567	0.00691	YES	0.135	0.000	0.817	0.501	0.300	0.807	0.00016	0.00066
-	ED1 5242.95	-	1.00	50.36	16.220	0.000045	0.00080	0.375	0.013	-0.03000	0.01645	-	-	-	-	-	**0.378**	**0.002**	-	-	-	-	-	-
96	ED1 5242.75	3.000	1.00	50.36	16.219	0.000049	0.00084	0.375	0.013	-0.03000	0.01641	0.038	0.300	0.1567	0.00679	YES	0.137	0.000	0.817	0.502	0.300	0.806	0.00016	0.00068
(DRAIN)																								
-	ED1 5239.20	-	1.00	50.36	16.213	0.000021	0.00030	0.375	0.013	-0.03000	0.01568	-	-	-	-	-	**0.265**	**0.000**	-	-	-	-	-	-
97	ED1 5239.00	3.750	1.00	50.36	16.213	0.000024	0.00035	0.375	0.013	-0.03000	0.01564	0.038	0.300	0.1567	0.00663	YES	0.099	0.000	0.817	0.341	0.300	0.978	0.00001	0.00034
(DRAIN)																								
-	ED1 5235.95	-	1.00	50.36	16.208	0.000025	0.00035	0.375	0.013	-0.03000	0.01502	-	-	-	-	-	**0.283**	**0.000**	-	-	-	-	-	-
98	ED1 5235.75	3.250	1.00	50.36	16.208	0.000028	0.00040	0.375	0.013	-0.03000	0.01498	0.038	0.300	0.1567	0.00648	YES	0.106	0.000	0.817	0.357	0.300	0.963	0.00001	0.00039
(DRAIN)																								
-	ED1 5232.70	-	1.00	50.36	16.203	0.000021	0.00030	0.375	0.013	-0.03000	0.01435	-	-	-	-	-	**0.267**	**0.000**	-	-	-	-	-	-
99	ED1 5232.50	3.250	1.00	50.36	16.202	0.000024	0.00034	0.375	0.013	-0.03000	0.01431	0.038	0.300	0.1567	0.00634	YES	0.100	0.000	0.817	0.330	0.300	0.987	0.00000	0.00034
(DRAIN)																								
-	ED1 5229.70	-	1.00	50.36	16.198	0.000021	0.00030	0.375	0.013	-0.03000	0.01374	-	-	-	-	-	**0.270**	**0.000**	-	-	-	-	-	-
100	ED1 5229.50	3.000	1.00	50.36	16.197	0.000024	0.00034	0.375	0.013	-0.03000	0.01370	0.038	0.300	0.1567	0.00620	YES	0.101	0.000	0.817	0.325	0.300	0.990	0.00000	0.00034
(DRAIN)																								
-	ED1 5226.70	-	1.00	50.36	16.193	0.000021	0.00030	0.375	0.013	-0.03000	0.01313	-	-	-	-	-	**0.272**	**0.000**	-	-	-	-	-	-
101	ED1 5226.50	3.000	1.00	50.36	16.192	0.000024	0.00034	0.375	0.013	-0.03000	0.01309	0.038	0.300	0.1567	0.00606	YES	0.102	0.000	0.817	0.321	0.300	0.993	0.00000	0.00034
(DRAIN)																								
(DRAIN)																								
-	ED1 5218.20	-	1.00	50.36	16.181	0.000021	0.00039	0.375	0.013	-0.03000	0.01139	-	-	-	-	-	**0.308**	**0.000**	-	-	-	-	-	-
102	ED1 5218.00	8.500	1.00	50.36	16.181	0.000024	0.00043	0.375	0.013	-0.03000	0.01135	0.038	0.300	0.1567	0.00564	YES	0.114	0.000	0.817	0.339	0.300	0.980	0.00001	0.00042
(DRAIN)																								
-	ED1 5215.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.01077	-	-	-	-	-	**0.282**	**0.000**	-	-	-	-	-	-
103	ED1 5215.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.01073	0.038	0.300	0.1567	0.00549	YES	0.106	0.000	0.817	0.302	0.300	1.000	0.00000	0.00034
(DRAIN)																								
-	ED1 5212.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.01016	-	-	-	-	-	**0.285**	**0.000**	-	-	-	-	-	-
104	ED1 5212.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.01012	0.038	0.300	0.1567	0.00533	YES	0.107	0.000	0.817	0.297	0.300	1.000	0.00000	0.00034
(DRAIN)																								
-	ED1 5209.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.00955	-	-	-	-	-	**0.288**	**0.000**	-	-	-	-	-	-
105	ED1 5209.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00951	0.038	0.300	0.1567	0.00516	YES	0.108	0.000	0.817	0.292	0.300	1.000	0.00000	0.00034
(DRAIN)																								
-	ED1 5206.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.00893	-	-	-	-	-	**0.292**	**0.000**	-	-	-	-	-	-
106	ED1 5206.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00889	0.038	0.300	0.1567	0.00500	YES	0.110	0.000	0.817	0.286	0.300	1.000	0.00000	0.00034
(DRAIN)																								
-	ED1 5203.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.00832	-	-	-	-	-	**0.296**	**0.000**	-	-	-	-	-	-
107	ED1 5203.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00828	0.038	0.300	0.1567	0.00482	YES	0.111	0.000	0.817	0.280	0.300	1.000	0.00000	0.00034
(DRAIN)																								
-	ED1 5200.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.00771	-	-	-	-	-	**0.300**	**0.000**	-	-	-	-	-	-
108	ED1 5200.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00767	0.038	0.300	0.1567	0.00464	YES	0.113	0.000	0.817	0.273	0.300	1.000	0.00000	0.00034
(DRAIN)																								
-	ED1 5197.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.00709	-	-	-	-	-	**0.305**	**0.000**	-	-	-	-	-	-
109	ED1 5197.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00705	0.038	0.300	0.1567	0.00445	YES	0.115	0.000	0.817	0.267	0.300	1.000	0.00000	0.00034
(DRAIN)																								
-	ED1 5194.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.00648	-	-	-	-	-	**0.310**	**0.000**	-	-	-	-	-	-
110	ED1 5194.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00644	0.038	0.300	0.1567	0.00425	YES	0.117	0.000	0.817	0.259	0.300	1.000	0.00000	0.00034
(DRAIN)																								
-	ED1 5191.20	-	1.00	50.36	16.181	0.000021	0.00030	0.375	0.013	-0.03000	0.00586	-	-	-	-	-	**0.316**	**0.000**	-	-	-	-	-	-
111	ED1 5191.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00582	0.038	0.300	0.1567	0.00404	YES	0.119	0.000	0.817	0.252	0.300	1.000	0.00000	0.00034
-	ED1 5188.20	-	1.00	50.36	16.181	0.000045	0.00064	0.375	0.013	-0.03000	0.00525	-	-	-	-	-	**0.430**	**0.004**	-	-	-	-	-	-
112	ED1 5188.00	3.000	1.00	50.36	16.181	0.000049	0.00068	0.375	0.013	-0.03000	0.00521	0.038	0.300	0.1567	0.00382	YES	0.157	0.000	0.817	0.326	0.300	0.990	0.00001	0.00068
-	ED1 5185.20	-	1.00	50.36	16.181	0.000045	0.00065	0.375	0.013	-0.03000	0.00464	-	-	-	-	-	**0.442**	**0.004**	-	-	-	-	-	-
113	ED1 5185.00	3.000	1.00	50.36	16.181	0.000049	0.00069	0.375	0.013	-0.03000	0.00460	0.038	0.300	0.1567	0.00359	YES	0.162	0.000	0.817	0.315	0.300	0.996	0.00000	0.00069
-	ED1 5182.20	-	1.00	50.36	16.181	0.000045	0.00064	0.375	0.013	-0.03000	0.00402	-	-	-	-	-	**0.453**	**0.005**	-	-	-	-	-	-
114	ED1 5182.00	3.000	1.00	50.36	16.181	0.000049	0.00069	0.375	0.013	-0.03000	0.00398	0.038	0.300	0.1567	0.00334	YES	0.166	0.000	0.817	0.301	0.300	1.000	0.00000	0.00069
-	ED1 5179.20	-	1.00	50.36	16.181	0.000045	0.00064	0.375	0.013	-0.03000	0.00341	-	-	-	-	-	**0.467**	**0.005**	-	-	-	-	-	-
115	ED1 5179.00	3.000	1.00	50.36	16.181	0.000049	0.00068	0.375	0.013	-0.03000	0.00337	0.038	0.300	0.1567	0.00307	YES	0.171	0.000	0.817	0.286	0.300	1.000	0.00000	0.00068
-	ED1 5176.20	-	1.00	50.36	16.181	0.000045	0.00064	0.375	0.013	-0.03000	0.00280	-	-	-	-	-	**0.484**	**0.006**	-	-	-	-	-	-
Low Point (116)	ED1 5176.00	3.000	1.00	50.36	16.181	0.000049	**0.00068**	0.375	0.013	-0.03000	0.00276	-	-	-	-	-	-	-	-	-	-	-	-	-

Find location of Low Point at the North Curb:

Station		S_x	S	Elevation at Profile	Elevation at N. Curb
ED1 5176.20		-0.03000	0.00280	50.73611	50.4816
ED1 5176.10		-0.03000	0.00278	50.73783	50.4813
ED1 5176.00	**Low Point at North Curb**	-0.03000	0.00276	50.73755	**50.4811**
ED1 5175.90		-0.02994	0.00274	50.73728	50.4813
ED1 5175.80		-0.02988	0.00271	50.73701	50.4815
ED1 5170.00		-0.02647	0.00153	50.72470	50.4984
ED1 5162.53	Low Point on Profile	-0.02208	0.00000	50.71900	50.5302
ED1 5160.00		-0.02059	-0.00052	50.71965	50.5436

The Low Point at the north curb occurs at a location where a drain would conflict with a stringer. Therefore, a scupper is provided at the Low Point.

Cross slope transition - There are no drains near 0% cross slope, but check amount of water flowing across deck.

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S	T m
BB	ED1 5120								0.00294		
-	ED1 5124	1.00	50.36	12.586	0.0000503	0.00071	0.375	0.016	0.00059	-0.00788	**5.2348**
-	ED1 5125	1.00	50.36	12.586	0.0000629	**0.00089**	0.375	0.016	0.00000	-0.00768	**#DIV/0!**
-	ED1 5126	1.00	50.36	12.586	0.0000755	0.00106	0.375	0.016	-0.00059	-0.00747	**6.1557**

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S	Spacing m	Shoulder Width m	T m	Depth 0.3m from Curb m	Bypass Flow m^3/s	Intercept Flow m^3/s
BB	ED1 5120															
100	ED1 5136	1.00	50.36	12.586	0.0002014	0.00284	0.375	0.016	-0.00647	-0.00543	16	0.300	**2.1095**	**0.0117**	0.00189	0.00095
(Scupper)																
99	ED1 5139	1.00	50.36	12.586	0.0000189	0.00205	0.375	0.016	-0.00824	-0.00481	3	0.300	**1.6418**	**0.0111**	0.00120	0.00085
98	ED1 5144	1.00	50.36	16.181	0.0000809	0.00234	0.375	0.016	-0.01118	-0.00379	5	0.300	**1.4905**	**0.0133**	0.00128	0.00105
(Scupper)																
97	ED1 5147	1.00	50.36	16.181	0.0000243	0.00056	0.375	0.016	-0.01294	-0.00318	3	0.300	**0.8232**	**0.0068**	0.00017	0.00039
(Scupper)																
96	ED1 5150	1.00	50.36	16.181	0.0000243	0.00034	0.375	0.016	-0.01471	-0.00256	3	0.300	**0.6574**	**0.0053**	0.00007	0.00027
(Scupper)																
95	ED1 5153	1.00	50.36	16.181	0.0000243	0.00034	0.375	0.016	-0.01647	-0.00195	3	0.300	**0.6447**	**0.0057**	0.00006	0.00028
(Scupper)																
94	ED1 5156	1.00	50.36	16.181	0.0000243	0.00034	0.375	0.016	-0.01824	-0.00134	3	0.300	**0.6494**	**0.0064**	0.00007	0.00028
(Scupper)																
93	ED1 5159	1.00	50.36	16.181	0.0000243	0.00034	0.375	0.016	-0.02000	-0.00072	3	0.300	**0.6879**	**0.0078**	0.00007	0.00027
(Scupper)																
*92	ED1 5162	1.00	50.36	16.181	0.0000243	0.00081	0.375	0.016	-0.02176	-0.00011	3	0.300	**1.2877**	**0.0215**	0.00040	0.00041
(Scupper)																
91	ED1 5165	1.00	50.36	16.181	0.0000243	0.00034	0.375	0.016	-0.02353	0.00051	3	0.300	**0.6645**	**0.0086**	0.00007	0.00027
(Scupper)																
90	ED1 5168	1.00	50.36	16.181	0.0000243	0.00034	0.375	0.016	-0.02529	0.00112	3	0.300	**0.5472**	**0.0063**	0.00004	0.00030
(Scupper)																
89	ED1 5171	1.00	50.36	16.181	0.0000243	0.00034	0.375	0.016	-0.02706	0.00173	3	0.300	**0.4833**	**0.0050**	0.00003	0.00032
(Scupper)																
88	ED1 5174	1.00	50.36	16.181	0.0000243	0.00034	0.375	0.016	-0.02882	0.00235	3	0.300	**0.4389**	**0.0040**	0.00002	0.00033
(Scupper)																

Total Flow at Low Point = 0.00116 m^3/s

Check scupper at low point by hand.

*Note: The flow demand for Drain 92 contains the bypass flow coming from the EDR1 ramp. See EDR1 spreadsheet for origin of value:

EDR1 Bypass = 0.00047 m^3/sec

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	a m	W m	S_w	Q_w m^3/s	Q< Q_w?	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept Flow m^3/s
(DRAIN)																								
-	ED1 5137.30	-	1.00	50.36	12.586	0.000016	0.00212	0.375	0.015	-0.00724	-0.00516	-	-	-	-	-	**1.736**	**0.010**	-	-	-	-	-	-
127	ED1 5137.50	-	1.00	50.36	12.586	0.000019	0.00215	0.375	0.015	-0.00735	-0.00512	-	-	-	-	-	**1.732**	**0.011**	0.817	3.015	0.300	0.172	0.00178	0.00037
(DRAIN)																								
(DRAIN)																								
-	ED1 5145.30	-	1.00	50.36	16.181	0.000021	0.00158	0.375	0.013	-0.01194	-0.00352	-	-	-	-	-	**1.158**	**0.010**	-	-	-	-	-	-
126	ED1 5145.50	8.000	1.00	50.36	16.181	0.000024	0.00163	0.375	0.013	-0.01206	-0.00348	0.038	0.300	0.1387	0.00255	YES	**0.253**	0.000	0.817	0.446	0.300	0.865	0.00022	0.00141
(DRAIN)																								
-	ED1 5148.30	-	1.00	50.36	16.181	0.000021	0.00046	0.375	0.013	-0.01371	-0.00291	-	-	-	-	-	**0.696**	**0.005**	-	-	-	-	-	-
125	ED1 5148.50	3.000	1.00	50.36	16.181	0.000024	0.00051	0.375	0.013	-0.01382	-0.00287	0.038	0.300	0.1405	0.00237	YES	**0.169**	0.000	0.817	0.257	0.300	1.000	0.00000	0.00051
(DRAIN)																								
-	ED1 5151.30	-	1.00	50.36	16.181	0.000021	0.00036	0.375	0.013	-0.01547	-0.00230	-	-	-	-	-	**0.615**	**0.005**	-	-	-	-	-	-
124	ED1 5151.50	3.000	1.00	50.36	16.181	0.000024	0.00041	0.375	0.013	-0.01559	-0.00226	0.038	0.300	0.1423	0.00214	YES	**0.161**	0.000	0.817	0.216	0.300	1.000	0.00000	0.00041
(DRAIN)																								
-	ED1 5154.30	-	1.00	50.36	16.181	0.000021	0.00036	0.375	0.013	-0.01724	-0.00168	-	-	-	-	-	**0.608**	**0.005**	-	-	-	-	-	-
123	ED1 5154.50	3.000	1.00	50.36	16.181	0.000024	0.00041	0.375	0.013	-0.01735	-0.00164	0.038	0.300	0.1440	0.00187	YES	**0.169**	0.000	0.817	0.195	0.300	1.000	0.00000	0.00041
(DRAIN)																								
-	ED1 5157.30	-	1.00	50.36	16.181	0.000021	0.00036	0.375	0.013	-0.01900	-0.00107	-	-	-	-	-	**0.624**	**0.006**	-	-	-	-	-	-
122	ED1 5157.50	3.000	1.00	50.36	16.181	0.000024	0.00041	0.375	0.013	-0.01912	-0.00103	0.038	0.300	0.1458	0.00151	YES	**0.184**	0.000	0.817	0.168	0.300	1.000	0.00000	0.00041
(DRAIN)																								
-	ED1 5160.30	-	1.00	50.36	16.181	0.000021	0.00037	0.375	0.013	-0.02076	-0.00046	-	-	-	-	-	**0.698**	**0.008**	-	-	-	-	-	-
121	ED1 5160.50	3.000	1.00	50.36	16.181	0.000024	0.00042	0.375	0.013	-0.02088	-0.00042	0.038	0.300	0.1475	0.00098	YES	**0.218**	0.000	0.817	0.128	0.300	1.000	0.00000	0.00042
(DRAIN)																								
-	ED1 5163.30	-	1.00	50.36	16.181	0.000021	0.00070	0.375	0.013	-0.02253	0.00016	-	-	-	-	-	**1.026**	**0.016**	-	-	-	-	-	-
120	ED1 5163.50	3.000	1.00	50.36	16.181	0.000024	0.00074	0.375	0.013	-0.02265	0.00020	0.038	0.300	0.1493	0.00069	NO	**0.309**	0.000	0.817	0.130	0.300	1.000	0.00000	0.00074
(DRAIN)																								
-	ED1 5166.30	-	1.00	50.36	16.181	0.000021	0.00037	0.375	0.013	-0.02429	0.00077	-	-	-	-	-	**0.571**	**0.007**	-	-	-	-	-	-
119	ED1 5166.50	3.000	1.00	50.36	16.181	0.000024	0.00041	0.375	0.013	-0.02441	0.00061	0.038	0.300	0.1511	0.00142	YES	**0.188**	0.000	0.817	0.154	0.300	1.000	0.00000	0.00041
(DRAIN)																								
-	ED1 5169.30	-	1.00	50.36	16.181	0.000021	0.00034	0.375	0.013	-0.02606	0.00138	-	-	-	-	-	**0.475**	**0.005**	-	-	-	-	-	-
118	ED1 5169.50	3.000	1.00	50.36	16.181	0.000024	0.00038	0.375	0.013	-0.02618	0.00143	0.038	0.300	0.1528	0.00192	YES	**0.164**	0.000	0.817	0.176	0.300	1.000	0.00000	0.00038
(DRAIN)																								
-	ED1 5172.30	-	1.00	50.36	16.181	0.000021	0.00032	0.375	0.013	-0.02782	0.00200	-	-	-	-	-	**0.418**	**0.003**	-	-	-	-	-	-
117	ED1 5172.50	3.000	1.00	50.36	16.181	0.000024	0.00037	0.375	0.013	-0.02794	0.00204	0.038	0.300	0.1546	0.00234	YES	**0.150**	0.000	0.817	0.191	0.300	1.000	0.00000	0.00037
(DRAIN)																								
-	ED1 5175.80	-	1.00	50.36	16.181	0.000029	0.00043	0.375	0.013	-0.02988	0.00271	-	-	-	-	-	**0.420**	**0.004**	-	-	-	-	-	-
Low Point (116)	ED1 5176.00	3.500	1.00	50.36	16.181	0.000032	**0.00047**	-	-	-0.03000	-	0.038	0.300	0.1567	-	-	-	-	-	-	-	-	-	-

ED1 Line Drainage

Drains and Scuppers with Uniform Cross Slope - 25 Year Intensity

Use Drain Type D-3, modified to 300 mm width. Use minimum drain spacing of 3.0 m.

