Recording requested by and mail to:

City Clerk
City of Beaumont
550 E. Sixth Street
Beaumont, CA 92223

SPACE ABOVE THIS LINE FOR RECORDER'S USE
EXEMPT FROM RECORDER'S FEES PURSUANT TO GOVERNMENT CODE SECTION 6103 AND 27383

APN:

STORM WATER MANAGEMENT WQMP/BMP FACILITIES

COVENANT AND AGREEMENT NO.

City of Beaumont, Riverside County, California

THIS COVENANT AND AGREEMENT is made and entered into this September 12th of 2025, by and between BEAUMONT REGENCY AVG, LLC, ("Owner"), and the City of Beaumont, California, ("City").

The Owner hereby certifies I am (we are) the sole owner of certain real property located at SOUTHEAST CORNER OF I-10 & OAK VALLEY PKWY. (Site Address) in the City of Beaumont, County of Riverside, State of California, more specifically described in **Exhibit "A"** and depicted in **Exhibit "B"** ("Property").

The Owner covenants and agrees to comply with the Project Water Quality Management Plan ("WQMP"), attached hereto as **Exhibit "C"**, providing for storm water quality treatment within the confines of the Property.

The Owner covenants and agrees that the health, safety and welfare of the residents of the City of Beaumont, require that the Best Management Practice ("BMP") facilities, more specifically described in the WQMP (for example bio- swales, catch basins, roof drains and appurtenances) be constructed and maintained to minimize pollutants in urban runoff by the Owner.

The Owner further covenants and agrees as follows:

1. The on-site storm water management/BMP facilities mentioned above shall be constructed by the Owner at its sole cost and expense, in accordance with the plans and specifications identified in the WQMP approved by City.

2. The Owner shall adequately maintain the storm water management/BMP facilities in a manner assuring peak performance at all times, including source control BMPs at all times as its sole responsibility, at its sole cost and expense. This includes all pipes and channels built to convey storm water on the Property, including catch basin inserts, underground detention ponds, swales and vegetation provided to control the quantity and quality of the

storm water. Adequate maintenance is herein defined as good working condition so that these facilities are performing in accordance with their design functions continuously at all times.

3. The Owner shall annually inspect the storm water management/BMP facilities mentioned above and submit an inspection report annually to the Public Works Department by the anniversary of the date of this Agreement of each year. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the storm water management BMPs listed in the WQMP such as bioswales, catch basins and related filter units, etc. Deficiencies shall be noted in the inspection report and corrected by Owner promptly.

4. The Owner hereby grants permission to City, its authorized agents and employees, to enter upon the Property and to inspect the storm water management/BMP facilities, take samples and perform testing whenever the City deems necessary and as required by the City's most current National Pollutant Discharge Elimination System (NPDES) Permit. The purpose of the inspection, testing and sampling is to follow up on apparent and reported deficiencies and/or to respond to citizen complaints and meet the requirements of the City's NPDES Permit issued by the State Water Resources Control Board – Santa Ana River Region. The City shall provide the Owner with advanced notice of entering upon the Property, except in the event of an emergency, as determined by the City. The City shall provide the Owner copies of the inspection findings and a directive to commence with the repairs if necessary. Owner or Owner's successors or assigns shall pay City for all costs incurred by City in the inspection, sampling, testing of the BMPs within thirty (30) calendar days of City invoice.

5. In the event the Owner fails to maintain the storm water management/BMP facilities in good working condition acceptable to the City, upon five (5) days advanced written notice, the City may enter upon the Property and take whatever steps necessary to correct deficiencies identified in any inspection report and to charge the costs of such repairs to the Owner the cost of which shall constitute a lien against the Property. In the event of an emergency, as determined by City, advanced notice as aforesaid, shall not be required. Notwithstanding the forgoing, it is expressly understood and agreed that the City is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation to the City.

6. The Owner will perform the work necessary to keep these facilities in good working order as appropriate. The maintenance schedule for the storm water management BMP facilities (including sediment removal) is outlined in the approved WQMP and the schedule must be followed at all times. In the future, City of Beaumont may adopt an annual Stormwater Inspection Fee that would be assessed to the Owner.

7. In the event the City, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials and the like, the Owner, its successors and assigns shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City hereunder.

8. This Agreement imposes no liability of any kind whatsoever on the City. Owner agrees to indemnify, defend (with counsel reasonably approved by the City) and hold harmless the City and its authorized officers, employees, agents and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this Agreement from any cause whatsoever, including the acts, errors or omissions of any person and for any costs or expenses incurred by the City on account of any claim except where such indemnification is prohibited by law. This indemnification provision shall apply regardless of the existence or degree of fault of indemnitees. The Owner's indemnification obligation applies to the City's "active" as well as "passive" negligence but does not apply to the

City's "sole negligence" or "willful misconduct" within the meaning of Civil Code Section 2782, or to any claims, actions, losses, damages, and/or liabilities, to the extent caused by the acts or omissions of any third party contractors undertaking any work (other than field inspections) or other maintenance on the Property on behalf of the City under this Agreement.

9. This Agreement shall be recorded with the County Recorder for the County of Riverside and shall constitute a covenant running with the land, equitable servitude and lien against the Property, and shall be binding on the Owner, its successors, assigns, transferees, administrators, executors, heirs, encumbrancers and any other successors in interests, including any homeowner's association.

10. In addition to any remedy available to City under this Agreement, if Owner violates any term of this Agreement and does not cure the violation within the time already provided in this Agreement, or, if not provided, within thirty (30) calendar days, or within such time authorized by the City if said cure reasonably requires more than the subject time, the City may bring an action at law or in equity in a court of competent jurisdiction to enforce compliance by the Owner with the terms of this Agreement. In such action, the City may recover any damages to which the City may be entitled for the violation, enjoin the violation by temporary or permanent injunction without the necessity of proving actual damages or the inadequacy of otherwise available legal remedies, or obtain other equitable relief, including, but not limited to, the restoration of the Property and/or the BMPs identified in the WQMP to the condition in which it/they existed prior to any such violation or injury.

11. Owner shall provide printed educational materials with any sale of the Property which provide information on what storm water management facilities are present, the types and locations of maintenance signs that are required and how the necessary maintenance can be maintained.

12. Owner shall provide actual notice of this Agreement and its terms to any respective buyers or successor(s) in interest.

13. In order to be valid, amendment or change to this Agreement including the WQMP and BMPs requires an amendment executed by the City and Owner which is recorded with the Riverside County Recorder.

WITNESS the following signatures:

OWNER:

By: _____ By: _____

Name: Christopher M. Sanchez Name: _____

Title: Vice President, Market Office Title: _____

Organization: Beaumont Regency AVG, LLC Organization: _____

All signatures on this Agreement on behalf of the Owner must be acknowledged before a Notary Public. In the event that the owner is a corporation, the President/Vice President and the corporate secretary of the corporation must sign.

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Diego)

On September 12, 2025 before me, Briana Gamez, Notary Public
(insert name and title of the officer)

personally appeared Christopher Sanchez,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Briana Gamez (Seal)

BRIANA GAMEZ
Comm. #2478170-Mfr. #NNA1
Notary Public
CALIFORNIA
San Diego County
My Comm. Exp. Jan 1, 2028

City:

CITY OF BEAUMONT

a Municipal Corporation

Signature: _____

City Manager

ATTEST:

Signature: _____

City Clerk

APPROVED AS TO FORM:

Signature: _____

John Pinkney, City Attorney

APPROVED AS TO CONTENT:

Signature: _____

Robert Vestal, Director of Engineering/Public Works

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Riverside)

On _____, 20___, before me, _____, notary public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature: _____ (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Riverside)

On _____, 20___, before me, _____, notary public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature: _____ (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Riverside)

On _____, 20___, before me, _____, notary public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature: _____ (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Riverside)

On _____, 20___, before me, _____, notary public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature: _____ (Seal)

EXHIBIT "A"
LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

LOTS 38, 39, 40, 41, 43, 44, AND 45 INCLUSIVE, OF BEAUMONT HEIGHTS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN PER MAP ON FILE IN BOOK 8, PAGE 53 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, TOGETHER WITH THAT PORTION OF THE UNNAMED STREET AS SHOWN BY MAP OF THE ABOVE MENTIONED BEAUMONT HEIGHTS, LYING WITHIN THE NORTH HALF OF SECTION 4, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN, ADJOINING LOTS 43, 44, AND 45 OF THE WEST, AS VACATED BY RESOLUTION RECORDED AUGUST 14, 1968 AS INSTRUMENT NO. 78782 OF OFFICIAL RECORDS, RIVERSIDE COUNTY.

EXCEPTING THOSE PORTIONS CONVEYED TO THE COUNTY OF RIVERSIDE BY DEED RECORDED OCTOBER 17, 1967 AS INSTRUMENT NO. 91449 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

ALSO EXCEPTING ALL MINERAL AND OIL RIGHTS AS RESERVED BY HANNAH M. HOUGHTELIN IN DEED RECORDED IN DEED RECORDED JULY 24, 1936 IN BOOK 287, PAGE 520 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

APN 414-070-008; APN 414-080-001; APN 414-080-002; APN 414-080-003; APN 414-080-004; APN 414-080-005; APN 414-080-006

PARCEL 2:

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING EASTERLY OF THE EASTERLY LINE, OF THE LAND DESCRIBED IN PARCELS 8F AND 8G OF THE FINAL ORDER OF CONDEMNATION IN CASE NO. 77829 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF WHICH WAS RECORDED MARCH 31, 1964 AS INSTRUMENT NO. 39647 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, AND LYING EASTERLY OF THE EASTERLY LINE OF THE LAND DESCRIBED IN PARCEL NO. 1 OF THE FINAL ORDER OF CONDEMNATION IN CASE NO. 32726 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, A CERTIFIED COPY OF WHICH WAS RECORDED AUGUST 03, 1943 IN BOOK 587, PAGE 380 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, AND LYING SOUTHEASTERLY OF THE SOUTHEASTERLY LINE OF THAT CERTAIN PARCEL OF LAND CONVEYED TO THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BY DEED RECORDED OCTOBER 17, 1967 AS INSTRUMENT NO. 91452 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THAT PORTION, IF ANY, IN JACKSON ROAD.