Place 300mm long scuppers between drains at minimum spacing of 3.0 m on center, and at least 1.5 m from a drain.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "ED1" 52+98 and "ED1" 51+25. The amount of flow crossing the deck is 0.00350 m^3/s and 0.00107 m^3/s respectively. BDA p. 17-3 advises that a maximum of 0.003 m3/s flow across the deck. Therefore, this configuration is nearly adequate and adequate, respectively.

Drains:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	ED1 5551.837	1.00	60.56	13.84	0.000000	0.00000	0.375	0.013	0.00440	0.01167	n/a	0.300	**0.000**	**0.000**	0.00000	n/a
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
1	ED1 5519.500	1.00	60.56	13.84	0.000021	0.00531	0.375	0.013	0.00350	0.01410	32.3	0.300	**3.030**	**0.010**	0.00402	0.00129
(Scupper)																
2	ED1 5516.000	1.00	60.56	13.84	0.000028	0.00460	0.375	0.013	0.00350	0.01437	3.5	0.300	**2.859**	**0.009**	0.00342	0.00118
(Scupper)																
3	ED1 5513.000	1.00	60.56	13.84	0.000021	0.00390	0.375	0.013	0.00350	0.01461	3.0	0.300	**2.680**	**0.008**	0.00284	0.00106
(Scupper)																
4	ED1 5508.000	1.00	60.56	13.84	0.000035	0.00380	0.375	0.013	0.00350	0.01499	5.0	0.300	**2.642**	**0.008**	0.00276	0.00104
(Scupper)																
5	ED1 5505.000	1.00	60.56	13.84	0.000021	0.00326	0.375	0.013	0.00350	0.01522	3.0	0.300	**2.487**	**0.008**	0.00231	0.00095
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
6	ED1 5487.000	1.00	60.56	13.84	0.000021	0.00513	0.375	0.013	0.00790	0.01661	18.0	0.300	**1.744**	**0.011**	0.00310	0.00203
(Scupper)																
7	ED1 5484.000	1.00	60.56	13.84	0.000021	0.00345	0.375	0.013	0.00955	0.01685	3.0	0.300	**1.331**	**0.010**	0.00175	0.00171
(Scupper)																
8	ED1 5481.000	1.00	60.56	13.84	0.000021	0.00216	0.375	0.013	0.01120	0.01708	3.0	0.300	**1.009**	**0.008**	0.00084	0.00132
(Scupper)																
9	ED1 5478.000	1.00	60.56	13.84	0.000021	0.00132	0.375	0.013	0.01285	0.01731	3.0	0.300	**0.768**	**0.006**	0.00035	0.00097
(Scupper)																
10	ED1 5475.000	1.00	60.56	13.84	0.000021	0.00088	0.375	0.013	0.01450	0.01754	3.0	0.300	**0.610**	**0.004**	0.00015	0.00074
(Scupper)																
11	ED1 5472.000	1.00	60.56	13.84	0.000021	0.00070	0.375	0.013	0.01615	0.01777	3.0	0.300	**0.521**	**0.004**	0.00007	0.00063
(Scupper)																
12	ED1 5469.000	1.00	60.56	13.84	0.000021	0.00063	0.375	0.013	0.01780	0.01800	3.0	0.300	**0.471**	**0.003**	0.00004	0.00059
(Scupper)																
13	ED1 5462.500	1.00	60.56	13.84	0.000021	0.00127	0.375	0.013	0.02000	0.01851	6.5	0.300	**0.567**	**0.005**	0.00017	0.00110
(Scupper)																
14	ED1 5459.500	1.00	60.56	13.84	0.000021	0.00070	0.375	0.013	0.02000	0.01874	3.0	0.300	**0.451**	**0.003**	0.00004	0.00066
(Scupper)																
15	ED1 5456.500	1.00	60.56	13.84	0.000021	0.00060	0.375	0.013	0.02000	0.01897	3.0	0.300	**0.424**	**0.002**	0.00002	0.00057
(Scupper)																
16	ED1 5453.000	1.00	60.56	13.876	0.000024	0.00069	0.375	0.013	0.02000	0.01924	3.5	0.300	**0.447**	**0.003**	0.00004	0.00065
(Scupper)																
17	ED1 5449.500	1.00	60.56	13.923	0.000024	0.00070	0.375	0.013	0.02000	0.01951	3.5	0.300	**0.449**	**0.003**	0.00004	0.00067
(Scupper)																
18	ED1 5446.500	1.00	60.56	13.9634	0.000021	0.00060	0.375	0.013	0.02000	0.01974	3.0	0.300	**0.423**	**0.002**	0.00002	0.00058
(Scupper)																
19	ED1 5443.500	1.00	60.56	14.0037	0.000021	0.00059	0.375	0.013	0.02000	0.01997	3.0	0.300	**0.419**	**0.002**	0.00002	0.00057
(Scupper)																
20	ED1 5440.500	1.00	60.56	14.0441	0.000021	0.00059	0.375	0.013	0.02000	0.02021	3.0	0.300	**0.419**	**0.002**	0.00002	0.00057
(Scupper)																
21	ED1 5437.500	1.00	60.56	14.0844	0.000021	0.00060	0.375	0.013	0.02000	0.02044	3.0	0.300	**0.418**	**0.002**	0.00002	0.00057
(Scupper)																
22	ED1 5434.500	1.00	60.56	14.1248	0.000021	0.00060	0.375	0.013	0.02000	0.02067	3.0	0.300	**0.418**	**0.002**	0.00002	0.00058
(Scupper)																
23	ED1 5431.500	1.00	60.56	14.1651	0.000021	0.00060	0.375	0.013	0.02000	0.02090	3.0	0.300	**0.418**	**0.002**	0.00002	0.00058
(Scupper)																
24	ED1 5428.500	1.00	60.56	14.2054	0.000021	0.00060	0.375	0.013	0.02000	0.02113	3.0	0.300	**0.418**	**0.002**	0.00002	0.00058
(Scupper)																
25	ED1 5425.500	1.00	60.56	14.2458	0.000021	0.00060	0.375	0.013	0.02000	0.02136	3.0	0.300	**0.417**	**0.002**	0.00002	0.00058
(Scupper)																
26	ED1 5422.500	1.00	60.56	14.2861	0.000021	0.00061	0.375	0.013	0.02000	0.02160	3.0	0.300	**0.417**	**0.002**	0.00002	0.00059

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	T m	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
1	ED1 5545.00	-	1.00	60.56	13.840	0.000095	0.00160	0.375	0.013	0.00440	0.01213	**1.724**	**0.006**	0.817	5.120	0.300	0.103	0.00144	0.00017
2	ED1 5542.00	3.000	1.00	60.56	13.840	0.000042	0.00214	0.375	0.013	0.00440	0.01237	**1.915**	**0.007**	0.817	5.814	0.300	0.091	0.00195	0.00019
3	ED1 5539.00	3.000	1.00	60.56	13.840	0.000042	0.00265	0.375	0.013	0.00440	0.01260	**2.067**	**0.008**	0.817	6.394	0.300	0.083	0.00243	0.00022
4	ED1 5536.00	3.000	1.00	60.56	13.840	0.000042	0.00314	0.375	0.013	0.00440	0.01283	**2.194**	**0.008**	0.817	6.899	0.300	0.077	0.00290	0.00024
5	ED1 5533.00	3.000	1.00	60.56	13.840	0.000042	0.00360	0.375	0.013	0.00440	0.01306	**2.302**	**0.009**	0.817	7.348	0.300	0.072	0.00334	0.00026
6	ED1 5530.00	3.000	1.00	60.56	13.840	0.000042	0.00404	0.375	0.013	0.00440	0.01329	**2.397**	**0.009**	0.817	7.757	0.300	0.069	0.00377	0.00028
7	ED1 5527.00	3.000	1.00	60.56	13.840	0.000042	0.00447	0.375	0.013	0.00440	0.01352	**2.481**	**0.010**	0.817	8.133	0.300	0.065	0.00418	0.00029
8	ED1 5524.00	3.000	1.00	60.56	13.840	0.000042	0.00488	0.375	0.013	0.00440	0.01376	**2.556**	**0.010**	0.817	8.483	0.300	0.063	0.00458	0.00031
9	ED1 5521.00	3.000	1.00	60.56	13.840	0.000042	0.00528	0.375	0.013	0.00440	0.01399	**2.624**	**0.010**	0.817	8.811	0.300	0.060	0.00496	0.00032
(DRAIN)																			
10	ED1 5518.00	3.000	1.00	60.56	13.840	0.000021	0.00437	0.375	0.013	0.00350	0.01422	**2.813**	**0.009**	0.817	9.386	0.300	0.057	0.00413	0.00025
(DRAIN)																			
11	ED1 5514.50	3.500	1.00	60.56	13.840	0.000021	0.00377	0.375	0.013	0.00350	0.01449	**2.651**	**0.008**	0.817	8.869	0.300	0.060	0.00355	0.00023
(DRAIN)																			
12	ED1 5510.50	4.000	1.00	60.56	13.840	0.000035	0.00343	0.375	0.013	0.00350	0.01480	**2.547**	**0.008**	0.817	8.573	0.300	0.062	0.00321	0.00021
(DRAIN)																			
13	ED1 5506.50	4.000	1.00	60.56	13.840	0.000021	0.00311	0.375	0.013	0.00350	0.01511	**2.446**	**0.008**	0.817	8.279	0.300	0.064	0.00291	0.00020
(DRAIN)																			
14	ED1 5500.50	6.000	1.00	60.56	13.840	0.000062	0.00337	0.375	0.013	0.00350	0.01557	**2.507**	**0.008**	0.817	8.644	0.300	0.062	0.00316	0.00021
15	ED1 5497.50	3.000	1.00	60.56	13.840	0.000042	0.00387	0.375	0.013	0.00350	0.01580	**2.633**	**0.008**	0.817	9.198	0.300	0.058	0.00364	0.00022
16	ED1 5494.50	3.000	1.00	60.56	13.840	0.000042	0.00435	0.375	0.013	0.00378	0.01603	**2.617**	**0.009**	0.817	9.273	0.300	0.057	0.00410	0.00025
17	ED1 5491.50	3.000	1.00	60.56	13.840	0.000042	0.00480	0.375	0.013	0.00543	0.01627	**2.159**	**0.010**	0.817	7.812	0.300	0.068	0.00447	0.00033
18	ED1 5488.50	3.000	1.00	60.56	13.840	0.000042	0.00518	0.375	0.013	0.00708	0.01650	**1.877**	**0.011**	0.817	6.906	0.300	0.077	0.00478	0.00040
(DRAIN)																			
19	ED1 5485.50	3.000	1.00	60.56	13.840	0.000021	0.00345	0.375	0.013	0.00873	0.01673	**1.411**	**0.010**	0.817	5.159	0.300	0.102	0.00310	0.00035
(DRAIN)																			
20	ED1 5482.50	3.000	1.00	60.56	13.840	0.000021	0.00210	0.375	0.013	0.01038	0.01696	**1.048**	**0.008**	0.817	3.788	0.300	0.138	0.00181	0.00029
(DRAIN)																			
21	ED1 5479.50	3.000	1.00	60.56	13.840	0.000021	0.00120	0.375	0.013	0.01203	0.01719	**0.772**	**0.006**	0.817	2.748	0.300	0.188	0.00097	0.00022
(DRAIN)																			
22	ED1 5476.50	3.000	1.00	60.56	13.840	0.000021	0.00071	0.375	0.013	0.01368	0.01743	**0.583**	**0.004**	0.817	2.046	0.300	0.248	0.00053	0.00018
(DRAIN)																			
23	ED1 5473.50	3.000	1.00	60.56	13.840	0.000021	0.00050	0.375	0.013	0.01533	0.01766	**0.475**	**0.003**	0.817	1.657	0.300	0.302	0.00035	0.00015
(DRAIN)																			
24	ED1 5470.50	3.000	1.00	60.56	13.840	0.000021	0.00042	0.375	0.013	0.01698	0.01789	**0.418**	**0.002**	0.817	1.462	0.300	0.339	0.00028	0.00014
(DRAIN)																			
25	ED1 5464.00	6.500	1.00	60.56	13.840	0.000069	0.00122	0.375	0.013	0.02000	0.01839	**0.558**	**0.005**	0.817	2.081	0.300	0.244	0.00092	0.00030
(DRAIN)																			
26	ED1 5461.00	3.000	1.00	60.56	13.840	0.000021	0.00052	0.375	0.013	0.02000	0.01862	**0.405**	**0.002**	0.817	1.465	0.300	0.338	0.00035	0.00018
(DRAIN)																			
27	ED1 5458.00	3.000	1.00	60.56	13.840	0.000021	0.00039	0.375	0.013	0.02000	0.01885	**0.362**	**0.001**	0.817	1.300	0.300	0.376	0.00024	0.00015
(DRAIN)																			
28	ED1 5454.75	3.250	1.00	60.56	13.852	0.000024	0.00043	0.375	0.013	0.02000	0.01911	**0.376**	**0.002**	0.817	1.365	0.300	0.360	0.00028	0.00016
(DRAIN)																			
29	ED1 5451.25	3.500	1.00	60.56	13.900	0.000024	0.00045	0.375	0.013	0.02000	0.01938	**0.380**	**0.002**	0.817	1.390	0.300	0.354	0.00029	0.00016
(DRAIN)																			
30	ED1 5448.00	3.250	1.00	60.56	13.943	0.000021	0.00039	0.375	0.013	0.02000	0.01963	**0.360**	**0.001**	0.817	1.319	0.300	0.372	0.00025	0.00015
(DRAIN)																			
31	ED1 5445.00	3.000	1.00	60.56	13.984	0.000021	0.00038	0.375	0.013	0.02000	0.01986	**0.355**	**0.001**	0.817	1.304	0.300	0.375	0.00024	0.00014
(DRAIN)																			
32	ED1 5442.00	3.000	1.00	60.56	14.024	0.000021	0.00038	0.375	0.013	0.02000	0.02009	**0.354**	**0.001**	0.817	1.307	0.300	0.374	0.00024	0.00014
(DRAIN)																			
33	ED1 5439.00	3.000	1.00	60.56	14.064	0.000021	0.00038	0.375	0.013	0.02000	0.02032	**0.353**	**0.001**	0.817	1.313	0.300	0.373	0.00024	0.00014
(DRAIN)																			
34	ED1 5436.00	3.000	1.00	60.56	14.105	0.000021	0.00038	0.375	0.013	0.02000	0.02055	**0.353**	**0.001**	0.817	1.319	0.300	0.372	0.00024	0.00014
(DRAIN)																			
35	ED1 5433.00	3.000	1.00	60.56	14.145	0.000021	0.00038	0.375	0.013	0.02000	0.02079	**0.353**	**0.001**	0.817	1.325	0.300	0.370	0.00024	0.00014
(DRAIN)																			
36	ED1 5430.00	3.000	1.00	60.56	14.185	0.000021	0.00038	0.375	0.013	0.02000	0.02102	**0.352**	**0.001**	0.817	1.331	0.300	0.369	0.00024	0.00014
(DRAIN)																			
37	ED1 5427.00	3.000	1.00	60.56	14.226	0.000021	0.00038	0.375	0.013	0.02000	0.02125	**0.352**	**0.001**	0.817	1.337	0.300	0.367	0.00024	0.00014
(DRAIN)																			
38	ED1 5424.00	3.000	1.00	60.56	14.266	0.000021	0.00038	0.375	0.013	0.02000	0.02148	**0.351**	**0.001**	0.817	1.343	0.300	0.366	0.00024	0.00014
(DRAIN)																			