ALSO EXCEPTING THEREFROM ONE-HALF OF ALL OIL, GAS, AND MINERAL RIGHTS, AS RESERVED IN DEED FROM R. J. STRUTHERS AND MARGARET E. STRUTHERS, RECORDED AUGUST 28, 1946 IN BOOK 768, PAGE 240 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

APN 414-090-019

EXHIBIT "B"
DIAGRAM OF PROPERTY

2025-0243365
Original
1 of 2
45

SHEET 1 OF 1 SHEET

IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

RECORD OF SURVEY

BEING A SURVEY OF GRANT DEED RECORDED MARCH 03, 2006 AS DOCUMENT NO. 2006-0155481 AND QUITCLAIM DEED RECORDED APRIL 6, 2006 AS DOCUMENT NO. 2006-0246088, BOTH OF OFFICIAL RECORDS IN THE COUNTY RECORDER OF RIVERSIDE COUNTY, CALIFORNIA

LYING WITHIN SECTIONS 4 AND 5, TOWNSHIP 3 SOUTH, RANGE 1 WEST, S.B.M.

DRC ENGINEERING, INC. JAKE W. LAPPERT, PLS 9303

DATE OF SURVEY: AUGUST, 2024

SURVEYOR'S STATEMENT

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS' ACT, AT THE REQUEST OF OAK VILLAGE, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY IN JULY, 2024.

Jake W. Lappert 07/21/25

JAKE W. LAPPERT DATE
PLS 9303

LICENSED LAND SURVEYOR JAKE W. LAPPERT LS 9303 STATE OF CALIFORNIA

RECORDER'S STATEMENT

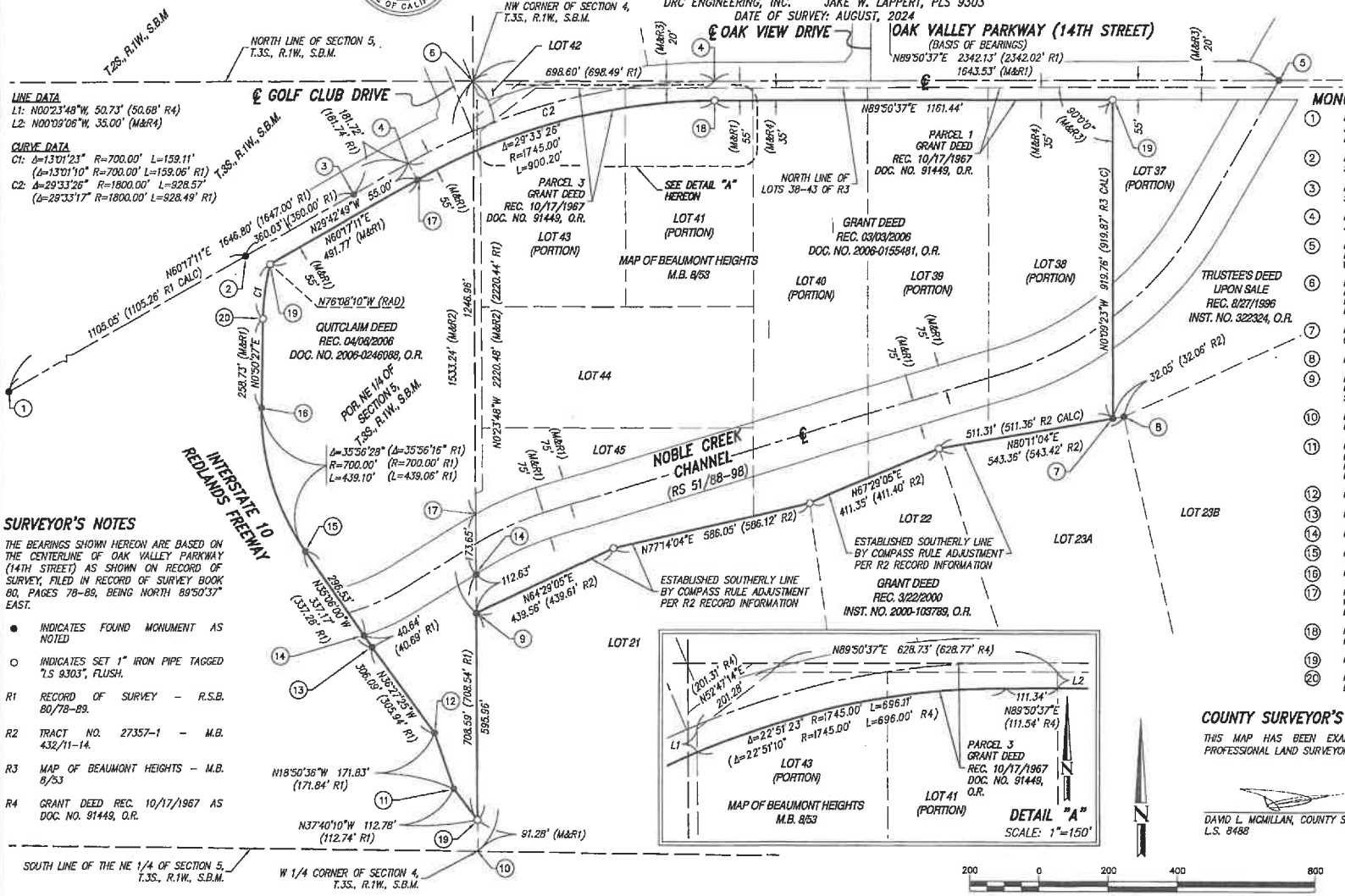
FILED THIS 7th DAY OF August, 2025
AT 9:12 PM IN BOOK 116 OF RECORDS OF SURVEY
AT PAGE 45, AT THE REQUEST OF THE COUNTY SURVEYOR
NO. 2025-0243365
FEE: $0

PETER ALDANA, ASSESSOR – COUNTY CLERK – RECORDER

BY: CR
DEPUTY

PURPOSE STATEMENT

THE PURPOSE OF THIS RECORD OF SURVEY IS TO ESTABLISH AND MONUMENT THE LAND DESCRIBED IN GRANT DEED RECORDED MARCH 03, 2006 AS DOCUMENT NO. 2006-0155481 AND QUITCLAIM DEED RECORDED APRIL 6, 2006 AS DOCUMENT NO. 2006-0246088, BOTH OF OFFICIAL RECORDS.



SURVEYOR'S NOTES

THE BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF OAK VALLEY PARKWAY (14TH STREET) AS SHOWN ON RECORD OF SURVEY, FILED IN RECORD OF SURVEY BOOK 80, PAGES 78-89, BEING NORTH 89°50'37" EAST.

- ● INDICATES FOUND MONUMENT AS NOTED
- ○ INDICATES SET 1" IRON PIPE TAGGED "LS 9303", FLUSH.
- R1 RECORD OF SURVEY – R.S.B. 80/78-89.
- R2 TRACT NO. 27357-1 – M.B. 432/11-14.
- R3 MAP OF BEAUMONT HEIGHTS – M.B. 8/53
- R4 GRANT DEED REC. 10/17/1967 AS DOC. NO. 91449, O.R.

MONUMENT AND ESTABLISHMENT NOTES

1. INDICATES FOUND 2" BRASS DISK IN WELL STAMPED "CAL DIV. HWYS 555+65.00 C.L. IMP. SAN TIM. CAN. = STA 550+19.37 EC C.L. S. FR. RD.", PER R1, DOWN 0.7'.
2. INDICATES FOUND 2" BRASS DISK IN WELL STAMPED "CAL DIV. HWYS C.L. IMP. SAN TIM. CAN. RD. 544+60.00 POT", PER R1, DOWN 1.0'.
3. INDICATES FOUND 2" BRASS DISK IN WELL STAMPED "CAL DIV. HWYS C.L. IMP. SAN TIM. CAN. RD. 541+00.00 POT", PER R1, DOWN 1.1'.
4. INDICATES SEARCHED, NOTHING FOUND. ESTABLISHED BY HOLDING TANGENCY AND RECORD RADIUS PER R1.
5. INDICATES FOUND LEAD, TACK, AND TAG STAMPED "CITY OF BEAUMONT", NO REFERENCE, FLUSH. ACCEPTED AS A POINT ON THE CENTERLINE OF OAK VALLEY PARKWAY.
6. INDICATES SEARCHED, NOTHING FOUND. ESTABLISHED BY HOLDING THE INTERSECTION OF THE NORTHERLY PROLONGATION OF A LINE PASSING THROUGH MONUMENTS ⑨ AND ⑭ WITH THE WESTERLY PROLONGATION OF A LINE PASSING THROUGH MONUMENTS ④ AND ⑤.
7. INDICATES FOUND 5/8" REBAR WITH CAP, TAG ILLEGIBLE, NO REFERENCE, UP 0.2'. ACCEPTED AS THE SOUTHEAST CORNER OF LOT 38 OF R3.
8. INDICATES FOUND 5/8" REBAR WITH CAP STAMPED "LS 5439", PER R2, UP 0.2'.
9. INDICATES SEARCHED, NOTHING FOUND. ESTABLISHED BY HOLDING R2 RECORD DATA. FOUND 3X3 POST, PER R2, DESTROYED. CENTER OF POST LOCATED S47°34'13"W, 0.26' FROM CALC CORNER.
10. INDICATES SEARCHED, NOTHING FOUND. ESTABLISHED BY HOLDING RECORD DISTANCE (91.28') PER R1.
11. INDICATES FOUND DISTURBED 1" IRON PIPE STAMPED "LS 3018", PER R1, LOCATED N63°41'32"E, 0.72' FROM CORNER. SAID CORNER ESTABLISHED BY HOLDING POSITION OF SAID PIPE FROM A FIELD SURVEY CONDUCTED BY DRC ENGINEERING, INC. ON JULY, 2006.
12. INDICATES FOUND 1" IRON PIPE STAMPED "LS 3018", PER R1, FLUSH.
13. INDICATES FOUND 1" IRON PIPE STAMPED "LS 3018", PER R1, DOWN 1.0'.
14. INDICATES FOUND 1" IRON PIPE STAMPED "LS 3018", PER R1, DOWN 1.2'.
15. INDICATES FOUND 1" IRON PIPE STAMPED "LS 3018", PER R1, DOWN 0.5'.
16. INDICATES FOUND 1" IRON PIPE STAMPED "LS 3018", PER R1, DOWN 0.1'.
17. INDICATES SEARCHED, NOTHING FOUND. ESTABLISHED BY HOLDING POSITION OF 1" IRON PIPE STAMPED "LS 3018" PER R1, FROM A FIELD SURVEY CONDUCTED BY DRC ENGINEERING, INC. ON JULY, 2006.
18. INDICATES SEARCHED, NOTHING FOUND. ESTABLISHED BY HOLDING 55' OFFSET FROM THE CENTERLINE OF OAK VALLEY PARKWAY PER R1.
19. INDICATES SEARCHED, NOTHING FOUND. ESTABLISHED BY INTERSECTION.
20. INDICATES SEARCHED, NOTHING FOUND. ESTABLISHED BY HOLDING RECORD DISTANCE (258.73') PER R1.