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	**Depth 0.3m from Curb**	Bypass Flow	Intercept. Flow
	m		mm/hr	m	km^2	m^3/s					m	m	m	**m**	m^3/s	m^3/s
(Scupper)																
27	ED1 5419.500	1.00	60.56	14.3265	0.000021	0.00061	0.375	0.013	0.02000	0.02183	3.0	0.300	**0.417**	**0.002**	0.00002	0.00059
(Scupper)																
28	ED1 5416.500	1.00	60.56	14.3668	0.000022	0.00061	0.375	0.013	0.02000	0.02206	3.0	0.300	**0.417**	**0.002**	0.00002	0.00059
(Scupper)																
29	ED1 5413.000	1.00	60.56	14.4139	0.000025	0.00072	0.375	0.013	0.02000	0.02233	3.5	0.300	**0.443**	**0.003**	0.00004	0.00069
(Scupper)																
30	ED1 5409.500	1.00	60.56	14.4609	0.000025	0.00074	0.375	0.013	0.02000	0.02260	3.5	0.300	**0.445**	**0.003**	0.00004	0.00070
(Scupper)																
31	ED1 5406.500	1.00	60.56	14.5013	0.000022	0.00063	0.375	0.013	0.02000	0.02283	3.0	0.300	**0.419**	**0.002**	0.00002	0.00061
(Scupper)																
32	ED1 5403.500	1.00	60.56	14.5416	0.000022	0.00062	0.375	0.013	0.02000	0.02306	3.0	0.300	**0.416**	**0.002**	0.00002	0.00060
(Scupper)																
33	ED1 5400.000	1.00	60.56	14.5887	0.000026	0.00073	0.375	0.013	0.02000	0.02333	3.5	0.300	**0.441**	**0.003**	0.00004	0.00070
(Scupper)																
34	ED1 5396.500	1.00	60.56	14.6358	0.000026	0.00075	0.375	0.013	0.02000	0.02361	3.5	0.300	**0.444**	**0.003**	0.00004	0.00071
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
35	ED1 5380.500	1.00	60.56	14.8509	0.000030	0.00250	0.375	0.013	0.02000	0.02403	16.0	0.300	**0.695**	**0.008**	0.00055	0.00194
(Scupper)																
36	ED1 5377.500	1.00	60.56	14.8913	0.000022	0.00108	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.507**	**0.004**	0.00010	0.00098
(Scupper)																
37	ED1 5374.500	1.00	60.56	14.9389	0.000022	0.00070	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.432**	**0.003**	0.00003	0.00067
(Scupper)																
38	ED1 5371.500	1.00	60.56	14.9918	0.000022	0.00065	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.419**	**0.002**	0.00002	0.00063
(Scupper)																
39	ED1 5368.500	1.00	60.56	15.0447	0.000023	0.00065	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.419**	**0.002**	0.00002	0.00062
(Scupper)																
40	ED1 5365.500	1.00	60.56	15.0976	0.000023	0.00065	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.419**	**0.002**	0.00002	0.00063
(Scupper)																
41	ED1 5362.500	1.00	60.56	15.1505	0.000023	0.00065	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.420**	**0.002**	0.00002	0.00063
(Scupper)																
42	ED1 5359.500	1.00	60.56	15.2034	0.000023	0.00065	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.421**	**0.002**	0.00002	0.00063
(Scupper)																
43	ED1 5356.500	1.00	60.56	15.2562	0.000023	0.00066	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.421**	**0.002**	0.00002	0.00063
(Scupper)																
44	ED1 5353.500	1.00	60.56	15.3091	0.000023	0.00066	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.422**	**0.002**	0.00002	0.00064
(Scupper)																
45	ED1 5350.500	1.00	60.56	15.362	0.000023	0.00066	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.422**	**0.002**	0.00002	0.00064
(Scupper)																
46	ED1 5347.000	1.00	60.56	15.4237	0.000027	0.00078	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.450**	**0.003**	0.00004	0.00074
(Scupper)																
47	ED1 5343.500	1.00	60.56	15.4854	0.000027	0.00080	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.453**	**0.003**	0.00004	0.00076
(Scupper)																
48	ED1 5340.500	1.00	60.56	15.5383	0.000023	0.00069	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.428**	**0.003**	0.00003	0.00066
(Scupper)																
49	ED1 5337.500	1.00	60.56	15.5912	0.000023	0.00068	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.426**	**0.003**	0.00003	0.00065
(Scupper)																
50	ED1 5334.000	1.00	60.56	15.6529	0.000027	0.00080	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.453**	**0.003**	0.00004	0.00075
(Scupper)																
51	ED1 5330.500	1.00	60.56	15.7146	0.000028	0.00081	0.375	0.013	0.01910	0.02403	3.5	0.300	**0.470**	**0.003**	0.00005	0.00076
(Scupper)																
52	ED1 5327.500	1.00	60.56	15.7674	0.000024	0.00071	0.375	0.013	0.01729	0.02403	3.0	0.300	**0.475**	**0.003**	0.00005	0.00066
(Scupper)																
53	ED1 5324.500	1.00	60.56	15.8203	0.000024	0.00072	0.375	0.013	0.01548	0.02403	3.0	0.300	**0.511**	**0.003**	0.00007	0.00065
(Scupper)																
54	ED1 5321.000	1.00	60.56	15.882	0.000028	0.00087	0.375	0.013	0.01338	0.02403	3.5	0.300	**0.602**	**0.004**	0.00014	0.00073
(Scupper)																
55	ED1 5318.000	1.00	60.56	15.9349	0.000024	0.00082	0.375	0.013	0.01157	0.02403	3.0	0.300	**0.644**	**0.004**	0.00015	0.00066
(Scupper)																
56	ED1 5315.000	1.00	60.56	15.9878	0.000024	0.00085	0.375	0.013	0.00976	0.02403	3.0	0.300	**0.725**	**0.004**	0.00020	0.00064
(Scupper)																
57	ED1 5312.000	1.00	60.56	16.0407	0.000024	0.00090	0.375	0.013	0.00796	0.02403	3.0	0.300	**0.845**	**0.004**	0.00028	0.00062
(Scupper)																
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(Scupper)																
(Scupper)																
(Scupper)																
58	ED1 5294.000	1.00	60.56	16.3033	0.000024	0.00456	0.375	0.013	-0.00288	0.02403	18.0	0.300	**2.924**	**0.008**	0.00342	0.00114
(Scupper)																
59	ED1 5291.000	1.00	60.56	16.2984	0.000024	0.00404	0.375	0.013	-0.00469	0.02403	3.0	0.300	**2.061**	**0.008**	0.00266	0.00138
(Scupper)																
60	ED1 5288.000	1.00	60.56	16.2935	0.000024	0.00326	0.375	0.013	-0.00650	0.02403	3.0	0.300	**1.551**	**0.008**	0.00184	0.00142
(Scupper)																
61	ED1 5285.000	1.00	60.56	16.2886	0.000024	0.00244	0.375	0.013	-0.00830	0.02403	3.0	0.300	**1.194**	**0.007**	0.00113	0.00131
(Scupper)																
62	ED1 5282.000	1.00	60.56	16.2836	0.000024	0.00175	0.375	0.013	-0.01011	0.02403	3.0	0.300	**0.932**	**0.006**	0.00062	0.00113

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	T	**Depth 0.3m from Curb**	K	L_T	L	E	Bypass Flow	Intercept. Flow
	m	m		mm/hr	m	km^2	m^3/s					m	**m**		m	m		m^3/s	m^3/s
39	ED1 5421.00	3.000	1.00	60.56	14.306	0.000021	0.00038	0.375	0.013	0.02000	0.02171	**0.351**	**0.001**	0.817	1.348	0.300	0.364	0.00024	0.00014
(DRAIN)																			
40	ED1 5418.00	3.000	1.00	60.56	14.347	0.000022	0.00039	0.375	0.013	0.02000	0.02194	**0.351**	**0.001**	0.817	1.354	0.300	0.363	0.00025	0.00014
(DRAIN)																			
41	ED1 5414.75	3.250	1.00	60.56	14.390	0.000025	0.00045	0.375	0.013	0.02000	0.02220	**0.370**	**0.001**	0.817	1.447	0.300	0.342	0.00029	0.00015
(DRAIN)																			
42	ED1 5411.25	3.500	1.00	60.56	14.437	0.000025	0.00046	0.375	0.013	0.02000	0.02247	**0.374**	**0.001**	0.817	1.474	0.300	0.336	0.00031	0.00016
(DRAIN)																			
43	ED1 5408.00	3.250	1.00	60.56	14.481	0.000022	0.00041	0.375	0.013	0.02000	0.02272	**0.355**	**0.001**	0.817	1.398	0.300	0.353	0.00026	0.00014
(DRAIN)																			
44	ED1 5405.00	3.000	1.00	60.56	14.521	0.000022	0.00039	0.375	0.013	0.02000	0.02295	**0.350**	**0.001**	0.817	1.381	0.300	0.356	0.00025	0.00014
(DRAIN)																			
45	ED1 5401.75	3.250	1.00	60.56	14.565	0.000025	0.00045	0.375	0.013	0.02000	0.02320	**0.369**	**0.001**	0.817	1.474	0.300	0.336	0.00030	0.00015
(DRAIN)																			
46	ED1 5398.25	3.500	1.00	60.56	14.612	0.000026	0.00047	0.375	0.013	0.02000	0.02347	**0.373**	**0.001**	0.817	1.500	0.300	0.331	0.00031	0.00016
(DRAIN)																			
47	ED1 5394.50	3.750	1.00	60.56	14.663	0.000029	0.00053	0.375	0.013	0.02000	0.02376	**0.391**	**0.002**	0.817	1.591	0.300	0.313	0.00037	0.00017
48	ED1 5391.50	3.000	1.00	60.56	14.703	0.000044	0.00111	0.375	0.013	0.02000	0.02399	**0.514**	**0.004**	0.817	2.173	0.300	0.235	0.00085	0.00026
49	ED1 5388.50	3.000	1.00	60.56	14.743	0.000044	0.00160	0.375	0.013	0.02000	0.02403	**0.589**	**0.006**	0.817	2.533	0.300	0.203	0.00128	0.00033
50	ED1 5385.50	3.000	1.00	60.56	14.784	0.000044	0.00203	0.375	0.013	0.02000	0.02403	**0.643**	**0.007**	0.817	2.796	0.300	0.185	0.00165	0.00038
51	ED1 5382.50	3.000	1.00	60.56	14.824	0.000044	0.00241	0.375	0.013	0.02000	0.02403	**0.686**	**0.008**	0.817	3.005	0.300	0.172	0.00199	0.00042
(DRAIN)																			
52	ED1 5379.00	3.500	1.00	60.56	14.871	0.000022	0.00093	0.375	0.013	0.02000	0.02403	**0.480**	**0.004**	0.817	2.016	0.300	0.252	0.00070	0.00023
(DRAIN)																			
53	ED1 5376.00	3.000	1.00	60.56	14.912	0.000022	0.00048	0.375	0.013	0.02000	0.02403	**0.374**	**0.001**	0.817	1.523	0.300	0.326	0.00032	0.00016
(DRAIN)																			
54	ED1 5373.00	3.000	1.00	60.56	14.965	0.000022	0.00041	0.375	0.013	0.02000	0.02403	**0.353**	**0.001**	0.817	1.429	0.300	0.346	0.00027	0.00014
(DRAIN)																			
55	ED1 5370.00	3.000	1.00	60.56	15.018	0.000023	0.00040	0.375	0.013	0.02000	0.02403	**0.351**	**0.001**	0.817	1.421	0.300	0.347	0.00026	0.00014
(DRAIN)																			
56	ED1 5367.00	3.000	1.00	60.56	15.071	0.000023	0.00041	0.375	0.013	0.02000	0.02403	**0.352**	**0.001**	0.817	1.422	0.300	0.347	0.00026	0.00014
(DRAIN)																			
57	ED1 5364.00	3.000	1.00	60.56	15.124	0.000023	0.00041	0.375	0.013	0.02000	0.02403	**0.352**	**0.001**	0.817	1.425	0.300	0.347	0.00027	0.00014
(DRAIN)																			
58	ED1 5361.00	3.000	1.00	60.56	15.177	0.000023	0.00041	0.375	0.013	0.02000	0.02403	**0.353**	**0.001**	0.817	1.427	0.300	0.346	0.00027	0.00014
(DRAIN)																			
59	ED1 5358.00	3.000	1.00	60.56	15.230	0.000023	0.00041	0.375	0.013	0.02000	0.02403	**0.353**	**0.001**	0.817	1.429	0.300	0.346	0.00027	0.00014
(DRAIN)																			
60	ED1 5355.00	3.000	1.00	60.56	15.283	0.000023	0.00041	0.375	0.013	0.02000	0.02403	**0.354**	**0.001**	0.817	1.432	0.300	0.345	0.00027	0.00014
(DRAIN)																			
61	ED1 5352.00	3.000	1.00	60.56	15.336	0.000023	0.00041	0.375	0.013	0.02000	0.02403	**0.354**	**0.001**	0.817	1.434	0.300	0.345	0.00027	0.00014
(DRAIN)																			
62	ED1 5348.75	3.250	1.00	60.56	15.393	0.000027	0.00048	0.375	0.013	0.02000	0.02403	**0.375**	**0.001**	0.817	1.528	0.300	0.325	0.00032	0.00016
(DRAIN)																			
63	ED1 5345.25	3.500	1.00	60.56	15.455	0.000027	0.00050	0.375	0.013	0.02000	0.02403	**0.380**	**0.002**	0.817	1.553	0.300	0.321	0.00034	0.00016
(DRAIN)																			
64	ED1 5342.00	3.250	1.00	60.56	15.512	0.000023	0.00044	0.375	0.013	0.02000	0.02403	**0.362**	**0.001**	0.817	1.470	0.300	0.337	0.00029	0.00015
(DRAIN)																			
65	ED1 5339.00	3.000	1.00	60.56	15.565	0.000023	0.00042	0.375	0.013	0.02000	0.02403	**0.357**	**0.001**	0.817	1.448	0.300	0.342	0.00028	0.00014
(DRAIN)																			
66	ED1 5335.75	3.250	1.00	60.56	15.622	0.000027	0.00049	0.375	0.013	0.02000	0.02403	**0.377**	**0.002**	0.817	1.539	0.300	0.323	0.00033	0.00016
(DRAIN)																			
67	ED1 5332.25	3.500	1.00	60.56	15.684	0.000027	0.00051	0.375	0.013	0.02000	0.02403	**0.383**	**0.002**	0.817	1.565	0.300	0.318	0.00035	0.00016
(DRAIN)																			
68	ED1 5329.00	3.250	1.00	60.56	15.741	0.000024	0.00045	0.375	0.013	0.01819	0.02403	**0.389**	**0.002**	0.817	1.578	0.300	0.316	0.00031	0.00014
(DRAIN)																			
69	ED1 5326.00	3.000	1.00	60.56	15.794	0.000024	0.00045	0.375	0.013	0.01639	0.02403	**0.415**	**0.002**	0.817	1.676	0.300	0.299	0.00032	0.00013
(DRAIN)																			
70	ED1 5322.75	3.250	1.00	60.56	15.851	0.000028	0.00054	0.375	0.013	0.01443	0.02403	**0.479**	**0.003**	0.817	1.948	0.300	0.260	0.00040	0.00014
(DRAIN)																			
71	ED1 5319.50	3.250	1.00	60.56	15.908	0.000024	0.00054	0.375	0.013	0.01247	0.02403	**0.527**	**0.003**	0.817	2.133	0.300	0.239	0.00041	0.00013
(DRAIN)																			
72	ED1 5316.50	3.000	1.00	60.56	15.961	0.000024	0.00056	0.375	0.013	0.01067	0.02403	**0.588**	**0.003**	0.817	2.374	0.300	0.216	0.00044	0.00012
(DRAIN)																			
73	ED1 5313.50	3.000	1.00	60.56	16.014	0.000024	0.00061	0.375	0.013	0.00886	0.02403	**0.682**	**0.003**	0.817	2.752	0.300	0.188	0.00050	0.00011
(DRAIN)																			
74	ED1 5310.50	3.000	1.00	60.56	16.067	0.000024	0.00069	0.375	0.013	0.00705	0.02403	**0.823**	**0.004**	0.817	3.320	0.300	0.157	0.00058	0.00011
75	ED1 5307.50	3.000	1.00	60.56	16.120	0.000048	0.00140	0.375	0.013	0.00525	0.02403	**1.291**	**0.005**	0.817	5.342	0.300	0.099	0.00126	0.00014
76	ED1 5304.50	3.000	1.00	60.56	16.173	0.000049	0.00209	0.375	0.013	0.00344	0.02403	**1.952**	**0.006**	0.817	8.132	0.300	0.065	0.00195	0.00014
77	ED1 5301.50	3.000	1.00	60.56	16.226	0.000049	0.00277	0.375	0.013	0.00163	0.02403	**3.460**	**0.005**	0.817	14.332	0.300	0.037	0.00267	0.00010
78	ED1 5298.50	3.000	1.00	60.56	16.279	0.000049	**0.00350**	0.375	0.013	-0.00017	0.02403	**15.373**	**0.003**	0.817	60.836	0.300	0.009	0.00347	0.00003
79	ED1 5295.50	3.000	1.00	60.56	16.306	0.000049	0.00430	0.375	0.013	-0.00198	0.02403	**3.616**	**0.007**	0.817	15.351	0.300	0.035	0.00415	0.00015
(DRAIN)																			
80	ED1 5292.50	3.000	1.00	60.56	16.301	0.000024	0.00383	0.375	0.013	-0.00379	0.02403	**2.310**	**0.008**	0.817	9.914	0.300	0.054	0.00363	0.00021
(DRAIN)																			
81	ED1 5289.50	3.000	1.00	60.56	16.296	0.000024	0.00307	0.375	0.013	-0.00559	0.02403	**1.666**	**0.008**	0.817	7.148	0.300	0.074	0.00284	0.00023
(DRAIN)																			
82	ED1 5286.50	3.000	1.00	60.56	16.291	0.000024	0.00225	0.375	0.013	-0.00740	0.02403	**1.244**	**0.007**	0.817	5.303	0.300	0.100	0.00203	0.00022
(DRAIN)																			
83	ED1 5283.50	3.000	1.00	60.56	16.286	0.000024	0.00154	0.375	0.013	-0.00921	0.02403	**0.942**	**0.006**	0.817	3.969	0.300	0.132	0.00134	0.00020
(DRAIN)																			