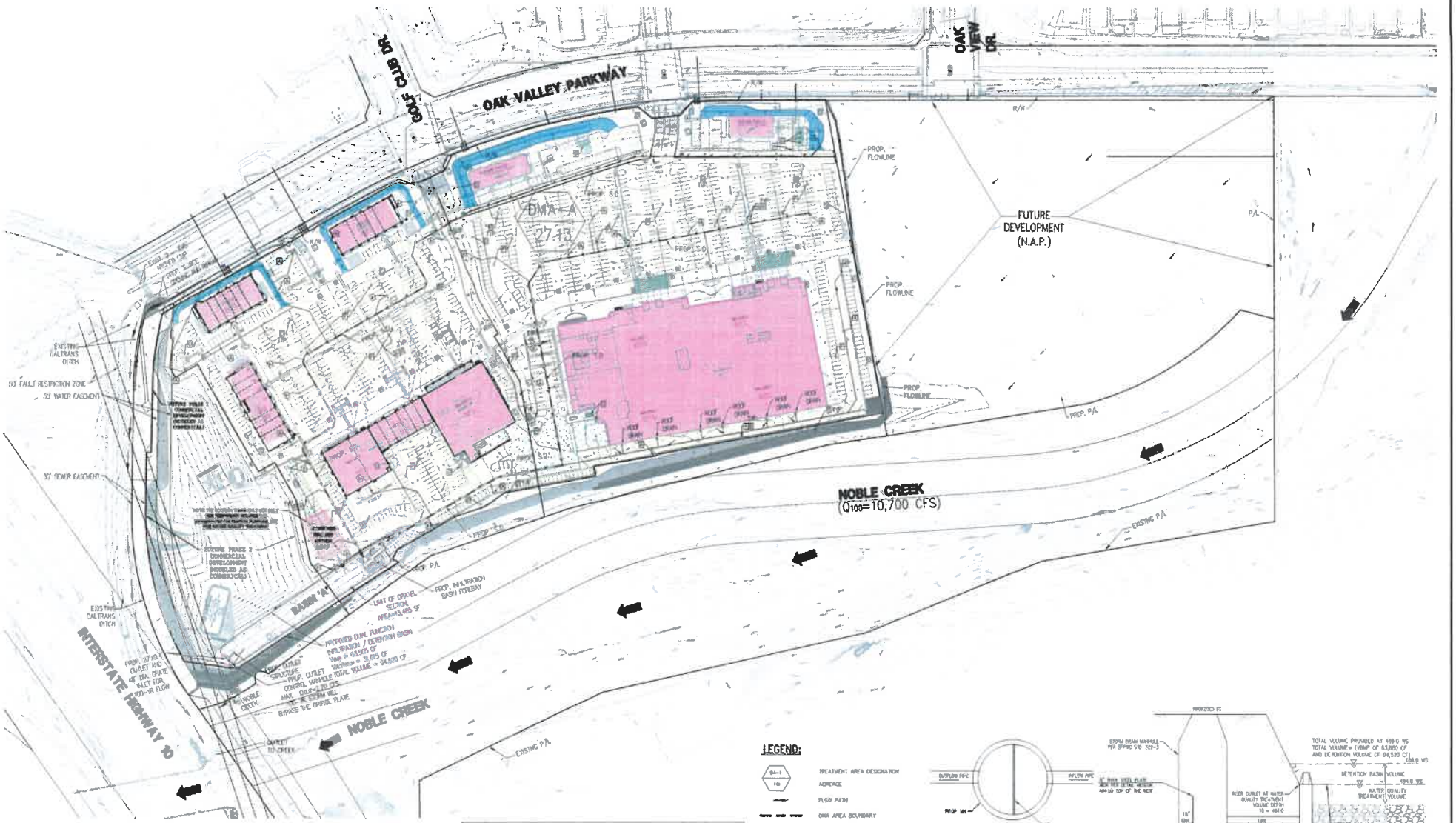
COUNTY SURVEYOR'S STATEMENT

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8766 OF THE PROFESSIONAL LAND SURVEYORS' ACT THIS 5 DAY OF AUG, 2025.

DAVID L. MCMILLAN, COUNTY SURVEYOR
L.S. 8488

LICENSED LAND SURVEYOR DAVID L. MCMILLAN LS 8488 STATE OF CALIFORNIA

RIV. CO 25-0072
SEC. 4 & 5, T3S, R1W, SBM



INFILTRATION BASIN DETAIL

NOT TO SCALE

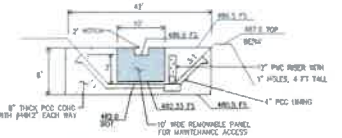
DRAWDOWN TIME:

BASED ON INFILTRATION RATE OF 9 INCH/HR, FS = 3, AT 48 HOURS DRAW-DOWN TIME, REQUIRED MINIMUM BASIN FOOTPRINT FOR THE GRAVEL BOTTOM SECTION IS 7,938 SF PER FORM 3 to INFILTRATION SIZING CALCULATION IN APPENDIX B

ACTUAL GRAVEL SECTION PROVIDED = 13,485 SF

DRAW-TIME = 7,938 SF / 13,485 SF * 48 HR
= 28.3 HRS

EFFECTIVE IMPERVIOUS SUMMARY (DMA-A)			
DMA	COVER TYPE	AREA (SF)	EFFECTIVE IMPERVIOUS FRACTION
DMA-A (A1)	ROOF	274,600	1.00
DMA-A (A2)	CONCRETE/ASPHALT	771,705	1.00
DMA-A (A3)	ORNAMENTAL LANDSCAPING	138,078	0.10

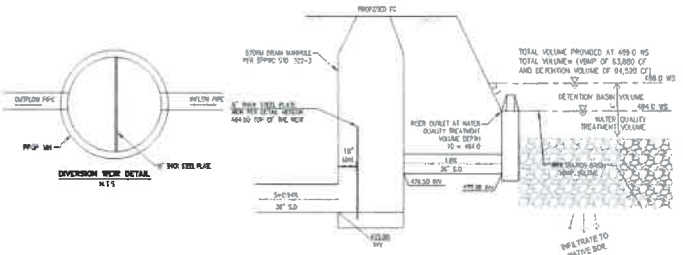


FOREBAY WALL DETAIL

NOT TO SCALE

LEGEND:

- TREATMENT AREA DESIGNATION
- ACREAGE
- FLOW PATH
- DMA AREA BOUNDARY
- ROOF AREA
- ASPHALT CONCRETE
- PORTLAND CEMENT CONCRETE
- PORTLAND CEMENT CONCRETE
- DECORATIVE PAVEMENT
- TREE / LANDSCAPING



SOURCE CONTROL BMPS

- [A] INLET FILTER
- [E] LANDSCAPE/OUTDOOR PESTICIDE USE
- [E] REFUSE AREAS
  MISC. WASH SPILLPOINTS ARE DRAINED TO PREVENT RUNOFF AND RUNON

NON-STRUCTURAL SOURCE CONTROL BMPS

- [X] LANDSCAPE MANAGEMENT BMPs PER CASQA BMP SC-73
- [X] CATCH BASIN INSPECTION PROGRAM
- [X] VACUUM SWEEPING OF PARKING LOTS/PAVED AREAS PER BMPs SC-43 AND SC-70

WQMP NOTES:

1. ALL STRUCTURAL BMPs SHALL BE ACCESSIBLE FOR INSPECTION AND MAINTENANCE AND SHALL BEAR A "NO DUMPING – DRAINS TO OCEAN" PAINT PER DETAIL HEREIN. STENCILS ARE AVAILABLE AT THE LOCAL BUILDING AND SAFETY DISTRICT OFFICE.
2. ALL TRASH BINS SHALL BE COVERED.
3. ALL DOWNSPOUTS TO DRAIN TO PROPOSED BMPs.