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T **m**	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
(Scupper)																
63	ED1 5279.000	1.00	60.56	16.2787	0.000024	0.00127	0.375	0.013	-0.01192	0.02383	3.0	0.300	**0.747**	**0.005**	0.00032	0.00095
(Scupper)																
64	ED1 5276.000	1.00	60.56	16.2738	0.000024	0.00099	0.375	0.013	-0.01372	0.02321	3.0	0.300	**0.626**	**0.004**	0.00017	0.00082
(Scupper)																
65	ED1 5273.000	1.00	60.56	16.2689	0.000024	0.00085	0.375	0.013	-0.01553	0.02260	3.0	0.300	**0.550**	**0.004**	0.00010	0.00075
(Scupper)																
66	ED1 5270.000	1.00	60.56	16.2639	0.000024	0.00078	0.375	0.013	-0.01733	0.02198	3.0	0.300	**0.500**	**0.003**	0.00007	0.00071
(Scupper)																
67	ED1 5267.000	1.00	60.56	16.259	0.000024	0.00074	0.375	0.013	-0.01914	0.02137	3.0	0.300	**0.463**	**0.003**	0.00005	0.00070
(Scupper)																
68	ED1 5264.000	1.00	60.56	16.2541	0.000024	0.00071	0.375	0.013	-0.02095	0.02076	3.0	0.300	**0.434**	**0.003**	0.00003	0.00068
(Scupper)																
69	ED1 5261.000	1.00	60.56	16.2491	0.000024	0.00069	0.375	0.013	-0.02275	0.02014	3.0	0.300	**0.410**	**0.003**	0.00002	0.00067
(Scupper)																
70	ED1 5257.000	1.00	60.56	16.2426	0.000032	0.00092	0.375	0.013	-0.02516	0.01933	4.0	0.300	**0.431**	**0.003**	0.00004	0.00088
(Scupper)																
71	ED1 5254.000	1.00	60.56	16.2377	0.000024	0.00068	0.375	0.013	-0.02697	0.01871	3.0	0.300	**0.371**	**0.002**	0.00001	0.00067
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
72	ED1 5240.500	1.00	60.56	16.2155	0.000036	0.00212	0.375	0.013	-0.03000	0.01595	13.5	0.300	**0.548**	**0.007**	0.00026	0.00186
(Scupper)																
73	ED1 5237.500	1.00	60.56	16.2106	0.000024	0.00081	0.375	0.013	-0.03000	0.01534	3.0	0.300	**0.385**	**0.003**	0.00001	0.00080
(Scupper)																
74	ED1 5234.000	1.00	60.56	16.2048	0.000028	0.00075	0.375	0.013	-0.03000	0.01462	3.5	0.300	**0.377**	**0.002**	0.00001	0.00074
(Scupper)																
75	ED1 5231.000	1.00	60.56	16.1999	0.000024	0.00063	0.375	0.013	-0.03000	0.01401	3.0	0.300	**0.356**	**0.002**	0.00000	0.00063
(Scupper)																
76	ED1 5228.000	1.00	60.56	16.195	0.000024	0.00062	0.375	0.013	-0.03000	0.01339	3.0	0.300	**0.358**	**0.002**	0.00000	0.00062
(Scupper)																
77	ED1 5225.000	1.00	60.56	16.19	0.000024	0.00062	0.375	0.013	-0.03000	0.01278	3.0	0.300	**0.360**	**0.002**	0.00001	0.00062
78	ED1 5219.500	1.00	60.56	16.181	0.000089	0.00151	0.375	0.013	-0.03000	0.01165	5.5	0.300	**0.512**	**0.006**	0.00014	0.00137
(Scupper)																
79	ED1 5216.500	1.00	60.56	16.181	0.000024	0.00071	0.375	0.013	-0.03000	0.01104	3.0	0.300	**0.389**	**0.003**	0.00001	0.00069
(Scupper)																
80	ED1 5213.500	1.00	60.56	16.181	0.000024	0.00062	0.375	0.013	-0.03000	0.01043	3.0	0.300	**0.373**	**0.002**	0.00001	0.00061
(Scupper)																
81	ED1 5210.500	1.00	60.56	16.181	0.000024	0.00061	0.375	0.013	-0.03000	0.00981	3.0	0.300	**0.376**	**0.002**	0.00001	0.00060
(Scupper)																
82	ED1 5207.500	1.00	60.56	16.181	0.000024	0.00060	0.375	0.013	-0.03000	0.00920	3.0	0.300	**0.379**	**0.002**	0.00001	0.00060
(Scupper)																
83	ED1 5204.500	1.00	60.56	16.181	0.000024	0.00060	0.375	0.013	-0.03000	0.00859	3.0	0.300	**0.384**	**0.003**	0.00001	0.00059
(Scupper)																
84	ED1 5201.500	1.00	60.56	16.181	0.000024	0.00060	0.375	0.013	-0.03000	0.00797	3.0	0.300	**0.388**	**0.003**	0.00001	0.00059
(Scupper)																
85	ED1 5198.500	1.00	60.56	16.181	0.000024	0.00059	0.375	0.013	-0.03000	0.00736	3.0	0.300	**0.393**	**0.003**	0.00001	0.00058
(Scupper)																
86	ED1 5195.500	1.00	60.56	16.181	0.000024	0.00059	0.375	0.013	-0.03000	0.00674	3.0	0.300	**0.399**	**0.003**	0.00001	0.00058
(Scupper)																
87	ED1 5192.500	1.00	60.56	16.181	0.000020	0.00056	0.375	0.013	-0.03000	0.00613	3.0	0.300	**0.398**	**0.003**	0.00001	0.00055
(Scupper)																
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(Scupper)																
(Scupper)																

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	T **m**	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
84	ED1 5280.50	3.000	1.00	60.56	16.281	0.000024	0.00104	0.375	0.013	-0.01101	0.02403	**0.726**	**0.005**	0.817	3.017	0.300	0.172	0.00086	0.00018
(DRAIN)																			
85	ED1 5277.50	3.000	1.00	60.56	16.276	0.000024	0.00074	0.375	0.013	-0.01282	0.02352	**0.583**	**0.004**	0.817	2.372	0.300	0.216	0.00058	0.00016
(DRAIN)																			
86	ED1 5274.50	3.000	1.00	60.56	16.271	0.000024	0.00059	0.375	0.013	-0.01462	0.02290	**0.496**	**0.003**	0.817	1.977	0.300	0.256	0.00044	0.00015
(DRAIN)																			
87	ED1 5271.50	3.000	1.00	60.56	16.266	0.000024	0.00052	0.375	0.013	-0.01643	0.02229	**0.442**	**0.002**	0.817	1.733	0.300	0.290	0.00037	0.00015
(DRAIN)																			
88	ED1 5268.50	3.000	1.00	60.56	16.261	0.000024	0.00048	0.375	0.013	-0.01824	0.02168	**0.405**	**0.002**	0.817	1.566	0.300	0.318	0.00033	0.00015
(DRAIN)																			
89	ED1 5265.50	3.000	1.00	60.56	16.257	0.000024	0.00046	0.375	0.013	-0.02004	0.02106	**0.377**	**0.002**	0.817	1.438	0.300	0.344	0.00030	0.00016
(DRAIN)																			
90	ED1 5262.50	3.000	1.00	60.56	16.252	0.000024	0.00044	0.375	0.013	-0.02185	0.02045	**0.355**	**0.001**	0.817	1.335	0.300	0.368	0.00028	0.00016
(DRAIN)																			
91	ED1 5259.00	3.500	1.00	60.56	16.246	0.000032	0.00057	0.375	0.013	-0.02396	0.01973	**0.371**	**0.002**	0.817	1.389	0.300	0.355	0.00037	0.00020
(DRAIN)																			
92	ED1 5255.50	3.500	1.00	60.56	16.240	0.000024	0.00045	0.375	0.013	-0.02607	0.01902	**0.324**	**0.001**	0.817	1.183	0.300	0.409	0.00027	0.00018
(DRAIN)																			
93	ED1 5251.75	3.750	1.00	60.56	16.234	0.000037	0.00063	0.375	0.013	-0.02832	0.01825	**0.351**	**0.001**	0.817	1.276	0.300	0.383	0.00039	0.00024
94	ED1 5248.75	3.000	1.00	60.56	16.229	0.000049	0.00121	0.375	0.013	-0.03000	0.01764	**0.436**	**0.004**	0.817	1.610	0.300	0.310	0.00084	0.00038
95	ED1 5245.75	3.000	1.00	60.56	16.224	0.000049	0.00166	0.375	0.013	-0.03000	0.01702	**0.494**	**0.006**	0.817	1.818	0.300	0.277	0.00120	0.00046
96	ED1 5242.75	3.000	1.00	60.56	16.219	0.000049	0.00203	0.375	0.013	-0.03000	0.01641	**0.536**	**0.007**	0.817	1.954	0.300	0.259	0.00150	0.00053
(DRAIN)																			
97	ED1 5239.00	3.750	1.00	60.56	16.213	0.000024	0.00067	0.375	0.013	-0.03000	0.01564	**0.357**	**0.002**	0.817	1.209	0.300	0.402	0.00040	0.00027
(DRAIN)																			
98	ED1 5235.75	3.250	1.00	60.56	16.208	0.000028	0.00050	0.375	0.013	-0.03000	0.01498	**0.321**	**0.001**	0.817	1.052	0.300	0.453	0.00027	0.00022
(DRAIN)																			
99	ED1 5232.50	3.250	1.00	60.56	16.202	0.000024	0.00042	0.375	0.013	-0.03000	0.01431	**0.305**	**0.000**	0.817	0.971	0.300	0.486	0.00022	0.00021
(DRAIN)																			
100	ED1 5229.50	3.000	1.00	60.56	16.197	0.000024	0.00042	0.375	0.013	-0.03000	0.01370	**0.306**	**0.000**	0.817	0.952	0.300	0.494	0.00021	0.00021
(DRAIN)																			
101	ED1 5226.50	3.000	1.00	60.56	16.192	0.000024	0.00042	0.375	0.013	-0.03000	0.01309	**0.309**	**0.000**	0.817	0.940	0.300	0.500	0.00021	0.00021
(DRAIN)																			
(DRAIN)																			
102	ED1 5218.00	8.500	1.00	60.56	16.181	0.000024	0.00056	0.375	0.013	-0.03000	0.01135	**0.353**	**0.002**	0.817	1.016	0.300	0.467	0.00030	0.00026
(DRAIN)																			
103	ED1 5215.00	3.000	1.00	60.56	16.181	0.000024	0.00043	0.375	0.013	-0.03000	0.01073	**0.323**	**0.001**	0.817	0.893	0.300	0.521	0.00020	0.00022
(DRAIN)																			
104	ED1 5212.00	3.000	1.00	60.56	16.181	0.000024	0.00042	0.375	0.013	-0.03000	0.01012	**0.325**	**0.001**	0.817	0.872	0.300	0.532	0.00020	0.00022
(DRAIN)																			
105	ED1 5209.00	3.000	1.00	60.56	16.181	0.000024	0.00042	0.375	0.013	-0.03000	0.00951	**0.329**	**0.001**	0.817	0.857	0.300	0.540	0.00019	0.00023
(DRAIN)																			
106	ED1 5206.00	3.000	1.00	60.56	16.181	0.000024	0.00042	0.375	0.013	-0.03000	0.00889	**0.333**	**0.001**	0.817	0.840	0.300	0.548	0.00019	0.00023
(DRAIN)																			
107	ED1 5203.00	3.000	1.00	60.56	16.181	0.000024	0.00042	0.375	0.013	-0.03000	0.00828	**0.338**	**0.001**	0.817	0.823	0.300	0.558	0.00019	0.00024
(DRAIN)																			
108	ED1 5200.00	3.000	1.00	60.56	16.181	0.000024	0.00042	0.375	0.013	-0.03000	0.00767	**0.343**	**0.001**	0.817	0.805	0.300	0.568	0.00018	0.00024
(DRAIN)																			
109	ED1 5197.00	3.000	1.00	60.56	16.181	0.000024	0.00042	0.375	0.013	-0.03000	0.00705	**0.349**	**0.001**	0.817	0.787	0.300	0.579	0.00018	0.00025
(DRAIN)																			
110	ED1 5193.75	3.250	1.00	60.56	16.181	0.000028	0.00049	0.375	0.013	-0.03000	0.00639	**0.377**	**0.002**	0.817	0.814	0.300	0.563	0.00022	0.00028
(DRAIN)																			
111	ED1 5191.00	2.750	1.00	60.56	16.181	0.000024	0.00042	0.375	0.013	-0.03000	0.00582	**0.362**	**0.002**	0.817	0.743	0.300	0.606	0.00017	0.00026
112	ED1 5188.00	3.000	1.00	60.56	16.181	0.000049	0.00099	0.375	0.013	-0.03000	0.00521	**0.508**	**0.006**	0.817	1.025	0.300	0.464	0.00053	0.00046
113	ED1 5185.00	3.000	1.00	60.56	16.181	0.000049	0.00135	0.375	0.013	-0.03000	0.00460	**0.585**	**0.009**	0.817	1.126	0.300	0.427	0.00078	0.00058
114	ED1 5182.00	3.000	1.00	60.56	16.181	0.000049	0.00160	0.375	0.013	-0.03000	0.00398	**0.639**	**0.010**	0.817	1.157	0.300	0.417	0.00093	0.00067
115	ED1 5179.00	3.000	1.00	60.56	16.181	0.000049	0.00175	0.375	0.013	-0.03000	0.00337	**0.683**	**0.011**	0.817	1.144	0.300	0.422	0.00101	0.00074
Low Point (116)	ED1 5176.00	3.000	1.00	60.56	16.181	0.000049	0.00184	-	-	-	-	-	-	-	-	-	-	-	-

Find location of Low Point at the North Curb:

Station		S_x	S	Elevation at Profile	Elevation at N. Curb
ED1 5176.20		-0.03000	0.00280	50.73811	50.4816
ED1 5176.10		-0.03000	0.00278	50.73783	50.4813
ED1 5176.00	**Low Point at North Curb**	-0.03000	0.00276	50.73755	**50.4811**
ED1 5175.90		-0.02994	0.00274	50.73728	50.4813
ED1 5175.80		-0.02988	0.00271	50.73701	50.4815
ED1 5170.00		-0.02647	0.00153	50.72470	50.4984
ED1 5162.53	Low Point on Profile	-0.02208	0.00000	50.71900	50.5302
ED1 5160.00		-0.02059	-0.00052	50.71965	50.5436

The Low Point at the north curb occurs at a location where a drain would conflict with a stringer. Therefore, a scupper is provided at the Low Point.