GRAPHIC SCALE: 1 INCH = 80 FT

POST-CONSTRUCTION WQMP SITE PLAN
OAKMONT VILLAGE
BEAUMONT, CALIFORNIA

EXHIBIT "C"
WQMP

Project Specific Water Quality Management Plan

*A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County*

Project Title: OAK VALLEY VILLAGE

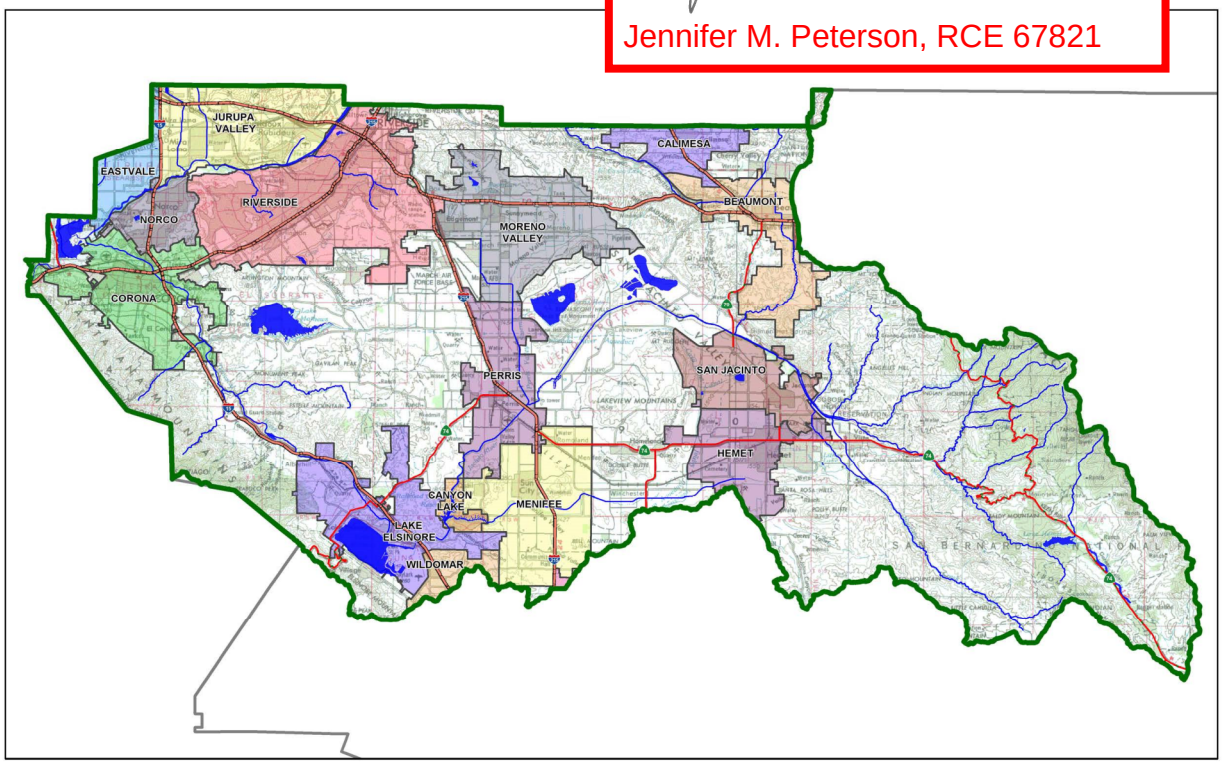
Development No: PP2024-0059

Design Review/Case No: PW2025-0241

No further comments.
Recommended for Approval by NV5 on 10/9/2025

Jennifer M. Peterson

Jennifer M. Peterson, RCE 67821



☐ **Preliminary**
☒ **Final**

Original Date Prepared: 5/20/2025

Revision Date(s): 8/01/25, 9/12/2025

Prepared for Compliance with
Regional Board Order No. **R8-2010-0033**
Template revised June 30, 2016

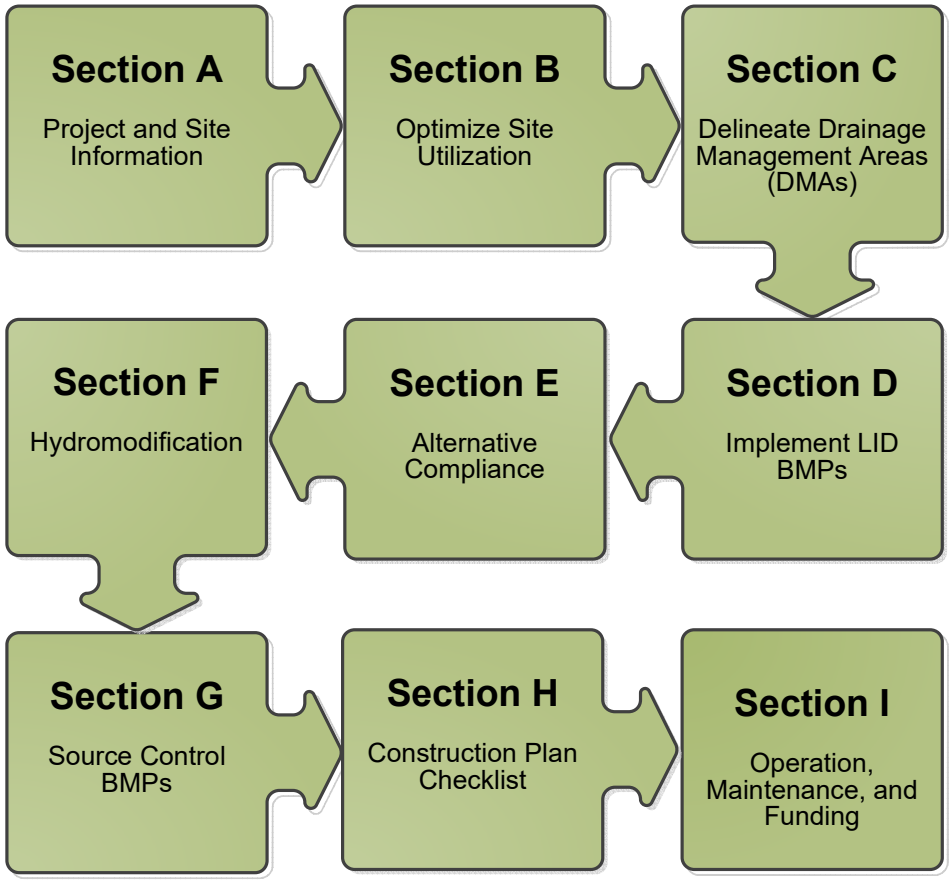
Contact Information:

Prepared for:
BEAUMONT REGENCY AVG, LLC
915 Wilshire Boulevard Suite 2200
Los Angeles, CA 90017
(213) 553-2283, Mr. Steven Felderman

Prepared by:
DRC Engineering, Inc.
6840 Indiana Ave, Ste 215
Riverside, CA 92506
(714) 685-6860, x307
Contact: Ronald W. Sklepko, PE

A Brief Introduction

This Project-Specific WQMP Template for the **Santa Ana Region** has been prepared to help guide you in documenting compliance for your project. Because this document has been designed to specifically document compliance, you will need to utilize the WQMP Guidance Document as your "how-to" manual to help guide you through this process. Both the Template and Guidance Document go hand-in-hand, and will help facilitate a well prepared Project-Specific WQMP. Below is a flowchart for the layout of this Template that will provide the steps required to document compliance.



OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for Regency Centers by DRC Engineering, Inc. for the Oakmont Valley Village project (P20-022).

This WQMP is intended to comply with the requirements of City of Beaumont which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under City of Beaumont Water Quality Ordinance 13.44.

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

Owner's Signature

7/14/2025
Date

Chris Sanchez
Owner's Printed Name

Vice President, Market Officer
Owner's Title/Position

PREPARER'S CERTIFICATION

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto."

Ronald W. Sklepko
Preparer's Signature

7/11/25
Date

Ronald W. Sklepko, P.E.
Preparer's Printed Name

Vice President
Preparer's Title/Position

Preparer's Licensure:

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Section A: Project and Site Information

Introduction:

As shown on the **Vicinity Map**, in **Appendix 1**, the property is in the City of Beaumont, County of Riverside, State of California. The property is bordered by State Highway 10 on the west, Oak Valley Parkway on the north, vacant land on the east, and Noble Creek on the south.

In the Existing Condition, the overall property consists of approximately 41.4 net acres (excluding the existing 30' sewer and 30' water easements along the westerly boundary) of vacant, undeveloped land. Most of the property is relatively flat, with a gentle slope towards the west. There is currently a 20' to 30' stockpile located near the middle of the property. Moderately steep slope ascends to the south along the southern side of Noble Creek. Based on the review of the USGS 7-1/2-minute map of the Beaumont, California Quadrangle, the property is described as a portion of Township 3S, Range 1 W, Sections 4 and 5, San Bernardino Base and Meridian, with elevations varying between approximately 2,525 feet above Mean Sea Level (MSL) at the northeast end to 2,480 feet above MSL at the southwest end.

In the Proposed Condition, the overall property proposes a 27.1-acre commercial development to the west, and a 14.3-acre future development to the east. The scope of this WQMP and the "Project Site" will pertain only to the proposed 27.1-acre commercial development to the west. The future residential development to the east is not a part of this WQMP and will require its own separate WQMP.

The Project Site consists of one (1) drainage management area:

- DMA-A consists of 27.1 acres with ten (10) buildings, three (3) loading docks, hardscape, paved drive aisles & parking areas, landscape areas, and storm drain system. The proposed storm drain system for DMA-A consists drainage inlets that collects surface runoff and discharge to an aboveground infiltration basin (Basin A) with a pre-treatment basin forebay. Basin A is designed to meet Santa Ana Watershed WQMP requirements for stormwater treatment via infiltration. Basin A also serves to meet hydromodification criteria before discharging southerly into Noble Creek. Basin A also consists of 8' deep gravel section which deep enough to be infiltrated into existing soils tested for infiltration.

Refer to Appendix 1 for the overall WQMP Site Plan depicting the proposed BMPs within DMA – A and the overall Site improvements layout.

Refer to Section D.5 and Appendix 6 for Design Volume Calculations for the proposed infiltration basin.

The southwest ±4 acres portion of the site will be rough graded for future commercial development. There are two temporary desilting basins (A and B) which calculated minimum surface areas are 272 sf and 3,123 sf (based on grading plan, both basins are 3-ft deep with 12" freeboard, 380 sf and 3,600 sf provided). Refer to Appendix 6 for Sediment Basin Calculations.

The property owner will be responsible for the long-term maintenance and funding of all onsite BMPs. Refer to **Appendix 9** of this WQMP for entities that will be responsible for implementing the WQMP.

PROJECT INFORMATION	
Type of Project:	Commerical
Planning Area:	N/A
Community Name:	Beaumount
Development Name:	Oak Valley Village

PROJECT LOCATION
Latitude & Longitude (DMS): 33.94479° N, -117.00091° W
Project Watershed and Sub-Watershed: Santa Ana Watershed and Timoteo Wash Sub-watershed
Total Acres: 27.13
APN(s): 414080005, 414080003, 414070007, 400561012, 400520005, 400520003, 400530007, 414080001, 414090019, 400561022, 400520009, 400530005, 414070008, 400561016, 400561015, 400561013, 414080004, 400561014, 400530004, 400561019, 400561055, 414080002, 400561021,
Map Book and Page No.: Map Book No. 175, Page No. 92

PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	Commercial
Proposed or Potential SIC Code(s)	5411, 5531, 5599, and 5812
Area of Impervious Project Footprint (SF)	1,045,705
Total Area of <u>proposed</u> Impervious Surfaces within the Project Footprint (SF)/or Replacement	1,045,705
Does the project consist of offsite road improvements?	☒ Y ☐ N
Does the project propose to construct unpaved roads?	☒ Y ☐ N
Is the project part of a larger common plan of development (phased project)?	☒ Y ☐ N

EXISTING SITE CHARACTERISTICS	
Total area of <u>existing</u> Impervious Surfaces within the Project limits Footprint (SF)	0
Is the project located within any MSHCP Criteria Cell?	☐ Y ☒ N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	☐ Y ☒ N
Is a Geotechnical Report attached?	☒ Y ☐ N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	N/A
What is the Water Quality Design Storm Depth for the project?	0.804

A.1 Maps and Site Plans

When completing your Project-Specific WQMP, include a map of the local vicinity and existing site. In addition, include all grading, drainage, landscape/plant palette and other pertinent construction plans in Appendix 2. At a **minimum**, your WQMP Site Plan should include the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling
- BMP Locations (Lat/Long)

Use your discretion on whether or not you may need to create multiple sheets or can appropriately accommodate these features on one or two sheets. Keep in mind that the Co-Permittee plan reviewer must be able to easily analyze your project utilizing this template and its associated site plans and maps.

A.2 Identify Receiving Waters

Using Table A.1 below, list in order of upstream to downstream, the receiving waters that the project site is tributary to. Continue to fill each row with the Receiving Water's 303(d) listed impairments (if any), designated beneficial uses, and proximity, if any, to a RARE beneficial use. Include a map of the receiving waters in Appendix 1.

Table A.1 Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
San Timoteo Creek	Indicator Bacteria	GWR-RARE-REC1-REC2-SPWN-WARM-WILD	10 MILES
santa ana river reach 5	None	AGR-GWR-MUN-RARE-REC1-REC2-SPWN-WARM-WILD	9.5 MILES
santa ana river reach 4	Indicator Bacteria	GWR-RARE-REC1-REC2-SPWN-WARM-WILD	9 MILES
Santa Ana River Reach 3	Copper, Indicator Bacteria, Lead	AGR-GWR-RARE-REC1-REC2-SPWN-WARM-WILD	7 MILES
Santa Ana River Reach 2	None	AGR-GWR-RARE-REC1-REC2-SPWN-WARM-WILD	5 MILES
Santa Ana River Reach 1	None	REC1-REC2-WARM-WILD	Not designated as RARE
Pacific Ocean	None	None	Not designated as RARE

A.3 Additional Permits/Approvals required for the Project:

Table A.2 Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	☐ Y	☒ N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	☐ Y	☒ N
US Army Corps of Engineers, CWA Section 404 Permit	☐ Y	☒ N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	☐ Y	☒ N
Statewide Construction General Permit Coverage	☒ Y	☐ N
Statewide Industrial General Permit Coverage	☐ Y	☒ N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	☐ Y	☒ N
Other *(please list in the space below as required)* City of Beaumont Grading Permit	☒ Y	☐ N

If yes is answered to any of the questions above, the Co-Permittee may require proof of approval/coverage from those agencies as applicable including documentation of any associated requirements that may affect this Project-Specific WQMP.

Section B: Optimize Site Utilization (LID Principles)

Review of the information collected in Section 'A' will aid in identifying the principal constraints on site design and selection of LID BMPs as well as opportunities to reduce imperviousness and incorporate LID Principles into the site and landscape design. For example, **constraints** might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, utility locations or safety concerns. **Opportunities** might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention BMPs), and differences in elevation (which can provide hydraulic head). Prepare a brief narrative for each of the site optimization strategies described below. This narrative will help you as you proceed with your LID design and explain your design decisions to others.

The 2010 Santa Ana MS4 Permit further requires that LID Retention BMPs (Infiltration Only or Harvest and Use) be used unless it can be shown that those BMPs are infeasible. Therefore, it is important that your narrative identify and justify if there are any constraints that would prevent the use of those categories of LID BMPs. Similarly, you should also note opportunities that exist which will be utilized during project design. Upon completion of identifying Constraints and Opportunities, include these on your WQMP Site plan in Appendix 1.

Consideration of "highest and best use" of the discharge should also be considered. For example, Lake Elsinore is evaporating faster than runoff from natural precipitation can recharge it. Requiring infiltration of 85% of runoff events for projects tributary to Lake Elsinore would only exacerbate current water quality problems associated with Pollutant concentration due to lake water evaporation. In cases where rainfall events have low potential to recharge Lake Elsinore (i.e. no hydraulic connection between groundwater to Lake Elsinore, or other factors), requiring infiltration of Urban Runoff from projects is counterproductive to the overall watershed goals. Project proponents, in these cases, would be allowed to discharge Urban Runoff, provided they used equally effective filtration-based BMPs.

Site Optimization

The following questions are based upon Section 3.2 of the WQMP Guidance Document. Review of the WQMP Guidance Document will help you determine how best to optimize your site and subsequently identify opportunities and/or constraints, and document compliance.

Did you identify and preserve existing drainage patterns? If so, how? If not, why?

The site is currently vacant and currently flows southwesterly towards the west boundary. In the proposed condition, the project site drainage consists of one drainage management area which consistent with the master WQMP (SR14-06 / P20-022). Refer to App. 1 for the overall WQMP site plan with proposed development. The storm water from the site will discharge into a proposed infiltration BMP. In the case of the basin overflow, the overflow will be discharged to Noble Creek.

Did you identify and protect existing vegetation? If so, how? If not, why?

Existing vegetation is minimal and previously graded with a stockpile in the middle of the site. Also, Entire Site will be graded.

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?

The project is proposing an infiltration basin for water quality mitigation. The lowest infiltration rate for soil on-site based on the three percolation tests performed by GPI, Inc is to be 9 in/hr (Appendix 3).

Did you identify and minimize impervious area? If so, how? If not, why?

We propose to minimize impervious area by providing landscaped areas and minimizing new sidewalk area.

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

The project's disturbed area will discharge to the landscaped areas when possible before entering the proposed infiltration BMP.

Section C: Delineate Drainage Management Areas (DMAs)

Utilizing the procedure in Section 3.3 of the WQMP Guidance Document which discusses the methods of delineating and mapping your project site into individual DMAs, complete Table C.1 below to appropriately categorize the types of classification (e.g., Type A, Type B, etc.) per DMA for your project site. Upon completion of this table, this information will then be used to populate and tabulate the corresponding tables for their respective DMA classifications.

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s)[1][2]	Area (Sq. Ft.)	DMA Type
DMA – A (A1)	Roofs	274,600	D
DMA – A (A2)	Concrete / Asphalt	771,105	D
DMA – A (A3)	Ornamental Landscaping	136,078	D

[1]*Reference Table 2-1 in the WQMP Guidance Document to populate this column*
[2]*If multi-surface provide back-up*

Table C.2 Type 'A', Self-Treating Areas

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)

Table C.3 Type 'B', Self-Retaining Areas

Self-Retaining Area				**Type 'C' DMAs that are draining to the Self-Retaining Area**		
DMA Name/ ID	Post-project surface type	Area (square feet) [A]	Storm Depth (inches) [B]	DMA Name / ID	[C] from Table C.4 = [C]	Required Retention Depth (inches) [D]

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas

DMA					Receiving Self-Retaining DMA		
DMA Name/ ID	Area (square feet)	Post-project surface type	Impervious fraction	Product		Area (square feet)	Ratio
	[A]		[B]	[C] = [A] x [B]	DMA name /ID	[D]	[C]/[D]

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
DMA A (A1, A2, A3)	Basin 'A' (Infiltration Basin)

Note: More than one drainage management area can drain to a single LID BMP, however, one drainage management area may not drain to more than one BMP.

Section D: Implement LID BMPs

D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (see discussion in Chapter 2.4.4 of the WQMP Guidance Document for further details)? ☐ Y ☒ N

If yes has been checked, Infiltration BMPs shall not be used for the site; proceed to section D.3

If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

Geotechnical Report

A Geotechnical Report or Phase I Environmental Site Assessment may be required by the Copermittee to confirm present and past site characteristics that may affect the use of Infiltration BMPs. In addition, the Co-Permittee, at their discretion, may not require a geotechnical report for small projects as described in Chapter 2 of the WQMP Guidance Document. If a geotechnical report has been prepared, include it in Appendix 3. In addition, if a Phase I Environmental Site Assessment has been prepared, include it in Appendix 4.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? ☐ Y ☒ N

Infiltration Feasibility

Table D.1 below is meant to provide a simple means of assessing which DMAs on your site support Infiltration BMPs and is discussed in the WQMP Guidance Document in Chapter 2.4.5. Check the appropriate box for each question and then list affected DMAs as applicable. If additional space is needed, add a row below the corresponding answer.

Table D.1 Infiltration Feasibility

Does the project site…	YES	NO
…have any DMAs with a seasonal high groundwater mark shallower than 10 feet?		x
If Yes, list affected DMAs:		
…have any DMAs located within 100 feet of a water supply well?		x
If Yes, list affected DMAs:		
…have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact?		x
If Yes, list affected DMAs:		
…have measured in-situ infiltration rates of less than 1.6 inches / hour?		x
If Yes, list affected DMAs:		
…have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface?		x
If Yes, list affected DMAs:		
…geotechnical report identify other site-specific factors that would preclude effective and safe infiltration?		x
Describe here:		

If you answered "Yes" to any of the questions above for any DMA, Infiltration BMPs should not be used for those DMAs and you should proceed to the assessment for Harvest and Use below.

D.2 Harvest and Use Assessment

Please check what applies*:*

☐ Reclaimed water will be used for the non-potable water demands for the project.

☐Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).

☒The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.

If any of the above boxes have been checked, Harvest and Use BMPs need not be assessed for the site. If none of the above criteria applies, follow the steps below to assess the feasibility of irrigation use, toilet use and other non-potable uses (e.g., industrial use).

Irrigation Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

Total Area of Irrigated Landscape: 3.1 ac

Type of Landscaping (Conservation Design or Active Turf): Conservation

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 24.0 ac

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

Enter your EIATIA factor: 1.85 ac/ac

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

Minimum required irrigated area: 44.4 ac

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
44.4 ac	3.1 ac

Not Feasible.