Cross slope transition - There are no drains near 0% cross slope, but check amount of water flowing across deck:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S	T m
BB	ED1 5120								0.00294		
-	ED1 5124	1.00	60.56	12.586	0.0000503	0.00085	0.375	0.016	0.00059	-0.00788	**5.6096**
-	ED1 5125	1.00	60.56	12.586	0.0000629	**0.00107**	0.375	0.016	0.00000	-0.00768	**#DIV/0!**
-	ED1 5126	1.00	60.56	12.586	0.0000755	0.00128	0.375	0.016	-0.00059	-0.00747	**6.5964**

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S	Spacing m	Shoulder Width m	T m	Depth 0.3m from Curb m	Bypass Flow m^3/s	Intercept. Flow m^3/s
BB	ED1 5120															
100	ED1 5136	1.00	60.56	12.586	0.0002014	0.00341	0.375	0.016	-0.00647	-0.00543	16	0.300	**2.2606**	**0.0127**	0.00234	0.00108
(Scupper)																
99	ED1 5139	1.00	60.56	12.586	0.0000189	0.00256	0.375	0.016	-0.00824	-0.00481	3	0.300	**1.7840**	**0.0122**	0.00156	0.00099
98	ED1 5144	1.00	60.56	16.181	0.0000809	0.00294	0.375	0.016	-0.01118	-0.00379	5	0.300	**1.6238**	**0.0148**	0.00170	0.00123
(Scupper)																
97	ED1 5147	1.00	60.56	16.181	0.0000243	0.00203	0.375	0.016	-0.01294	-0.00318	3	0.300	**1.3328**	**0.0134**	0.00103	0.00100
(Scupper)																
96	ED1 5150	1.00	60.56	16.181	0.0000243	0.00140	0.375	0.016	-0.01471	-0.00256	3	0.300	**1.1151**	**0.0120**	0.00061	0.00079
(Scupper)																
95	ED1 5153	1.00	60.56	16.181	0.0000243	0.00102	0.375	0.016	-0.01647	-0.00195	3	0.300	**0.9700**	**0.0110**	0.00038	0.00064
(Scupper)																
94	ED1 5156	1.00	60.56	16.181	0.0000243	0.00080	0.375	0.016	-0.01824	-0.00134	3	0.300	**0.8924**	**0.0108**	0.00027	0.00053
(Scupper)																
93	ED1 5159	1.00	60.56	16.181	0.0000243	0.00066	0.375	0.016	-0.02000	-0.00072	3	0.300	**0.8811**	**0.0116**	0.00022	0.00044
(Scupper)																
*92	ED1 5162	1.00	60.56	16.181	0.0000243	0.00110	0.375	0.016	-0.02176	-0.00011	3	0.300	**1.4446**	**0.0249**	0.00059	0.00051
(Scupper)																
91	ED1 5165	1.00	60.56	16.181	0.0000243	0.00056	0.375	0.016	-0.02353	0.00051	3	0.300	**0.7991**	**0.0117**	0.00016	0.00040
(Scupper)																
90	ED1 5168	1.00	60.56	16.181	0.0000243	0.00054	0.375	0.016	-0.02529	0.00112	3	0.300	**0.6479**	**0.0088**	0.00010	0.00043
(Scupper)																
89	ED1 5171	1.00	60.56	16.181	0.0000243	0.00055	0.375	0.016	-0.02706	0.00173	3	0.300	**0.5761**	**0.0075**	0.00008	0.00047
(Scupper)																
88	ED1 5174	1.00	60.56	16.181	0.0000243	0.00055	0.375	0.016	-0.02882	0.00235	3	0.300	**0.5250**	**0.0065**	0.00006	0.00049
(Scupper)																

Total Flow at Low Point = 0.00244 m^3/s

Check scupper at low point by hand.

*Note: The flow demand for Drain 92 contains the bypass flow coming from the EDR1 ramp. See EDR1 spreadsheet for origin of value:

EDR1 Bypass = 0.00058 m^3/sec

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
(DRAIN)																			
127	ED1 5137.50	-	1.00	60.56	12.586	0.000019	0.00266	0.375	0.015	-0.00735	-0.00512	**1.874**	**0.012**	0.817	3.293	0.300	0.158	0.00224	0.00042
(DRAIN)																			
(DRAIN)																			
126	ED1 5145.50	8.000	1.00	60.56	16.181	0.000024	0.00211	0.375	0.013	-0.01206	-0.00348	**1.287**	**0.012**	0.817	2.159	0.300	0.236	0.00162	0.00050
(DRAIN)																			
125	ED1 5148.50	3.000	1.00	60.56	16.181	0.000024	0.00144	0.375	0.013	-0.01382	-0.00287	**1.060**	**0.011**	0.817	1.597	0.300	0.312	0.00099	0.00045
(DRAIN)																			
124	ED1 5151.50	3.000	1.00	60.56	16.181	0.000024	0.00102	0.375	0.013	-0.01559	-0.00226	**0.904**	**0.009**	0.817	1.196	0.300	0.405	0.00061	0.00041
(DRAIN)																			
123	ED1 5154.50	3.000	1.00	60.56	16.181	0.000024	0.00079	0.375	0.013	-0.01735	-0.00164	**0.816**	**0.009**	0.817	0.916	0.300	0.510	0.00039	0.00040
(DRAIN)																			
122	ED1 5157.50	3.000	1.00	60.56	16.181	0.000024	0.00068	0.375	0.013	-0.01912	-0.00103	**0.792**	**0.009**	0.817	0.705	0.300	0.631	0.00025	0.00043
(DRAIN)																			
121	ED1 5160.50	3.000	1.00	60.56	16.181	0.000024	0.00063	0.375	0.013	-0.02088	-0.00042	**0.864**	**0.012**	0.817	0.493	0.300	0.815	0.00012	0.00051
(DRAIN)																			
120	ED1 5163.50	3.000	1.00	60.56	16.181	0.000024	0.00100	0.375	0.013	-0.02265	0.00020	**1.123**	**0.019**	0.817	0.458	0.300	0.853	0.00015	0.00086
(DRAIN)																			
119	ED1 5166.50	3.000	1.00	60.56	16.181	0.000024	0.00057	0.375	0.013	-0.02441	0.00081	**0.666**	**0.009**	0.817	0.527	0.300	0.780	0.00013	0.00045
(DRAIN)																			
118	ED1 5169.50	3.000	1.00	60.56	16.181	0.000024	0.00051	0.375	0.013	-0.02618	0.00143	**0.551**	**0.007**	0.817	0.573	0.300	0.737	0.00014	0.00038
(DRAIN)																			
117	ED1 5172.50	3.000	1.00	60.56	16.181	0.000024	0.00049	0.375	0.013	-0.02794	0.00204	**0.486**	**0.005**	0.817	0.600	0.300	0.713	0.00014	0.00035
(DRAIN)																			
Low Point (116)	ED1 5176.00	3.500	1.00	60.56	16.181	0.000032	0.00061	-	-	-0.03000	-	-	-	-	-	-	-	-	-

ED1 Line Drainage

Drains and Scuppers with Uniform Cross Slope - 25 Year Intensity

Use Drain Type D-3, modified to 300 mm width. Use minimum drain spacing of 3.0 m.

Place 300mm long scuppers between drains at minimum spacing of 3.0 m on center, and at least 1.5 m from a drain.

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Sheet flow across deck occurs at point of zero cross-slope at approximately "ED1" 52+98 and "ED1" 51+25. The amount of flow crossing the deck is 0.00350 m^3/s and 0.00107 m^3/s respectively. BDA p. 17-3 advises that a maximum of 0.003 m3/s flow across the deck. Therefore, this configuration is nearly adequate and adequate, respectively.

Drains:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T **m**	**Depth 0.3m from Curb m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
-	ED1 5551.837	1.00	50.36	13.84	0.000000	0.00000	0.375	0.013	0.00440	0.01167	n/a	0.300	**0.000**	**0.000**	0.00000	n/a
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
1	ED1 5519.500	1.00	50.36	13.84	0.000021	0.00429	0.375	0.013	0.00350	0.01410	32.3	0.300	**2.796**	**0.009**	0.00317	0.00112
(Scupper)																
2	ED1 5516.000	1.00	50.36	13.84	0.000028	0.00363	0.375	0.013	0.00350	0.01437	3.5	0.300	**2.619**	**0.008**	0.00263	0.00101
(Scupper)																
3	ED1 5513.000	1.00	50.36	13.84	0.000021	0.00302	0.375	0.013	0.00350	0.01461	3.0	0.300	**2.435**	**0.007**	0.00213	0.00089
(Scupper)																
4	ED1 5508.000	1.00	50.36	13.84	0.000035	0.00292	0.375	0.013	0.00350	0.01499	5.0	0.300	**2.393**	**0.007**	0.00204	0.00088
(Scupper)																
5	ED1 5505.000	1.00	50.36	13.84	0.000021	0.00246	0.375	0.013	0.00350	0.01522	3.0	0.300	**2.238**	**0.007**	0.00168	0.00078
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
6	ED1 5487.000	1.00	50.36	13.84	0.000021	0.00398	0.375	0.013	0.00790	0.01661	18.0	0.300	**1.585**	**0.010**	0.00227	0.00171
(Scupper)																
7	ED1 5484.000	1.00	50.36	13.84	0.000021	0.00256	0.375	0.013	0.00955	0.01685	3.0	0.300	**1.191**	**0.009**	0.00118	0.00138
(Scupper)																
8	ED1 5481.000	1.00	50.36	13.84	0.000021	0.00153	0.375	0.013	0.01120	0.01708	3.0	0.300	**0.887**	**0.007**	0.00051	0.00102
(Scupper)																
9	ED1 5478.000	1.00	50.36	13.84	0.000021	0.00092	0.375	0.013	0.01285	0.01731	3.0	0.300	**0.670**	**0.005**	0.00019	0.00073
(Scupper)																
10	ED1 5475.000	1.00	50.36	13.84	0.000021	0.00064	0.375	0.013	0.01450	0.01754	3.0	0.300	**0.539**	**0.003**	0.00007	0.00056
(Scupper)																
11	ED1 5472.000	1.00	50.36	13.84	0.000021	0.00053	0.375	0.013	0.01615	0.01777	3.0	0.300	**0.471**	**0.003**	0.00004	0.00050
(Scupper)																
12	ED1 5469.000	1.00	50.36	13.84	0.000021	0.00050	0.375	0.013	0.01780	0.01800	3.0	0.300	**0.431**	**0.002**	0.00002	0.00048
(Scupper)																
13	ED1 5462.500	1.00	50.36	13.84	0.000021	0.00103	0.375	0.013	0.02000	0.01851	6.5	0.300	**0.523**	**0.004**	0.00011	0.00092
(Scupper)																
14	ED1 5459.500	1.00	50.36	13.84	0.000021	0.00054	0.375	0.013	0.02000	0.01874	3.0	0.300	**0.411**	**0.002**	0.00002	0.00053
(Scupper)																
15	ED1 5456.500	1.00	50.36	13.84	0.000021	0.00048	0.375	0.013	0.02000	0.01897	3.0	0.300	**0.390**	**0.002**	0.00001	0.00047
(Scupper)																
16	ED1 5453.000	1.00	50.36	13.876	0.000024	0.00056	0.375	0.013	0.02000	0.01924	3.5	0.300	**0.413**	**0.002**	0.00002	0.00054
(Scupper)																
17	ED1 5449.500	1.00	50.36	13.923	0.000024	0.00057	0.375	0.013	0.02000	0.01951	3.5	0.300	**0.414**	**0.002**	0.00002	0.00055
(Scupper)																
18	ED1 5446.500	1.00	50.36	13.9634	0.000021	0.00048	0.375	0.013	0.02000	0.01974	3.0	0.300	**0.389**	**0.002**	0.00001	0.00047
(Scupper)																
19	ED1 5443.500	1.00	50.36	14.0037	0.000021	0.00048	0.375	0.013	0.02000	0.01997	3.0	0.300	**0.387**	**0.002**	0.00001	0.00047
(Scupper)																
20	ED1 5440.500	1.00	50.36	14.0441	0.000021	0.00048	0.375	0.013	0.02000	0.02021	3.0	0.300	**0.386**	**0.002**	0.00001	0.00047
(Scupper)																
21	ED1 5437.500	1.00	50.36	14.0844	0.000021	0.00048	0.375	0.013	0.02000	0.02044	3.0	0.300	**0.386**	**0.002**	0.00001	0.00047
(Scupper)																
22	ED1 5434.500	1.00	50.36	14.1248	0.000021	0.00048	0.375	0.013	0.02000	0.02067	3.0	0.300	**0.386**	**0.002**	0.00001	0.00047
(Scupper)																
23	ED1 5431.500	1.00	50.36	14.1651	0.000021	0.00048	0.375	0.013	0.02000	0.02090	3.0	0.300	**0.386**	**0.002**	0.00001	0.00048
(Scupper)																
24	ED1 5428.500	1.00	50.36	14.2054	0.000021	0.00049	0.375	0.013	0.02000	0.02113	3.0	0.300	**0.385**	**0.002**	0.00001	0.00048
(Scupper)																
25	ED1 5425.500	1.00	50.36	14.2458	0.000021	0.00049	0.375	0.013	0.02000	0.02136	3.0	0.300	**0.385**	**0.002**	0.00001	0.00048
(Scupper)																
26	ED1 5422.500	1.00	50.36	14.2861	0.000021	0.00049	0.375	0.013	0.02000	0.02160	3.0	0.300	**0.385**	**0.002**	0.00001	0.00048

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	T **m**	**Depth 0.3m from Curb m**	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
1	ED1 5545.00	-	1.00	50.36	13.840	0.000095	0.00133	0.375	0.013	0.00440	0.01213	**1.609**	**0.006**	0.817	4.738	0.300	0.111	0.00119	0.00015
2	ED1 5542.00	3.000	1.00	50.36	13.840	0.000042	0.00177	0.375	0.013	0.00440	0.01237	**1.783**	**0.007**	0.817	5.367	0.300	0.098	0.00160	0.00017
3	ED1 5539.00	3.000	1.00	50.36	13.840	0.000042	0.00218	0.375	0.013	0.00440	0.01260	**1.922**	**0.007**	0.817	5.892	0.300	0.090	0.00199	0.00020
4	ED1 5536.00	3.000	1.00	50.36	13.840	0.000042	0.00257	0.375	0.013	0.00440	0.01283	**2.037**	**0.008**	0.817	6.347	0.300	0.083	0.00236	0.00021
5	ED1 5533.00	3.000	1.00	50.36	13.840	0.000042	0.00294	0.375	0.013	0.00440	0.01306	**2.135**	**0.008**	0.817	6.753	0.300	0.079	0.00271	0.00023
6	ED1 5530.00	3.000	1.00	50.36	13.840	0.000042	0.00330	0.375	0.013	0.00440	0.01329	**2.221**	**0.008**	0.817	7.120	0.300	0.075	0.00305	0.00025
7	ED1 5527.00	3.000	1.00	50.36	13.840	0.000042	0.00364	0.375	0.013	0.00440	0.01352	**2.296**	**0.009**	0.817	7.458	0.300	0.071	0.00338	0.00026
8	ED1 5524.00	3.000	1.00	50.36	13.840	0.000042	0.00396	0.375	0.013	0.00440	0.01376	**2.364**	**0.009**	0.817	7.772	0.300	0.068	0.00369	0.00027
9	ED1 5521.00	3.000	1.00	50.36	13.840	0.000042	0.00428	0.375	0.013	0.00440	0.01399	**2.425**	**0.009**	0.817	8.065	0.300	0.066	0.00400	0.00028
(DRAIN)																			
10	ED1 5518.00	3.000	1.00	50.36	13.840	0.000021	0.00346	0.375	0.013	0.00350	0.01422	**2.576**	**0.008**	0.817	8.507	0.300	0.063	0.00324	0.00022
(DRAIN)																			
11	ED1 5514.50	3.500	1.00	50.36	13.840	0.000021	0.00292	0.375	0.013	0.00350	0.01449	**2.409**	**0.007**	0.817	7.966	0.300	0.067	0.00273	0.00019
(DRAIN)																			
12	ED1 5510.50	4.000	1.00	50.36	13.840	0.000035	0.00261	0.375	0.013	0.00350	0.01480	**2.301**	**0.007**	0.817	7.651	0.300	0.069	0.00243	0.00018
(DRAIN)																			
13	ED1 5506.50	4.000	1.00	50.36	13.840	0.000021	0.00234	0.375	0.013	0.00350	0.01511	**2.198**	**0.007**	0.817	7.343	0.300	0.072	0.00217	0.00017
(DRAIN)																			
14	ED1 5500.50	6.000	1.00	50.36	13.840	0.000062	0.00255	0.375	0.013	0.00350	0.01557	**2.260**	**0.007**	0.817	7.693	0.300	0.069	0.00238	0.00018
15	ED1 5497.50	3.000	1.00	50.36	13.840	0.000042	0.00296	0.375	0.013	0.00350	0.01580	**2.383**	**0.007**	0.817	8.225	0.300	0.065	0.00277	0.00019
16	ED1 5494.50	3.000	1.00	50.36	13.840	0.000042	0.00336	0.375	0.013	0.00378	0.01603	**2.375**	**0.008**	0.817	8.319	0.300	0.064	0.00314	0.00021
17	ED1 5491.50	3.000	1.00	50.36	13.840	0.000042	0.00373	0.375	0.013	0.00543	0.01627	**1.964**	**0.009**	0.817	7.024	0.300	0.076	0.00345	0.00028
18	ED1 5488.50	3.000	1.00	50.36	13.840	0.000042	0.00403	0.375	0.013	0.00708	0.01650	**1.709**	**0.010**	0.817	6.216	0.300	0.085	0.00369	0.00034
(DRAIN)																			
19	ED1 5485.50	3.000	1.00	50.36	13.840	0.000021	0.00257	0.375	0.013	0.00873	0.01673	**1.262**	**0.008**	0.817	4.555	0.300	0.115	0.00227	0.00030
(DRAIN)																			
20	ED1 5482.50	3.000	1.00	50.36	13.840	0.000021	0.00148	0.375	0.013	0.01038	0.01696	**0.918**	**0.006**	0.817	3.266	0.300	0.159	0.00124	0.00023
(DRAIN)																			
21	ED1 5479.50	3.000	1.00	50.36	13.840	0.000021	0.00080	0.375	0.013	0.01203	0.01719	**0.664**	**0.004**	0.817	2.324	0.300	0.220	0.00063	0.00018
(DRAIN)																			
22	ED1 5476.50	3.000	1.00	50.36	13.840	0.000021	0.00048	0.375	0.013	0.01368	0.01743	**0.505**	**0.003**	0.817	1.742	0.300	0.288	0.00034	0.00014
(DRAIN)																			
23	ED1 5473.50	3.000	1.00	50.36	13.840	0.000021	0.00037	0.375	0.013	0.01533	0.01766	**0.423**	**0.002**	0.817	1.456	0.300	0.340	0.00024	0.00012
(DRAIN)																			
24	ED1 5470.50	3.000	1.00	50.36	13.840	0.000021	0.00033	0.375	0.013	0.01698	0.01789	**0.380**	**0.001**	0.817	1.315	0.300	0.373	0.00021	0.00012
(DRAIN)																			
25	ED1 5464.00	6.500	1.00	50.36	13.840	0.000069	0.00100	0.375	0.013	0.02000	0.01839	**0.518**	**0.004**	0.817	1.914	0.300	0.264	0.00073	0.00026
(DRAIN)																			
26	ED1 5461.00	3.000	1.00	50.36	13.840	0.000021	0.00040	0.375	0.013	0.02000	0.01862	**0.366**	**0.001**	0.817	1.307	0.300	0.375	0.00025	0.00015
(DRAIN)																			
27	ED1 5458.00	3.000	1.00	50.36	13.840	0.000021	0.00031	0.375	0.013	0.02000	0.01885	**0.332**	**0.001**	0.817	1.180	0.300	0.410	0.00018	0.00013
(DRAIN)																			
28	ED1 5454.75	3.250	1.00	50.36	13.852	0.000024	0.00035	0.375	0.013	0.02000	0.01911	**0.348**	**0.001**	0.817	1.250	0.300	0.390	0.00021	0.00014
(DRAIN)																			
29	ED1 5451.25	3.500	1.00	50.36	13.900	0.000024	0.00036	0.375	0.013	0.02000	0.01938	**0.350**	**0.001**	0.817	1.269	0.300	0.385	0.00022	0.00014
(DRAIN)																			
30	ED1 5448.00	3.250	1.00	50.36	13.943	0.000021	0.00031	0.375	0.013	0.02000	0.01963	**0.331**	**0.001**	0.817	1.200	0.300	0.404	0.00019	0.00013
(DRAIN)																			
31	ED1 5445.00	3.000	1.00	50.36	13.984	0.000021	0.00031	0.375	0.013	0.02000	0.01986	**0.327**	**0.001**	0.817	1.192	0.300	0.407	0.00018	0.00012
(DRAIN)																			
32	ED1 5442.00	3.000	1.00	50.36	14.024	0.000021	0.00031	0.375	0.013	0.02000	0.02009	**0.327**	**0.001**	0.817	1.196	0.300	0.405	0.00018	0.00012
(DRAIN)																			
33	ED1 5439.00	3.000	1.00	50.36	14.064	0.000021	0.00031	0.375	0.013	0.02000	0.02032	**0.327**	**0.001**	0.817	1.202	0.300	0.404	0.00018	0.00012
(DRAIN)																			
34	ED1 5436.00	3.000	1.00	50.36	14.105	0.000021	0.00031	0.375	0.013	0.02000	0.02055	**0.326**	**0.001**	0.817	1.207	0.300	0.402	0.00018	0.00012
(DRAIN)																			
35	ED1 5433.00	3.000	1.00	50.36	14.145	0.000021	0.00031	0.375	0.013	0.02000	0.02079	**0.326**	**0.001**	0.817	1.213	0.300	0.400	0.00018	0.00012
(DRAIN)																			
36	ED1 5430.00	3.000	1.00	50.36	14.185	0.000021	0.00031	0.375	0.013	0.02000	0.02102	**0.325**	**0.001**	0.817	1.218	0.300	0.399	0.00019	0.00012
(DRAIN)																			
37	ED1 5427.00	3.000	1.00	50.36	14.226	0.000021	0.00031	0.375	0.013	0.02000	0.02125	**0.325**	**0.001**	0.817	1.223	0.300	0.397	0.00019	0.00012
(DRAIN)																			
38	ED1 5424.00	3.000	1.00	50.36	14.266	0.000021	0.00031	0.375	0.013	0.02000	0.02148	**0.325**	**0.000**	0.817	1.229	0.300	0.396	0.00019	0.00012
(DRAIN)																			

Drain No.	Station	C	i	Trib. Width	A	Q	K	n	S_x	S_L	Drain Spa.	Drain Width	T	**Depth 0.3m from Curb**	Bypass Flow	Intercept Flow
	m		mm/hr	m	km^2	m^3/s					m	m	m	m	m^3/s	m^3/s
(Scupper)																
27	ED1 5419.500	1.00	50.36	14.3265	0.000021	0.00049	0.375	0.013	0.02000	0.02183	3.0	0.300	**0.385**	**0.002**	0.00001	0.00048
(Scupper)																
28	ED1 5416.500	1.00	50.36	14.3668	0.000022	0.00049	0.375	0.013	0.02000	0.02206	3.0	0.300	**0.384**	**0.002**	0.00001	0.00048
(Scupper)																
29	ED1 5413.000	1.00	50.36	14.4139	0.000025	0.00058	0.375	0.013	0.02000	0.02233	3.5	0.300	**0.409**	**0.002**	0.00002	0.00057
(Scupper)																
30	ED1 5409.500	1.00	50.36	14.4609	0.000025	0.00059	0.375	0.013	0.02000	0.02260	3.5	0.300	**0.410**	**0.002**	0.00002	0.00058
(Scupper)																
31	ED1 5406.500	1.00	50.36	14.5013	0.000022	0.00051	0.375	0.013	0.02000	0.02283	3.0	0.300	**0.386**	**0.002**	0.00001	0.00050
(Scupper)																
32	ED1 5403.500	1.00	50.36	14.5416	0.000022	0.00050	0.375	0.013	0.02000	0.02306	3.0	0.300	**0.384**	**0.002**	0.00001	0.00049
(Scupper)																
33	ED1 5400.000	1.00	50.36	14.5887	0.000026	0.00059	0.375	0.013	0.02000	0.02333	3.5	0.300	**0.408**	**0.002**	0.00002	0.00058
(Scupper)																
34	ED1 5396.500	1.00	50.36	14.6358	0.000026	0.00060	0.375	0.013	0.02000	0.02361	3.5	0.300	**0.409**	**0.002**	0.00002	0.00059
(Scupper)																
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(Scupper)																
35	ED1 5380.500	1.00	50.36	14.8509	0.000030	0.00199	0.375	0.013	0.02000	0.02403	16.0	0.300	**0.638**	**0.007**	0.00037	0.00162
(Scupper)																
36	ED1 5377.500	1.00	50.36	14.8913	0.000022	0.00080	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.454**	**0.003**	0.00004	0.00076
(Scupper)																
37	ED1 5374.500	1.00	50.36	14.9389	0.000022	0.00055	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.393**	**0.002**	0.00001	0.00053
(Scupper)																
38	ED1 5371.500	1.00	50.36	14.9918	0.000022	0.00052	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.386**	**0.002**	0.00001	0.00051
(Scupper)																
39	ED1 5368.500	1.00	50.36	15.0447	0.000023	0.00052	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.386**	**0.002**	0.00001	0.00051
(Scupper)																
40	ED1 5365.500	1.00	50.36	15.0976	0.000023	0.00052	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.387**	**0.002**	0.00001	0.00051
(Scupper)																
41	ED1 5362.500	1.00	50.36	15.1505	0.000023	0.00053	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.388**	**0.002**	0.00001	0.00052
(Scupper)																
42	ED1 5359.500	1.00	50.36	15.2034	0.000023	0.00053	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.388**	**0.002**	0.00001	0.00052
(Scupper)																
43	ED1 5356.500	1.00	50.36	15.2562	0.000023	0.00053	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.389**	**0.002**	0.00001	0.00052
(Scupper)																
44	ED1 5353.500	1.00	50.36	15.3091	0.000023	0.00053	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.389**	**0.002**	0.00001	0.00052
(Scupper)																
45	ED1 5350.500	1.00	50.36	15.362	0.000023	0.00053	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.390**	**0.002**	0.00001	0.00052
(Scupper)																
46	ED1 5347.000	1.00	50.36	15.4237	0.000027	0.00063	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.416**	**0.002**	0.00002	0.00061
(Scupper)																
47	ED1 5343.500	1.00	50.36	15.4854	0.000027	0.00064	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.418**	**0.002**	0.00002	0.00062
(Scupper)																
48	ED1 5340.500	1.00	50.36	15.5383	0.000023	0.00055	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.394**	**0.002**	0.00001	0.00054
(Scupper)																
49	ED1 5337.500	1.00	50.36	15.5912	0.000023	0.00054	0.375	0.013	0.02000	0.02403	3.0	0.300	**0.393**	**0.002**	0.00001	0.00053
(Scupper)																
50	ED1 5334.000	1.00	50.36	15.6529	0.000027	0.00064	0.375	0.013	0.02000	0.02403	3.5	0.300	**0.418**	**0.002**	0.00002	0.00062
(Scupper)																
51	ED1 5330.500	1.00	50.36	15.7146	0.000028	0.00066	0.375	0.013	0.01910	0.02403	3.5	0.300	**0.433**	**0.003**	0.00003	0.00063
(Scupper)																
52	ED1 5327.500	1.00	50.36	15.7674	0.000024	0.00057	0.375	0.013	0.01729	0.02403	3.0	0.300	**0.437**	**0.002**	0.00003	0.00054
(Scupper)																
53	ED1 5324.500	1.00	50.36	15.8203	0.000024	0.00058	0.375	0.013	0.01548	0.02403	3.0	0.300	**0.471**	**0.003**	0.00004	0.00054
(Scupper)																
54	ED1 5321.000	1.00	50.36	15.882	0.000028	0.00070	0.375	0.013	0.01338	0.02403	3.5	0.300	**0.555**	**0.003**	0.00009	0.00061
(Scupper)																
55	ED1 5318.000	1.00	50.36	15.9349	0.000024	0.00065	0.375	0.013	0.01157	0.02403	3.0	0.300	**0.591**	**0.003**	0.00010	0.00055
(Scupper)																
56	ED1 5315.000	1.00	50.36	15.9878	0.000024	0.00067	0.375	0.013	0.00976	0.02403	3.0	0.300	**0.664**	**0.004**	0.00013	0.00053
(Scupper)																
57	ED1 5312.000	1.00	50.36	16.0407	0.000024	0.00071	0.375	0.013	0.00796	0.02403	3.0	0.300	**0.773**	**0.004**	0.00019	0.00052
(Scupper)																
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(Scupper)																
(Scupper)																
58	ED1 5294.000	1.00	50.36	16.3033	0.000024	0.00372	0.375	0.013	-0.00288	0.02403	18.0	0.300	**2.709**	**0.007**	0.00272	0.00100
(Scupper)																
59	ED1 5291.000	1.00	50.36	16.2984	0.000024	0.00323	0.375	0.013	-0.00469	0.02403	3.0	0.300	**1.895**	**0.007**	0.00204	0.00119
(Scupper)																
60	ED1 5288.000	1.00	50.36	16.2935	0.000024	0.00253	0.375	0.013	-0.00650	0.02403	3.0	0.300	**1.411**	**0.007**	0.00134	0.00119
(Scupper)																
61	ED1 5285.000	1.00	50.36	16.2886	0.000024	0.00184	0.375	0.013	-0.00830	0.02403	3.0	0.300	**1.074**	**0.006**	0.00077	0.00107
(Scupper)																
62	ED1 5282.000	1.00	50.36	16.2836	0.000024	0.00129	0.375	0.013	-0.01011	0.02403	3.0	0.300	**0.831**	**0.005**	0.00039	0.00090

Scupper No.	Station	Scupper Spacing	C	i	Trib. Width	A	Q	K	n	S_x	S_L	T	**Depth 0.3m from Curb**	K	L_T	L	E	Bypass Flow	Intercept. Flow
	m	m		mm/hr	m	km^2	m^3/s					m	m		m	m		m^3/s	m^3/s
39	ED1 5421.00	3.000	1.00	50.36	14.306	0.000021	0.00031	0.375	0.013	0.02000	0.02171	**0.324**	**0.000**	0.817	1.234	0.300	0.394	0.00019	0.00012
(DRAIN)																			
40	ED1 5418.00	3.000	1.00	50.36	14.347	0.000022	0.00031	0.375	0.013	0.02000	0.02194	**0.324**	**0.000**	0.817	1.240	0.300	0.393	0.00019	0.00012
(DRAIN)																			
41	ED1 5414.75	3.250	1.00	50.36	14.390	0.000025	0.00036	0.375	0.013	0.02000	0.02220	**0.343**	**0.001**	0.817	1.326	0.300	0.370	0.00023	0.00013
(DRAIN)																			
42	ED1 5411.25	3.500	1.00	50.36	14.437	0.000025	0.00037	0.375	0.013	0.02000	0.02247	**0.345**	**0.001**	0.817	1.346	0.300	0.365	0.00024	0.00014
(DRAIN)																			
43	ED1 5408.00	3.250	1.00	50.36	14.481	0.000022	0.00032	0.375	0.013	0.02000	0.02272	**0.327**	**0.001**	0.817	1.273	0.300	0.384	0.00020	0.00012
(DRAIN)																			
44	ED1 5405.00	3.000	1.00	50.36	14.521	0.000022	0.00032	0.375	0.013	0.02000	0.02295	**0.323**	**0.000**	0.817	1.263	0.300	0.386	0.00019	0.00012
(DRAIN)																			
45	ED1 5401.75	3.250	1.00	50.36	14.565	0.000025	0.00037	0.375	0.013	0.02000	0.02320	**0.341**	**0.001**	0.817	1.351	0.300	0.364	0.00023	0.00013
(DRAIN)																			
46	ED1 5398.25	3.500	1.00	50.36	14.612	0.000026	0.00038	0.375	0.013	0.02000	0.02347	**0.344**	**0.001**	0.817	1.370	0.300	0.359	0.00024	0.00014
(DRAIN)																			
47	ED1 5394.50	3.750	1.00	50.36	14.663	0.000029	0.00043	0.375	0.013	0.02000	0.02376	**0.361**	**0.001**	0.817	1.454	0.300	0.340	0.00028	0.00015
48	ED1 5391.50	3.000	1.00	50.36	14.703	0.000044	0.00091	0.375	0.013	0.02000	0.02399	**0.475**	**0.004**	0.817	1.992	0.300	0.255	0.00068	0.00023
49	ED1 5388.50	3.000	1.00	50.36	14.743	0.000044	0.00130	0.375	0.013	0.02000	0.02403	**0.544**	**0.005**	0.817	2.319	0.300	0.221	0.00101	0.00029
50	ED1 5385.50	3.000	1.00	50.36	14.784	0.000044	0.00164	0.375	0.013	0.02000	0.02403	**0.593**	**0.006**	0.817	2.556	0.300	0.201	0.00131	0.00033
51	ED1 5382.50	3.000	1.00	50.36	14.824	0.000044	0.00194	0.375	0.013	0.02000	0.02403	**0.632**	**0.007**	0.817	2.741	0.300	0.188	0.00157	0.00036
(DRAIN)																			
52	ED1 5379.00	3.500	1.00	50.36	14.871	0.000022	0.00068	0.375	0.013	0.02000	0.02403	**0.427**	**0.003**	0.817	1.767	0.300	0.285	0.00049	0.00019
(DRAIN)																			
53	ED1 5376.00	3.000	1.00	50.36	14.912	0.000022	0.00036	0.375	0.013	0.02000	0.02403	**0.336**	**0.001**	0.817	1.353	0.300	0.363	0.00023	0.00013
(DRAIN)																			
54	ED1 5373.00	3.000	1.00	50.36	14.965	0.000022	0.00033	0.375	0.013	0.02000	0.02403	**0.325**	**0.000**	0.817	1.301	0.300	0.376	0.00020	0.00012
(DRAIN)																			
55	ED1 5370.00	3.000	1.00	50.36	15.018	0.000023	0.00033	0.375	0.013	0.02000	0.02403	**0.324**	**0.000**	0.817	1.299	0.300	0.377	0.00020	0.00012
(DRAIN)																			
56	ED1 5367.00	3.000	1.00	50.36	15.071	0.000023	0.00033	0.375	0.013	0.02000	0.02403	**0.325**	**0.000**	0.817	1.301	0.300	0.376	0.00020	0.00012
(DRAIN)																			
57	ED1 5364.00	3.000	1.00	50.36	15.124	0.000023	0.00033	0.375	0.013	0.02000	0.02403	**0.325**	**0.001**	0.817	1.303	0.300	0.376	0.00021	0.00012
(DRAIN)																			
58	ED1 5361.00	3.000	1.00	50.36	15.177	0.000023	0.00033	0.375	0.013	0.02000	0.02403	**0.326**	**0.001**	0.817	1.306	0.300	0.375	0.00021	0.00012
(DRAIN)																			
59	ED1 5358.00	3.000	1.00	50.36	15.230	0.000023	0.00033	0.375	0.013	0.02000	0.02403	**0.326**	**0.001**	0.817	1.308	0.300	0.374	0.00021	0.00012
(DRAIN)																			
60	ED1 5355.00	3.000	1.00	50.36	15.283	0.000023	0.00033	0.375	0.013	0.02000	0.02403	**0.327**	**0.001**	0.817	1.310	0.300	0.374	0.00021	0.00012
(DRAIN)																			
61	ED1 5352.00	3.000	1.00	50.36	15.336	0.000023	0.00033	0.375	0.013	0.02000	0.02403	**0.327**	**0.001**	0.817	1.312	0.300	0.373	0.00021	0.00013
(DRAIN)																			
62	ED1 5348.75	3.250	1.00	50.36	15.393	0.000027	0.00039	0.375	0.013	0.02000	0.02403	**0.347**	**0.001**	0.817	1.399	0.300	0.352	0.00025	0.00014
(DRAIN)																			
63	ED1 5345.25	3.500	1.00	50.36	15.455	0.000027	0.00040	0.375	0.013	0.02000	0.02403	**0.350**	**0.001**	0.817	1.417	0.300	0.348	0.00026	0.00014
(DRAIN)																			
64	ED1 5342.00	3.250	1.00	50.36	15.512	0.000023	0.00035	0.375	0.013	0.02000	0.02403	**0.333**	**0.001**	0.817	1.337	0.300	0.367	0.00022	0.00013
(DRAIN)																			
65	ED1 5339.00	3.000	1.00	50.36	15.565	0.000023	0.00034	0.375	0.013	0.02000	0.02403	**0.330**	**0.001**	0.817	1.322	0.300	0.371	0.00021	0.00013
(DRAIN)																			
66	ED1 5335.75	3.250	1.00	50.36	15.622	0.000027	0.00040	0.375	0.013	0.02000	0.02403	**0.349**	**0.001**	0.817	1.409	0.300	0.350	0.00026	0.00014
(DRAIN)																			
67	ED1 5332.25	3.500	1.00	50.36	15.684	0.000027	0.00041	0.375	0.013	0.02000	0.02403	**0.353**	**0.001**	0.817	1.427	0.300	0.346	0.00027	0.00014
(DRAIN)																			
68	ED1 5329.00	3.250	1.00	50.36	15.741	0.000024	0.00036	0.375	0.013	0.01819	0.02403	**0.357**	**0.001**	0.817	1.433	0.300	0.345	0.00024	0.00012
(DRAIN)																			
69	ED1 5326.00	3.000	1.00	50.36	15.794	0.000024	0.00036	0.375	0.013	0.01639	0.02403	**0.381**	**0.001**	0.817	1.524	0.300	0.326	0.00024	0.00012
(DRAIN)																			
70	ED1 5322.75	3.250	1.00	50.36	15.851	0.000028	0.00043	0.375	0.013	0.01443	0.02403	**0.441**	**0.002**	0.817	1.772	0.300	0.284	0.00031	0.00012
(DRAIN)																			
71	ED1 5319.50	3.250	1.00	50.36	15.908	0.000024	0.00042	0.375	0.013	0.01247	0.02403	**0.480**	**0.002**	0.817	1.924	0.300	0.263	0.00031	0.00011
(DRAIN)																			
72	ED1 5316.50	3.000	1.00	50.36	15.961	0.000024	0.00044	0.375	0.013	0.01067	0.02403	**0.535**	**0.003**	0.817	2.137	0.300	0.238	0.00033	0.00010
(DRAIN)																			
73	ED1 5313.50	3.000	1.00	50.36	16.014	0.000024	0.00047	0.375	0.013	0.00886	0.02403	**0.620**	**0.003**	0.817	2.474	0.300	0.208	0.00038	0.00010
(DRAIN)																			
74	ED1 5310.50	3.000	1.00	50.36	16.067	0.000024	0.00053	0.375	0.013	0.00705	0.02403	**0.747**	**0.003**	0.817	2.980	0.300	0.174	0.00044	0.00009
75	ED1 5307.50	3.000	1.00	50.36	16.120	0.000048	0.00112	0.375	0.013	0.00525	0.02403	**1.188**	**0.005**	0.817	4.866	0.300	0.108	0.00100	0.00012
76	ED1 5304.50	3.000	1.00	50.36	16.173	0.000049	0.00168	0.375	0.013	0.00344	0.02403	**1.802**	**0.005**	0.817	7.435	0.300	0.071	0.00156	0.00012
77	ED1 5301.50	3.000	1.00	50.36	16.226	0.000049	0.00225	0.375	0.013	0.00163	0.02403	**3.199**	**0.005**	0.817	13.127	0.300	0.041	0.00216	0.00009
78	ED1 5298.50	3.000	1.00	50.36	16.279	0.000049	**0.00285**	0.375	0.013	-0.00017	0.02403	**14.230**	**0.002**	0.817	55.796	0.300	0.010	0.00282	0.00003
79	ED1 5295.50	3.000	1.00	50.36	16.306	0.000049	0.00351	0.375	0.013	-0.00198	0.02403	**3.352**	**0.006**	0.817	14.100	0.300	0.038	0.00338	0.00013
(DRAIN)																			
80	ED1 5292.50	3.000	1.00	50.36	16.301	0.000024	0.00307	0.375	0.013	-0.00379	0.02403	**2.124**	**0.007**	0.817	9.027	0.300	0.059	0.00289	0.00018
(DRAIN)																			
81	ED1 5289.50	3.000	1.00	50.36	16.296	0.000024	0.00238	0.375	0.013	-0.00559	0.02403	**1.515**	**0.007**	0.817	6.428	0.300	0.082	0.00219	0.00020
(DRAIN)																			
82	ED1 5286.50	3.000	1.00	50.36	16.291	0.000024	0.00168	0.375	0.013	-0.00740	0.02403	**1.116**	**0.006**	0.817	4.695	0.300	0.112	0.00149	0.00019
(DRAIN)																			
83	ED1 5283.50	3.000	1.00	50.36	16.286	0.000024	0.00111	0.375	0.013	-0.00921	0.02403	**0.833**	**0.005**	0.817	3.460	0.300	0.151	0.00094	0.00017
(DRAIN)																			