Toilet Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for toilet flushing uses on your site:

Step 1: Identify the projected total number of daily toilet users during the wet season, and account for any periodic shut downs or other lapses in occupancy:

Projected Number of Daily Toilet Users: 500 (employees + customers)

Project Type: Commerical

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for toilet use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 24.0 ac

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-2 in Chapter 2 to determine the minimum number or toilet users per tributary impervious acre (TUTIA).

Enter your TUTIA factor: 167 tu / ac

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of toilet users that would be required.

Minimum number of toilet users: 4.008 tu

Step 5: Determine if harvesting stormwater runoff for toilet flushing use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required Toilet Users (Step 4)	Projected number of toilet users (Step 1)
4,008	500

Not Feasible.

Other Non-Potable Use Feasibility

Are there other non-potable uses for stormwater runoff on the site (e.g. industrial use)? See Chapter 2 of the Guidance for further information. If yes, describe below. If no, write N/A.

N/A

Step 1: Identify the projected average daily non-potable demand, in gallons per day, during the wet season and accounting for any periodic shut downs or other lapses in occupancy or operation.

Average Daily Demand: 0

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for the identified non-potable use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 24.0 ac

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-4 in Chapter 2 to determine the minimum demand for non-potable uses per tributary impervious acre.

Enter the factor from Table 2-4: 1,204 gpd per impervious acre

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of gallons per day of non-potable use that would be required.

Minimum required use: 28,896 gpd

Step 5: Determine if harvesting stormwater runoff for other non-potable use is feasible for the project by comparing the projected average daily use (Step 1) to the minimum required non-potable use (Step 4).

Minimum required non-potable use (Step 4)	**Projected average daily use (Step 1)**
28,896 gpd	0

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention and Biotreatment per Section 3.4.2 of the WQMP Guidance Document.

N/A

D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

Select one of the following:

☐ LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).

☐ A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

D.4 Feasibility Assessment Summaries

From the Infiltration, Harvest and Use, Bioretention and Biotreatment Sections above, complete Table D.2 below to summarize which LID BMPs are technically feasible, and which are not, based upon the established hierarchy.

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
DMA-1	☒	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

For those DMAs where LID BMPs are not feasible, provide a brief narrative below summarizing why they are not feasible, include your technical infeasibility criteria in Appendix 5, and proceed to Section E below to document Alternative Compliance measures for those DMAs. Recall that each proposed DMA must pass through the LID BMP hierarchy before alternative compliance measures may be considered.

D.5 LID BMP Sizing

Each LID BMP must be designed to ensure that the Design Capture Volume will be addressed by the selected BMPs. First, calculate the Design Capture Volume for each LID BMP using the V_{BMP} worksheet in Appendix F of the LID BMP Design Handbook. Second, design the LID BMP to meet the required V_{BMP} using a method approved by the Copermittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Copermittee to assist you in correctly sizing your LID BMPs. Complete Table D.3 below to document the Design Capture Volume and the Proposed Volume for each LID BMP. Provide the completed design procedure sheets for each LID BMP in Appendix 6. You may add additional rows to the table below as needed.

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Basin 'A' (Infiltration Basin)*		
	[A]		[B]	[C]	[A] x [C]			
DMA-1 (A1)	274,600	*Roof*	*1*	*0.89*	244,943			
DMA-1 (A2)	771,105	*Concrete or Asphalt*	*1*	*0.89*	687,826			
DMA-1 (A3)	136,078	*Ornamental Landscaping*	*0.1*	*0.11*	15,031			
						Design Storm Depth (in)	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
	A_T = Σ[A] 1,181,783				Σ= [D] 947,800	[E] 0.804	$[F] = \frac{[D]x[E]}{12}$ 63,503	[G] **63,558**

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Volume Summary Calculations:

- **Gravel Section Area = 5,533 sf (see WQMP exhibit), V=5,533 sf *8ft*0.4 (Void) = 17,706 cf**
- **Forebay, 4ft deep, volume = 5,244 cf**
- **Aboveground Volume = (5,090 sf + 10,500sf) / 2 * 2.5ft deep = 19,488 cf**
- **Underground R-TANK System Volume = 21,120 CF (NOTE: The R-TANK SYSTEM ONLY FOR TEMPORARY HOLDING THE STORMWATER PURPOSE, NOT FOR WATER QUALITY TREATMENT)**
  Note: Total Volume R-Tank System Provided = 29,809 CF.

  Total Volume Provided = 63,558 CF

`

Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to LID waiver approval by the Copermittee). Check one of the following Boxes:

☒ LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- *Or* -

☐ The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Co-Permittee and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The following alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.

E.1 Identify Pollutants of Concern

Utilizing Table A.1 from Section A above which noted your project's receiving waters and their associated EPA approved 303(d) listed impairments, cross reference this information with that of your selected Priority Development Project Category in Table E.1 below. If the identified General Pollutant Categories are the same as those listed for your receiving waters, then these will be your Pollutants of Concern and the appropriate box or boxes will be checked on the last row. The purpose of this is to document compliance and to help you appropriately plan for mitigating your Pollutants of Concern in lieu of implementing LID BMPs.

Table E.1 Potential Pollutants by Land Use Type

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories							
	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash & Debris	Oil & Grease
☐ Detached Residential Development	P	N	P	P	N	P	P	P
☐ Attached Residential Development	P	N	P	P	N	P	P	P(2)
☒ Commercial/Industrial Development	P(3)	P	P(1)	P(1)	P(5)	P(1)	P	P
☐ Automotive Repair Shops	N	P	N	N	P(4, 5)	N	P	P
☐ Restaurants (>5,000 ft^2)	P	N	N	N	N	N	P	P
☐ Hillside Development (>5,000 ft^2)	P	N	P	P	N	P	P	P
☐ Parking Lots (>5,000 ft^2)	P(6)	P	P(1)	P(1)	P(4)	P(1)	P	P
☐ Retail Gasoline Outlets	N	P	N	N	P	N	P	P
Project Priority Pollutant(s) of Concern	☐	☒	☒	☒	☐	☐	☒	☒

P = Potential

N = Not Potential

(1) A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected

(2) A potential Pollutant if the project includes uncovered parking areas; otherwise not expected

(3) A potential Pollutant is land use involving animal waste

(4) Specifically petroleum hydrocarbons

(5) Specifically solvents

(6) Bacterial indicators are routinely detected in pavement runoff

E.2 Stormwater Credits

Projects that cannot implement LID BMPs but nevertheless implement smart growth principles are potentially eligible for Stormwater Credits. Utilize Table 3-8 within the WQMP Guidance Document to identify your Project Category and its associated Water Quality Credit. If not applicable, write N/A.

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage[2]
Total Credit Percentage[1]	

[1]Cannot Exceed 50%

[2]Obtain corresponding data from Table 3-8 in the WQMP Guidance Document

E.3 Sizing Criteria

After you appropriately considered Stormwater Credits for your project, utilize Table E.3 below to appropriately size them to the DCV, or Design Flow Rate, as applicable. Please reference Chapter 3.5.2 of the WQMP Guidance Document for further information.

Table E.3 Treatment Control BMP Sizing

DMA Type/ID	**DMA Area (square feet)**	**Post-Project Surface Type**	**Effective Impervious Fraction, I_f**	**DMA Runoff Factor**	**DMA Area x Runoff Factor**		***Enter BMP Name / Identifier Here***		
	[A]		[B]	[C]	[A] x [C]				
						Design Storm Depth (in)	*Minimum Design Capture Volume or Design Flow Rate (cubic feet or cfs)*	*Total Storm Water Credit % Reduction*	*Proposed Volume or Flow on Plans (cubic feet or cfs)*
	A_T = Σ[A]				Σ= [D]	[E]	$[F] = \frac{[D]x[E]}{[G]}$	[F] X (1-[H])	[I]

[B], [C] is obtained as described in Section 2.3.1 from the WQMP Guidance Document

[E] is for Flow-Based Treatment Control BMPs [E] = .2, for Volume-Based Control Treatment BMPs, [E] obtained from Exhibit A in the WQMP Guidance Document

[G] is for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12

[H] is from the Total Credit Percentage as Calculated from Table E.2 above

[I] as obtained from a design procedure sheet from the BMP manufacturer and should be included in Appendix 6

E.4 Treatment Control BMP Selection

Treatment Control BMPs typically provide proprietary treatment mechanisms to treat potential pollutants in runoff, but do not sustain significant biological processes. Treatment Control BMPs must have a removal efficiency of a medium or high effectiveness as quantified below:

- **High**: equal to or greater than 80% removal efficiency
- **Medium**: between 40% and 80% removal efficiency

Such removal efficiency documentation (e.g., studies, reports, etc.) as further discussed in Chapter 3.5.2 of the WQMP Guidance Document, must be included in Appendix 6. In addition, ensure that proposed Treatment Control BMPs are properly identified on the WQMP Site Plan in Appendix 1.

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID[1]	Priority Pollutant(s) of Concern to Mitigate[2]	Removal Efficiency Percentage[3]

[1] Treatment Control BMPs must not be constructed within Receiving Waters. In addition, a proposed Treatment Control BMP may be listed more than once if they possess more than one qualifying pollutant removal efficiency.
[2] Cross Reference Table E.1 above to populate this column.
[3] As documented in a Co-Permittee Approved Study and provided in Appendix 6.

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

Once you have determined that the LID design is adequate to address water quality requirements, you will need to assess if the proposed LID Design may still create a HCOC. Review Chapters 2 and 3 (including Figure 3-7) of the WQMP Guidance Document to determine if your project must mitigate for Hydromodification impacts. If your project meets one of the following criteria which will be indicated by the check boxes below, you do not need to address Hydromodification at this time. However, if the project does not qualify for Exemptions 1, 2 or 3, then additional measures must be added to the design to comply with HCOC criteria. This is discussed in further detail below in Section F.2.

HCOC EXEMPTION 1: The Priority Development Project disturbs less than one acre. The Copermittee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply.