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spa. m	Drain Width m	T m	Depth 0.3m from Curb m	Bypass Flow m^3/s	Intercept. Flow m^3/s
(Scupper)																
63	ED1 5279.000	1.00	50.36	16.2787	0.000024	0.00093	0.375	0.013	-0.01192	0.02383	3.0	0.300	**0.665**	**0.004**	0.00019	0.00075
(Scupper)																
64	ED1 5276.000	1.00	50.36	16.2738	0.000024	0.00075	0.375	0.013	-0.01372	0.02321	3.0	0.300	**0.563**	**0.004**	0.00010	0.00065
(Scupper)																
65	ED1 5273.000	1.00	50.36	16.2689	0.000024	0.00066	0.375	0.013	-0.01553	0.02260	3.0	0.300	**0.500**	**0.003**	0.00006	0.00060
(Scupper)																
66	ED1 5270.000	1.00	50.36	16.2639	0.000024	0.00062	0.375	0.013	-0.01733	0.02198	3.0	0.300	**0.457**	**0.003**	0.00004	0.00058
(Scupper)																
67	ED1 5267.000	1.00	50.36	16.259	0.000024	0.00059	0.375	0.013	-0.01914	0.02137	3.0	0.300	**0.425**	**0.002**	0.00002	0.00057
(Scupper)																
68	ED1 5264.000	1.00	50.36	16.2541	0.000024	0.00057	0.375	0.013	-0.02095	0.02076	3.0	0.300	**0.400**	**0.002**	0.00001	0.00056
(Scupper)																
69	ED1 5261.000	1.00	50.36	16.2491	0.000024	0.00056	0.375	0.013	-0.02275	0.02014	3.0	0.300	**0.378**	**0.002**	0.00001	0.00055
(Scupper)																
70	ED1 5257.000	1.00	50.36	16.2426	0.000032	0.00075	0.375	0.013	-0.02516	0.01933	4.0	0.300	**0.399**	**0.002**	0.00002	0.00073
(Scupper)																
71	ED1 5254.000	1.00	50.36	16.2377	0.000024	0.00054	0.375	0.013	-0.02697	0.01871	3.0	0.300	**0.341**	**0.001**	0.00000	0.00054
(Scupper)																
(Scupper)																
(Scupper)																
(Scupper)																
72	ED1 5240.500	1.00	50.36	16.2155	0.000036	0.00168	0.375	0.013	-0.03000	0.01595	13.5	0.300	**0.502**	**0.006**	0.00015	0.00153
(Scupper)																
73	ED1 5237.500	1.00	50.36	16.2106	0.000024	0.00061	0.375	0.013	-0.03000	0.01534	3.0	0.300	**0.347**	**0.001**	0.00000	0.00061
(Scupper)																
74	ED1 5234.000	1.00	50.36	16.2048	0.000028	0.00061	0.375	0.013	-0.03000	0.01462	3.5	0.300	**0.348**	**0.001**	0.00000	0.00060
(Scupper)																
75	ED1 5231.000	1.00	50.36	16.1999	0.000024	0.00051	0.375	0.013	-0.03000	0.01401	3.0	0.300	**0.329**	**0.001**	0.00000	0.00051
(Scupper)																
76	ED1 5228.000	1.00	50.36	16.195	0.000024	0.00050	0.375	0.013	-0.03000	0.01339	3.0	0.300	**0.330**	**0.001**	0.00000	0.00050
(Scupper)																
77	ED1 5225.000	1.00	50.36	16.19	0.000024	0.00050	0.375	0.013	-0.03000	0.01278	3.0	0.300	**0.333**	**0.001**	0.00000	0.00050
78	ED1 5219.500	1.00	50.36	16.181	0.000089	0.00126	0.375	0.013	-0.03000	0.01165	5.5	0.300	**0.477**	**0.005**	0.00009	0.00117
(Scupper)																
79	ED1 5216.500	1.00	50.36	16.181	0.000024	0.00055	0.375	0.013	-0.03000	0.01104	3.0	0.300	**0.355**	**0.002**	0.00000	0.00055
(Scupper)																
80	ED1 5213.500	1.00	50.36	16.181	0.000024	0.00049	0.375	0.013	-0.03000	0.01043	3.0	0.300	**0.344**	**0.001**	0.00000	0.00049
(Scupper)																
81	ED1 5210.500	1.00	50.36	16.181	0.000024	0.00049	0.375	0.013	-0.03000	0.00981	3.0	0.300	**0.347**	**0.001**	0.00000	0.00049
(Scupper)																
82	ED1 5207.500	1.00	50.36	16.181	0.000024	0.00049	0.375	0.013	-0.03000	0.00920	3.0	0.300	**0.350**	**0.002**	0.00000	0.00049
(Scupper)																
83	ED1 5204.500	1.00	50.36	16.181	0.000024	0.00048	0.375	0.013	-0.03000	0.00859	3.0	0.300	**0.354**	**0.002**	0.00000	0.00048
(Scupper)																
84	ED1 5201.500	1.00	50.36	16.181	0.000024	0.00048	0.375	0.013	-0.03000	0.00797	3.0	0.300	**0.358**	**0.002**	0.00000	0.00048
(Scupper)																
85	ED1 5198.500	1.00	50.36	16.181	0.000024	0.00048	0.375	0.013	-0.03000	0.00736	3.0	0.300	**0.362**	**0.002**	0.00000	0.00047
(Scupper)																
86	ED1 5195.500	1.00	50.36	16.181	0.000024	0.00047	0.375	0.013	-0.03000	0.00674	3.0	0.300	**0.367**	**0.002**	0.00001	0.00047
(Scupper)																
87	ED1 5192.500	1.00	50.36	16.181	0.000020	0.00045	0.375	0.013	-0.03000	0.00613	3.0	0.300	**0.365**	**0.002**	0.00000	0.00044
(Scupper)																
(Scupper)																
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(Scupper)																
(Scupper)																
(Scupper)																

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
84	ED1 5280.50	3.000	1.00	50.36	16.281	0.000024	0.00073	0.375	0.013	-0.01101	0.02403	**0.638**	**0.004**	0.817	2.611	0.300	0.197	0.00059	0.00014
(DRAIN)																			
85	ED1 5277.50	3.000	1.00	50.36	16.276	0.000024	0.00053	0.375	0.013	-0.01282	0.02352	**0.516**	**0.003**	0.817	2.070	0.300	0.246	0.00040	0.00013
(DRAIN)																			
86	ED1 5274.50	3.000	1.00	50.36	16.271	0.000024	0.00044	0.375	0.013	-0.01462	0.02290	**0.446**	**0.002**	0.817	1.754	0.300	0.287	0.00032	0.00013
(DRAIN)																			
87	ED1 5271.50	3.000	1.00	50.36	16.266	0.000024	0.00040	0.375	0.013	-0.01643	0.02229	**0.402**	**0.002**	0.817	1.557	0.300	0.320	0.00027	0.00013
(DRAIN)																			
88	ED1 5268.50	3.000	1.00	50.36	16.261	0.000024	0.00038	0.375	0.013	-0.01824	0.02168	**0.370**	**0.001**	0.817	1.417	0.300	0.348	0.00025	0.00013
(DRAIN)																			
89	ED1 5265.50	3.000	1.00	50.36	16.257	0.000024	0.00037	0.375	0.013	-0.02004	0.02106	**0.346**	**0.001**	0.817	1.308	0.300	0.374	0.00023	0.00014
(DRAIN)																			
90	ED1 5262.50	3.000	1.00	50.36	16.252	0.000024	0.00036	0.375	0.013	-0.02185	0.02045	**0.327**	**0.001**	0.817	1.219	0.300	0.399	0.00022	0.00014
(DRAIN)																			
91	ED1 5259.00	3.500	1.00	50.36	16.246	0.000032	0.00047	0.375	0.013	-0.02396	0.01973	**0.343**	**0.001**	0.817	1.275	0.300	0.383	0.00029	0.00018
(DRAIN)																			
92	ED1 5255.50	3.500	1.00	50.36	16.240	0.000024	0.00036	0.375	0.013	-0.02607	0.01902	**0.298**	**0.000**	0.817	1.077	0.300	**0.444**	0.00020	0.00016
(DRAIN)																			
93	ED1 5251.75	3.750	1.00	50.36	16.234	0.000037	0.00052	0.375	0.013	-0.02832	0.01825	**0.326**	**0.001**	0.817	1.177	0.300	**0.411**	0.00030	0.00021
94	ED1 5248.75	3.000	1.00	50.36	16.229	0.000049	0.00099	0.375	0.013	-0.03000	0.01764	**0.404**	**0.003**	0.817	1.479	0.300	0.335	0.00066	0.00033
95	ED1 5245.75	3.000	1.00	50.36	16.224	0.000049	0.00135	0.375	0.013	-0.03000	0.01702	**0.456**	**0.005**	0.817	1.663	0.300	0.301	0.00094	0.00040
96	ED1 5242.75	3.000	1.00	50.36	16.219	0.000049	0.00163	0.375	0.013	-0.03000	0.01641	**0.493**	**0.006**	0.817	1.782	0.300	0.282	0.00117	0.00046
(DRAIN)																			
97	ED1 5239.00	3.750	1.00	50.36	16.213	0.000024	0.00049	0.375	0.013	-0.03000	0.01564	**0.318**	**0.001**	0.817	1.063	0.300	0.450	0.00027	0.00022
(DRAIN)																			
98	ED1 5235.75	3.250	1.00	50.36	16.208	0.000028	0.00040	0.375	0.013	-0.03000	0.01498	**0.297**	**0.000**	0.817	0.965	0.300	0.489	0.00021	0.00020
(DRAIN)																			
99	ED1 5232.50	3.250	1.00	50.36	16.202	0.000024	0.00035	0.375	0.013	-0.03000	0.01431	**0.283**	**0.000**	0.817	0.893	0.300	0.522	0.00017	0.00018
(DRAIN)																			
100	ED1 5229.50	3.000	1.00	50.36	16.197	0.000024	0.00034	0.375	0.013	-0.03000	0.01370	**0.285**	**0.000**	0.817	0.878	0.300	0.529	0.00016	0.00018
(DRAIN)																			
101	ED1 5226.50	3.000	1.00	50.36	16.192	0.000024	0.00034	0.375	0.013	-0.03000	0.01309	**0.287**	**0.000**	0.817	0.866	0.300	0.535	0.00016	0.00018
(DRAIN)																			
(DRAIN)																			
102	ED1 5218.00	8.500	1.00	50.36	16.181	0.000024	0.00043	0.375	0.013	-0.03000	0.01135	**0.322**	**0.001**	0.817	0.914	0.300	0.511	0.00021	0.00022
(DRAIN)																			
103	ED1 5215.00	3.000	1.00	50.36	16.181	0.000024	0.00035	0.375	0.013	-0.03000	0.01073	**0.299**	**0.000**	0.817	0.819	0.300	0.560	0.00015	0.00019
(DRAIN)																			
104	ED1 5212.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.01012	**0.302**	**0.000**	0.817	0.803	0.300	0.569	0.00015	0.00020
(DRAIN)																			
105	ED1 5209.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00951	**0.305**	**0.000**	0.817	0.788	0.300	0.578	0.00015	0.00020
(DRAIN)																			
106	ED1 5206.00	3.000	1.00	50.36	16.181	0.000024	0.00034	0.375	0.013	-0.03000	0.00889	**0.309**	**0.000**	0.817	0.773	0.300	0.587	0.00014	0.00020
(DRAIN)																			
107	ED1 5203.00	3.000	1.00	50.36	16.181	0.000024	0.00035	0.375	0.013	-0.03000	0.00828	**0.314**	**0.000**	0.817	0.757	0.300	0.597	0.00014	0.00021
(DRAIN)																			
108	ED1 5200.00	3.000	1.00	50.36	16.181	0.000024	0.00035	0.375	0.013	-0.03000	0.00767	**0.318**	**0.001**	0.817	0.740	0.300	0.608	0.00014	0.00021
(DRAIN)																			
109	ED1 5197.00	3.000	1.00	50.36	16.181	0.000024	0.00035	0.375	0.013	-0.03000	0.00705	**0.324**	**0.001**	0.817	0.722	0.300	0.619	0.00013	0.00021
(DRAIN)																			
110	ED1 5193.75	3.250	1.00	50.36	16.181	0.000028	0.00040	0.375	0.013	-0.03000	0.00639	**0.349**	**0.001**	0.817	0.748	0.300	0.602	0.00016	0.00024
(DRAIN)																			
111	ED1 5191.00	2.750	1.00	50.36	16.181	0.000024	0.00035	0.375	0.013	-0.03000	0.00582	**0.336**	**0.001**	0.817	0.682	0.300	0.647	0.00012	0.00022
112	ED1 5188.00	3.000	1.00	50.36	16.181	0.000049	0.00081	0.375	0.013	-0.03000	0.00521	**0.470**	**0.005**	0.817	0.941	0.300	0.499	0.00040	0.00040
113	ED1 5185.00	3.000	1.00	50.36	16.181	0.000049	0.00109	0.375	0.013	-0.03000	0.00460	**0.539**	**0.007**	0.817	1.028	0.300	0.463	0.00058	0.00050
114	ED1 5182.00	3.000	1.00	50.36	16.181	0.000049	0.00127	0.375	0.013	-0.03000	0.00398	**0.586**	**0.009**	0.817	1.050	0.300	0.454	0.00069	0.00058
115	ED1 5179.00	3.000	1.00	50.36	16.181	0.000049	0.00138	0.375	0.013	-0.03000	0.00337	**0.624**	**0.010**	0.817	1.033	0.300	0.461	0.00074	0.00063
Low Point (116)	ED1 5176.00	3.000	1.00	50.36	16.181	0.000049	0.00143	-	-	-	-	-	-	-	-	-	-	-	-

Find location of Low Point at the North Curb:

Station		S_x	S	Elevation at Profile	Elevation at N. Curb
ED1 5176.20		-0.03000	0.00280	50.73811	50.4816
ED1 5176.10		-0.03000	0.00278	50.73783	50.4813
ED1 5176.00	**Low Point at North Curb**	-0.03000	0.00276	50.73755	**50.4811**
ED1 5175.90		-0.02994	0.00274	50.73728	50.4813
ED1 5175.80		-0.02988	0.00271	50.73701	50.4815
ED1 5170.00		-0.02647	0.00153	50.72470	50.4984
ED1 5162.53	Low Point on Profile	-0.02208	0.00000	50.71900	50.5302
ED1 5160.00		-0.02059	-0.00052	50.71965	50.5436

The Low Point at the north curb occurs at a location where a drain would conflict with a stringer. Therefore, a scupper is provided at the Low Point.

Cross slope transition - There are no drains near 0% cross slope, but check amount of water flowing across deck:

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S	T m
BB	ED1 5120								0.00294		
-	ED1 5124	1.00	50.36	12.586	0.0000503	0.00071	0.375	0.016	0.00059	-0.00788	**5.2348**
-	ED1 5125	1.00	50.36	12.586	0.0000629	**0.00089**	0.375	0.016	0.00000	-0.00768	**#DIV/0!**
-	ED1 5126	1.00	50.36	12.586	0.0000755	0.00106	0.375	0.016	-0.00059	-0.00747	**6.1557**

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S	Spacing m	Shoulder Width m	T m	Depth 0.3m from Curb m	Bypass Flow m^3/s	Intercept. Flow m^3/s
BB	ED1 5120															
100	ED1 5136	1.00	50.36	12.586	0.0002014	0.00284	0.375	0.016	-0.00647	-0.00543	16	0.300	**2.1095**	**0.0117**	0.00189	0.00095
(Scupper)																
99	ED1 5139	1.00	50.36	12.586	0.0000189	0.00210	0.375	0.016	-0.00824	-0.00481	3	0.300	**1.6563**	**0.0112**	0.00123	0.00087
98	ED1 5144	1.00	50.36	16.181	0.0000809	0.00237	0.375	0.016	-0.01118	-0.00379	5	0.300	**1.4988**	**0.0134**	0.00131	0.00106
(Scupper)																
97	ED1 5147	1.00	50.36	16.181	0.0000243	0.00162	0.375	0.016	-0.01294	-0.00318	3	0.300	**1.2256**	**0.0120**	0.00077	0.00085
(Scupper)																
96	ED1 5150	1.00	50.36	16.181	0.0000243	0.00112	0.375	0.016	-0.01471	-0.00256	3	0.300	**1.0265**	**0.0107**	0.00045	0.00068
(Scupper)																
95	ED1 5153	1.00	50.36	16.181	0.0000243	0.00083	0.375	0.016	-0.01647	-0.00195	3	0.300	**0.8987**	**0.0099**	0.00028	0.00055
(Scupper)																
94	ED1 5156	1.00	50.36	16.181	0.0000243	0.00066	0.375	0.016	-0.01824	-0.00134	3	0.300	**0.8329**	**0.0097**	0.00020	0.00046
(Scupper)																
93	ED1 5159	1.00	50.36	16.181	0.0000243	0.00056	0.375	0.016	-0.02000	-0.00072	3	0.300	**0.8249**	**0.0105**	0.00017	0.00039
(Scupper)																
*92	ED1 5162	1.00	50.36	16.181	0.0000243	0.00091	0.375	0.016	-0.02176	-0.00011	3	0.300	**1.3430**	**0.0227**	0.00046	0.00045
(Scupper)																
91	ED1 5165	1.00	50.36	16.181	0.0000243	0.00045	0.375	0.016	-0.02353	0.00051	3	0.300	**0.7339**	**0.0102**	0.00011	0.00034
(Scupper)																
90	ED1 5168	1.00	50.36	16.181	0.0000243	0.00045	0.375	0.016	-0.02529	0.00112	3	0.300	**0.6045**	**0.0077**	0.00007	0.00037
(Scupper)																
89	ED1 5171	1.00	50.36	16.181	0.0000243	0.00046	0.375	0.016	-0.02706	0.00173	3	0.300	**0.5412**	**0.0065**	0.00005	0.00041
(Scupper)																
88	ED1 5174	1.00	50.36	16.181	0.0000243	0.00047	0.375	0.016	-0.02882	0.00235	3	0.300	**0.4947**	**0.0056**	0.00004	0.00043
(Scupper)																

Total Flow at Low Point = 0.00202 m^3/s

Check scupper at low point by hand.

*Note: The flow demand for Drain 92 contains the bypass flow coming from the EDR1 ramp. See EDR1 spreadsheet for origin of value:

EDR1 Bypass = 0.00047 m^3/sec

Scuppers:

Scupper No.	Station m	Scupper Spacing m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	T m	Depth 0.3m from Curb m	K	L_T m	L m	E	Bypass Flow m^3/s	Intercept. Flow m^3/s
(DRAIN)																			
127	ED1 5137.50	-	1.00	60.56	12.586	0.000019	0.00221	0.375	0.015	-0.00735	-0.00512	**1.748**	**0.011**	0.817	3.047	0.300	0.170	0.00183	0.00038
(DRAIN)																			
(DRAIN)																			
126	ED1 5145.50	8.000	1.00	60.56	16.181	0.000024	0.00172	0.375	0.013	-0.01206	-0.00348	**1.191**	**0.011**	0.817	1.979	0.300	0.256	0.00128	0.00044
(DRAIN)																			
125	ED1 5148.50	3.000	1.00	60.56	16.181	0.000024	0.00118	0.375	0.013	-0.01382	-0.00287	**0.984**	**0.009**	0.817	1.468	0.300	0.337	0.00078	0.00040
(DRAIN)																			
124	ED1 5151.50	3.000	1.00	60.56	16.181	0.000024	0.00086	0.375	0.013	-0.01559	-0.00226	**0.848**	**0.009**	0.817	1.113	0.300	0.432	0.00049	0.00037
(DRAIN)																			
123	ED1 5154.50	3.000	1.00	60.56	16.181	0.000024	0.00069	0.375	0.013	-0.01735	-0.00164	**0.776**	**0.008**	0.817	0.867	0.300	0.535	0.00032	0.00037
(DRAIN)																			
122	ED1 5157.50	3.000	1.00	60.56	16.181	0.000024	0.00061	0.375	0.013	-0.01912	-0.00103	**0.762**	**0.009**	0.817	0.675	0.300	0.653	0.00021	0.00040
(DRAIN)																			
121	ED1 5160.50	3.000	1.00	60.56	16.181	0.000024	0.00058	0.375	0.013	-0.02088	-0.00042	**0.836**	**0.011**	0.817	0.476	0.300	0.833	0.00010	0.00048
(DRAIN)																			
120	ED1 5163.50	3.000	1.00	60.56	16.181	0.000024	0.00087	0.375	0.013	-0.02265	0.00020	**1.067**	**0.017**	0.817	0.432	0.300	0.881	0.00010	0.00077
(DRAIN)																			
119	ED1 5166.50	3.000	1.00	60.56	16.181	0.000024	0.00052	0.375	0.013	-0.02441	0.00081	**0.644**	**0.008**	0.817	0.507	0.300	0.800	0.00010	0.00042
(DRAIN)																			
118	ED1 5169.50	3.000	1.00	60.56	16.181	0.000024	0.00048	0.375	0.013	-0.02618	0.00143	**0.539**	**0.006**	0.817	0.558	0.300	0.750	0.00012	0.00036
(DRAIN)																			
117	ED1 5172.50	3.000	1.00	60.56	16.181	0.000024	0.00047	0.375	0.013	-0.02794	0.00204	**0.477**	**0.005**	0.817	0.588	0.300	0.723	0.00013	0.00034
(DRAIN)																			
Low Point (116)	ED1 5176.00	3.500	1.00	60.56	16.181	0.000032	0.00059	-	-	-0.03000	-	-	-	-	-	-	-	-	-

EDR1 Line Drainage

Drains Only - 25 Year Intensity

Use Drain Type D-3 (unmodified).

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Notes:
Sheet flow across deck occurs at point of zero cross-slope at approximately "EDR1" 51+09.714. The amount of flow crossing the deck is 0.00038 m^3/s.
BDA p. 17-3 advises that a maximum of 0.003 m3/s flow across the deck. Therefore, this configuration is adequate.

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spacing m	Drain Width m	**T m**	Shoulder Width m	**Depth at Edge of Shldr. m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
High Point	EDR1 5104	1.00	60.56	6.4	0	0.000000	0.375	0.016	0.01176	0.00000	n/a	0.400	**0.0000**	2.400	**0.000**	0.00000	n/a
1	EDR1 5096	1.00	60.56	6.4	0.0000512	0.00087	0.375	0.016	0.02000	0.01209	n/a	0.400	**0.5750**	2.400	**0.000**	0.00004	0.00083
Bridge Begin	EDR1 5090	1.00	60.56	6.4	0.0000384	0.00069	0.375	0.016	0.02000	0.02659	n/a	0.400	**0.4545**	2.400	**0.000**	0.00000	0.00069

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spacing m	Drain Width m	**T m**	Shoulder Width m	**Depth at Edge of Shldr. m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
High Point	EDR1 5104	1.00	60.56	6.4	0	0.000000	0.375	0.016	0.01176	0.00000	n/a	0.400	**0.0000**	2.400	**0.000**	0.00000	n/a
2	EDR1 5108	1.00	60.56	6.4	0.0000256	0.00043	0.375	0.016	0.00353	-0.00584	n/a	0.400	**1.5029**	2.400	**0.000**	0.00019	0.00024
0% Cross Slope	EDR1 5109.714	1.00	60.56	6.4	0.0000110	**0.00038**	0.375	0.016	0.00000	-0.00549	n/a	0.400	**331.1271**	2.400	**0.000**	0.00037	0.00000
3	EDR1 5110	1.00	60.56	6.4	0.0000128	0.00041	0.375	0.016	-0.00059	-0.00543	n/a	0.400	**4.5580**	0.600	**0.002**	0.00032	0.00009
4	EDR1 5117	1.00	60.56	6.4	0.0000448	0.00108	0.375	0.016	-0.01059	-0.00400	7	0.400	**1.1423**	0.600	**0.006**	0.00034	0.00074
5	EDR1 5120	1.00	60.56	6.4	0.0000192	0.00067	0.375	0.016	-0.01235	-0.00338	3	0.400	**0.8940**	0.600	**0.004**	0.00014	0.00053
6	EDR1 5123	1.00	60.56	6.4	0.0000192	0.00046	0.375	0.016	-0.01412	-0.00277	3	0.400	**0.7444**	0.600	**0.002**	0.00006	0.00040
7	EDR1 5126	1.00	60.56	6.4	0.0000192	0.00038	0.375	0.016	-0.01588	-0.00215	3	0.400	**0.6764**	0.600	**0.001**	0.00004	0.00035
8	EDR1 5129	1.00	60.56	6.4	0.0000192	0.00036	0.375	0.016	-0.01765	-0.00154	3	0.400	**0.6584**	0.600	**0.001**	0.00003	0.00033
9	EDR1 5132	1.00	60.56	6.4	0.0000192	0.00036	0.375	0.016	-0.01941	-0.00093	3	0.400	**0.6784**	0.600	**0.002**	0.00003	0.00032
10	EDR1 5135	1.00	60.56	6.4	0.0000192	0.00036	0.375	0.016	-0.02118	-0.00031	3	0.400	**0.7902**	0.600	**0.004**	0.00036	0.00000
Q to ED1 51+62	EDR1 5137	1.00	60.56	6.4	0.0000128	**0.00058**	-	-	-	-	-	-	-	-	-	-	-

Cross slope at EDR1 51+14= -0.00882

EDR1 Line Drainage

Drains Only - 10 Year Intensity

Use Drain Type D-3 (unmodified).

Positive cross-slopes mean the deck is superelevated such that the south side collects the flow, negative cross-slopes mean the deck is superelevated such that the north side collects the flow.

Notes:
Sheet flow across deck occurs at point of zero cross-slope at approximately "EDR1" 51+09.714. The amount of flow crossing the deck is 0.00030 m^3/s.
BDA p. 17-3 advises that a maximum of 0.003 m3/s flow across the deck. Therefore, this configuration is adequate.

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spacing m	Drain Width m	**T m**	Shoulder Width m	**Depth at Edge of Shldr. m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
High Point	EDR1 5104	1.00	50.36	6.4	0	0.000000	0.375	0.016	0.01176	0.00000	n/a	0.400	**0.0000**	2.400	**0.000**	0.00000	n/a
1	EDR1 5096	1.00	50.36	6.4	0.0000512	0.00072	0.375	0.016	0.02000	0.01209	n/a	0.400	**0.5366**	2.400	**0.000**	0.00002	0.00070
Bridge Begin	EDR1 5090	1.00	50.36	6.4	0.0000384	0.00056	0.375	0.016	0.02000	0.02659	n/a	0.400	**0.4209**	2.400	**0.000**	0.00000	0.00056

Drain No.	Station m	C	i mm/hr	Trib. Width m	A km^2	Q m^3/s	K	n	S_x	S_L	Drain Spacing m	Drain Width m	**T m**	Shoulder Width m	**Depth at Edge of Shldr. m**	Bypass Flow m^3/s	Intercept. Flow m^3/s
High Point	EDR1 5104	1.00	50.36	6.4	0	0.000000	0.375	0.016	0.01176	0.00000	n/a	0.400	**0.0000**	2.400	**0.000**	0.00000	n/a
2	EDR1 5108	1.00	50.36	6.4	0.0000256	0.00036	0.375	0.016	0.00353	-0.00584	n/a	0.400	**1.4024**	2.400	**0.000**	0.00015	0.00021
0% Cross Slope	EDR1 5109.714	1.00	50.36	6.4	0.0000110	**0.00030**	0.375	0.016	0.00000	-0.00549	n/a	0.400	**304.9892**	2.400	**0.000**	0.00030	0.00000
3	EDR1 5110	1.00	50.36	6.4	0.0000128	0.00033	0.375	0.016	-0.00059	-0.00543	n/a	0.400	**4.2025**	0.600	**0.002**	0.00025	0.00008
4	EDR1 5117	1.00	50.36	6.4	0.0000448	0.00088	0.375	0.016	-0.01059	-0.00400	7	0.400	**1.0597**	0.600	**0.005**	0.00025	0.00063
5	EDR1 5120	1.00	50.36	6.4	0.0000192	0.00052	0.375	0.016	-0.01235	-0.00338	3	0.400	**0.8143**	0.600	**0.003**	0.00009	0.00043
6	EDR1 5123	1.00	50.36	6.4	0.0000192	0.00036	0.375	0.016	-0.01412	-0.00277	3	0.400	**0.6751**	0.600	**0.001**	0.00003	0.00032
7	EDR1 5126	1.00	50.36	6.4	0.0000192	0.00030	0.375	0.016	-0.01588	-0.00215	3	0.400	**0.6186**	0.600	**0.000**	0.00002	0.00028
8	EDR1 5129	1.00	50.36	6.4	0.0000192	0.00029	0.375	0.016	-0.01765	-0.00154	3	0.400	**0.6063**	0.600	**0.000**	0.00002	0.00027
9	EDR1 5132	1.00	50.36	6.4	0.0000192	0.00029	0.375	0.016	-0.01941	-0.00093	3	0.400	**0.6262**	0.600	**0.001**	0.00002	0.00027
10	EDR1 5135	1.00	50.36	6.4	0.0000192	0.00029	0.375	0.016	-0.02118	-0.00031	3	0.400	**0.7294**	0.600	**0.003**	0.00029	0.00000
Q to ED1 51+62	EDR1 5137	1.00	50.36	6.4	0.0000128	**0.00047**	-	-	-	-	-	-	-	-	-	-	-

Cross slope at EDR1 51+14= -0.00882