HCOC EXEMPTION 2: The volume and time of concentration[1] of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, report results in Table F.1 below and provide your substantiated hydrologic analysis in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	**Post-condition**	**% Difference**
Time of Concentration			
Volume (Cubic Feet)			

[1] Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

HCOC EXEMPTION 3: All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Susceptibility Maps.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply and note below which adequate sump applies to this HCOC qualifier:

F.2 HCOC Mitigation

If none of the above HCOC Exemption Criteria are applicable, HCOC criteria is considered mitigated if they meet one of the following conditions:

a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.

b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.

c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Be sure to include all pertinent documentation used in your analysis of the items a, b or c in Appendix 7.

SEE APPENDIX 7 FOR SUPPORTION CALCULATION MEET THE HCOC MITGATION C

Section G: Source Control BMPs

Source control BMPs include permanent, structural features that may be required in your project plans — such as roofs over and berms around trash and recycling areas — and Operational BMPs, such as regular sweeping and "housekeeping", that must be implemented by the site's occupant or user. The MEP standard typically requires both types of BMPs. In general, Operational BMPs cannot be substituted for a feasible and effective permanent BMP. Using the Pollutant Sources/Source Control Checklist in Appendix 8, review the following procedure to specify Source Control BMPs for your site:

1. ***Identify Pollutant Sources*:** Review Column 1 in the Pollutant Sources/Source Control Checklist. Check off the potential sources of Pollutants that apply to your site.

2. ***Note Locations on Project-Specific WQMP Exhibit*:** Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist. Show the location of each Pollutant source and each permanent Source Control BMP in your Project-Specific WQMP Exhibit located in Appendix 1.

3. ***Prepare a Table and Narrative*:** Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist. In the left column of Table G.1 below, list each potential source of runoff Pollutants on your site (from those that you checked in the Pollutant Sources/Source Control Checklist). In the middle column, list the corresponding permanent, Structural Source Control BMPs (from Columns 2 and 3 of the Pollutant Sources/Source Control Checklist) used to prevent Pollutants from entering runoff. **Add additional narrative** in this column that explains any special features, materials or methods of construction that will be used to implement these permanent, Structural Source Control BMPs.

4. ***Identify Operational Source Control BMPs:*** To complete your table, refer once again to the Pollutant Sources/Source Control Checklist. List in the right column of your table the Operational BMPs that should be implemented as long as the anticipated activities continue at the site. Copermittee stormwater ordinances require that applicable Source Control BMPs be implemented; the same BMPs may also be required as a condition of a use permit or other revocable Discretionary Approval for use of the site.

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
On-site storm drain inlets	☒ Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify. **(CASQA BMP SC-44, "Drainage System Maintenance"; SD-13, "Storm Drain System Signs")**	☒ Maintain and periodically repaint or replace inlet markings. ☒ Provide stormwater pollution prevention information to new site owners, lessees, or operators. ☒ See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com ☒ Include the following in lease agreements: "Tenant shall not allow anyone to discharge into storm drains or to store or deposit materials so as to create a potential discharge into storm drain." ☒ Provide and periodically inspect spill kits ☒ In the case of fuel spills, follow the procedures in the Spill Response Plan and clean up with clean-up method and supplies specified in MSDSs (Material Safety Data Sheets)
Interior floor drains and elevator shafts sump pumps	☒ State that interior floor drains and elevator shafts sump pumps will be plumbed to sanitary sewer. ***Interior floor drains will be plumbed to sanitary sewer. There is no elevator shaft.***	☒ Inspect and maintain drains to prevent blockages and overflow.
Landscape/ Outdoor Pesticide Use	State that final landscape plans will accomplish all of the following. ☐ Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. ☒ Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.	☒ Maintain landscaping using minimum or no pesticides. ☒ See applicable operational BMPs in "What you should know for… Landscape and Gardening" at http://rcflood.org/stormwater/ ☒ Provide IPM (Intergraded Pest Management) information to new owners, lessees and operators. Applicable operational BMPs in "What you should know for… Landscape and Gardening":

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
	☒ Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. ☒ Consider using pest-resistant plants, especially adjacent to hardscape. ☒ To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions. **(CASQA BMP SD-10 "Site Design & Landscape Planning, SD-12 "Efficient Irrigation")**	☒ Never apply pesticides or fertilizers when rain is predicted within the next 48 hours. ☒ Do not overwater. ☒ Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain. Dispose of green waste by composting, hauling it to a permitted landfill, or recycling it though city's program.
Food service	☒ For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. ☒ On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	☒ See the brochure, "The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" at http://rcflood.org/stormwater/ ***Provide this brochure to new site owners, lessees, and operators.***
Refuse areas	☒ State how site refuse will be handled and provide supporting detail to what is shown on plans. ***Refuse will be picked up by local waste management company on a weekly basis. Detail of the trash enclosure will be provided in the final WQMP.*** ☒ State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar. **(CASQA BMP SD-32, "Trash Enclosures")**	☒ State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmpbooks.com

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
		Tenant of each building is responsible for the inspection and maintenance of the refuse areas as stated in the CC&R's or lease agreement.
Loading Docks	☐ Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer. ☐ Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. ☐ Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.	☒ Move loaded and unloaded items indoors as soon as possible. ☒ See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
Fire Sprinkler Test Water	☒ Provide a means to drain fire sprinkler test water to the sanitary sewer. ***The drain line for fire sprinkler test water will be connected to the sanitary sewer line per plumbing plan.***	☒ See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
Miscellaneous Drain or Wash Water or Other Sources ☐ Boiler drain lines ☒ Condensate drain lines	☐ Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. ☒ Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate	Additional Operational BMPs suggested on Fact Sheet SC-10: ☒ Train employees to identify non-stormwater discharges and report them to the appropriate departments.

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
☒ Rooftop equipment ☐ Drainage sumps ☒ Roofing, gutters, and trim ☐ Other sources	drain lines may not discharge to the storm drain system. ☒ Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. ☐ Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. ☒ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. **(CASQA BMP SD-10, "Site Design and Landscape Planning" and SD-11, "Roof Runoff Controls")**	
Plazas, sidewalks, and parking lots	☒ Control the number of points for vehicle access ☒ Inspect BMP's prior to forecast rain, daily during extended rain events, after rain events, weekly during rainy season and at two-week intervals during the non-rainy season ☒ Do not sweep up any unknown substance or any object that may be potentially hazardous ☒ After sweeping is finished, properly dispose of sweeper wastes **(CASQA BMP SE-7, "Street Sweeping and Vacuuming")**	☒ Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of liter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.
Activity Restriction	If a property owners association (POA) is formed, conditions, covenants and restrictions shall include measures listed in BMPs for the purpose of surface water quality protection.	• Prohibit the blowing, sweeping, or hosing of debris (leaf litter, grass clippings, litter, etc.) into streets, sidewalks, parking lots, storm drain inlets, or other conveyances. • Require dumpster lids to be closed at all times when not being loaded/unloaded.

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
		• Prohibiting public access to the detention system and the storm drain system • Maintenance agreements for common areas including drive aisles, parking areas, storm drain system, water quality BMPs and landscaping. • Prohibit the dumping or disposal of debris (leaf litter, grass clippings, litter, motor oil etc.) into streets, sidewalks, parking lots, storm drain inlets, landscaped areas or other conveyances • Prohibit car repair • Prohibit food preparation

Section H: Construction Plan Checklist

Populate Table H.1 below to assist the plan checker in an expeditious review of your project. The first two columns will contain information that was prepared in previous steps, while the last column will be populated with the corresponding plan sheets. This table is to be completed with the submittal of your final Project-Specific WQMP.

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)	BMP Location (Lat/Long)
Basin 'A'	Infiltration Basin	Precise Grading Plan sheets 11, 17, and 25	33.7793°, -117.0070°

Note that the updated table — or Construction Plan WQMP Checklist — is **only a reference tool** to facilitate an easy comparison of the construction plans to your Project-Specific WQMP. Co-Permittee staff can advise you regarding the process required to propose changes to the approved Project-Specific WQMP.

Section I: Operation, Maintenance and Funding

The Copermittee will periodically verify that Stormwater BMPs on your site are maintained and continue to operate as designed. To make this possible, your Copermittee will require that you include in Appendix 9 of this Project-Specific WQMP:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.
3. An outline of general maintenance requirements for the Stormwater BMPs you have selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility. Geo-locating the BMPs using a coordinate system of latitude and longitude is recommended to help facilitate a future statewide database system.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance. Include a brief description of typical landscape maintenance for these areas.

Your local Co-Permittee will also require that you prepare and submit a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on your site. An agreement assigning responsibility for maintenance and providing for inspections and certification may also be required.

Details of these requirements and instructions for preparing a Stormwater BMP Operation and Maintenance Plan are in Chapter 5 of the WQMP Guidance Document.

Maintenance Mechanism:

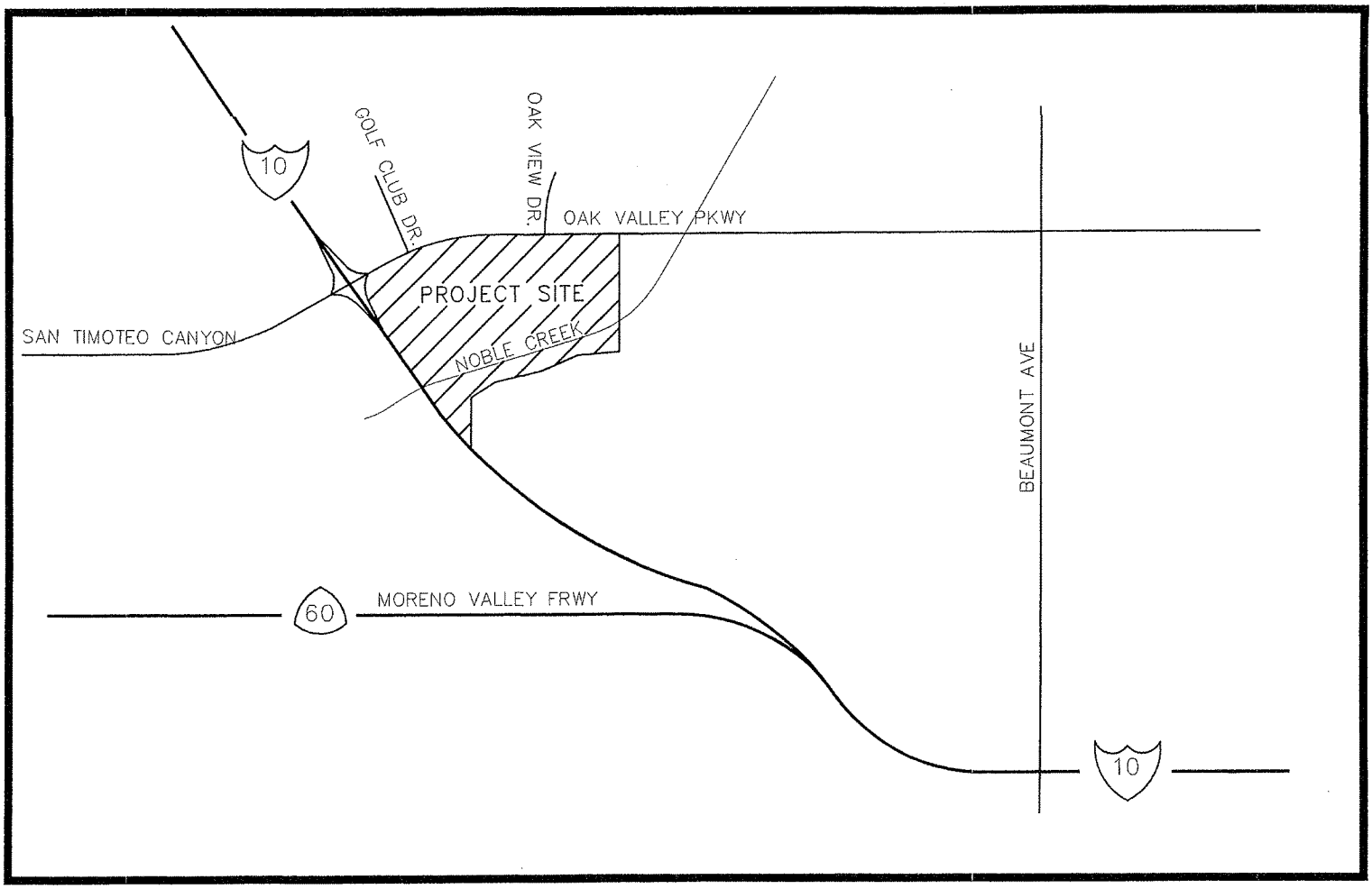
Will the proposed BMPs be maintained by a Home Owners' Association (HOA) or Property Owners Association (POA)?

☐ Y ☒ N

Include your Operation and Maintenance Plan and Maintenance Mechanism in Appendix 9. Additionally, include all pertinent forms of educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP in Appendix 10.

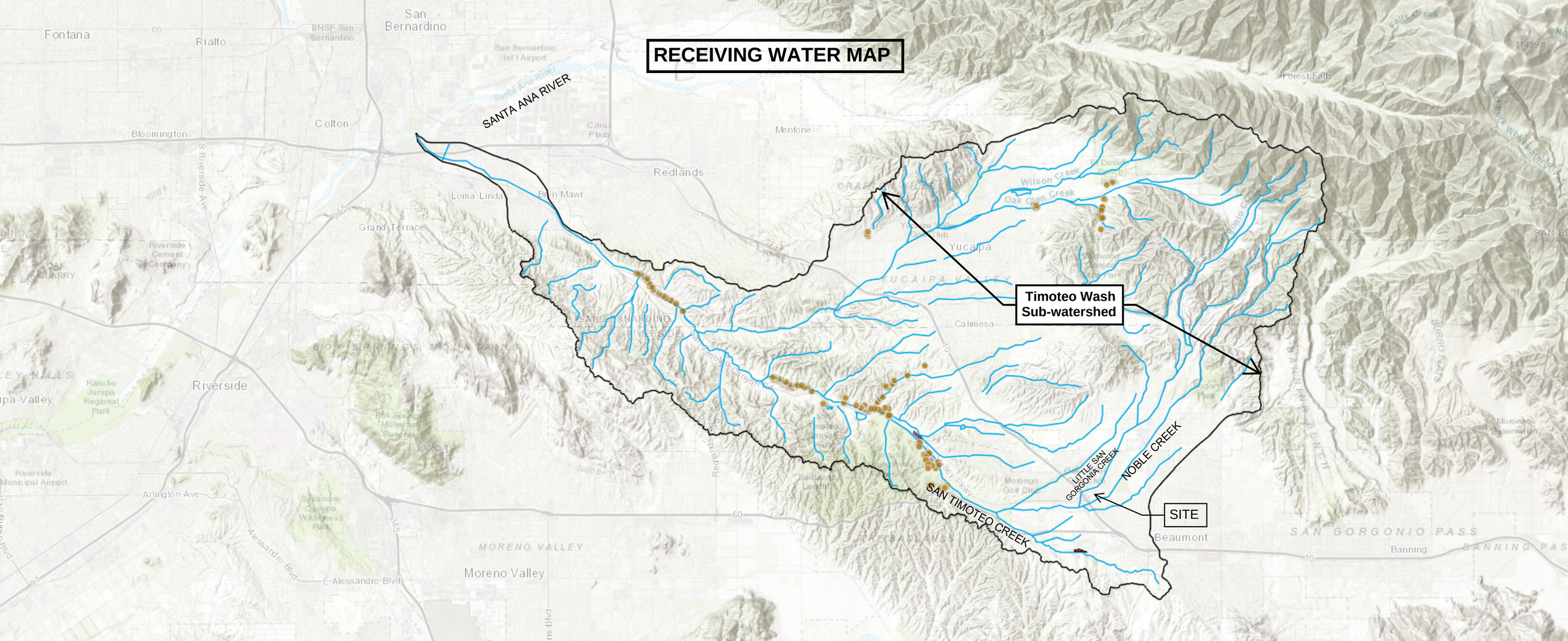
Appendix 1: Maps and Site Plans

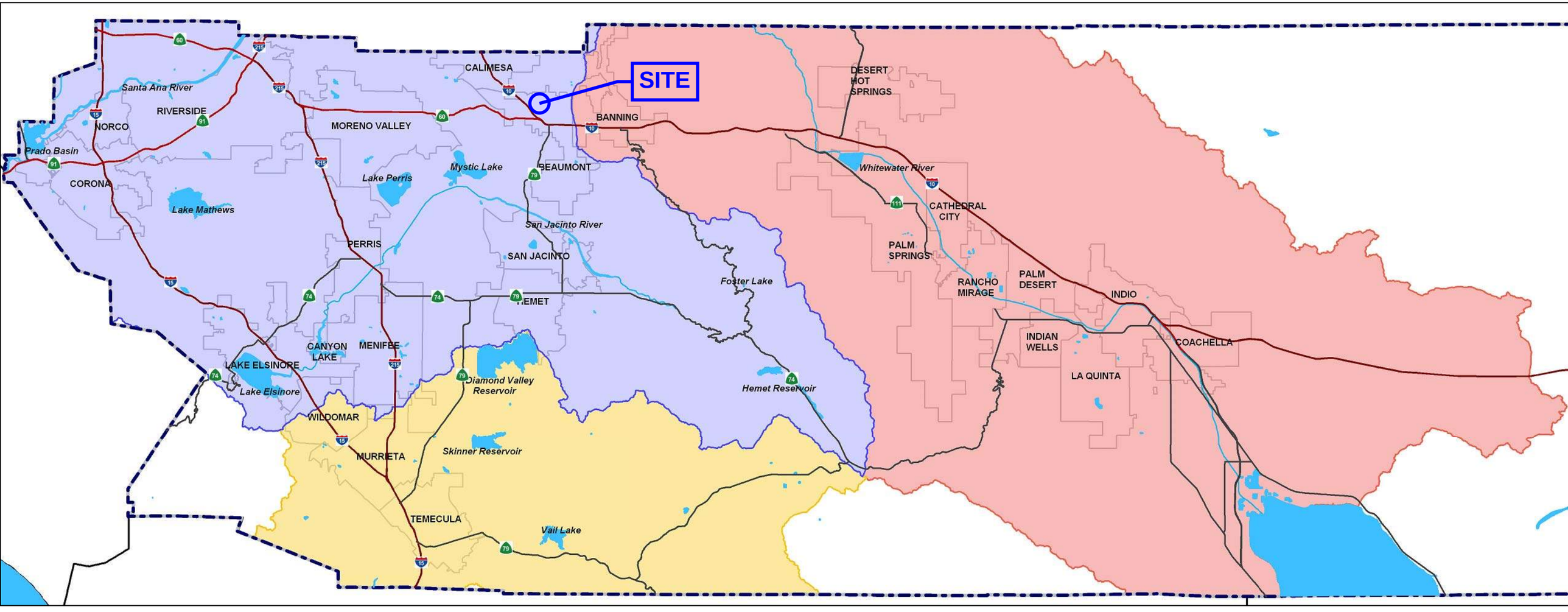
Location Map, WQMP Site Plan and Receiving Waters Map



VICINITY MAP

NOT TO SCALE


RECEIVING WATER MAP
SANTA ANA RIVER
Timoteo Wash
Sub-watershed
SAN TIMOTEO CREEK
LITTLE SAN GORGONIO CREEK
NOBLE CREEK
SITE
Fontana
Rialto
San Bernardino
Colton
Bloomington
Redlands
Loma Linda
Mentone
Yucaipa
Calimesa
Beaumont
Riverside
Moreno Valley
Forest Falls
Banning
SAN GORGONIO PASS


SITE
CALIMESA
Santa Ana River
RIVERSIDE
NORCO
MORENO VALLEY
Prado Basin
CORONA
Lake Perris
Mystic Lake
BEAUMONT
Lake Mathews
San Jacinto River
PERRIS
SAN JACINTO
Foster Lake
HEMET
CANYON LAKE
MENIFEE
LAKE ELSINORE
Lake Elsinore
Diamond Valley Reservoir
Hemet Reservoir
WILDOMAR
MURRIETA
Skinner Reservoir
TEMECULA
Vail Lake
BANNING
DESERT HOT SPRINGS
Whitewater River
CATHEDRAL CITY
PALM SPRINGS
RANCHO MIRAGE
PALM DESERT
INDIO
INDIAN WELLS
LA QUINTA
COACHELLA

The graphical and tabular information shown on this document may be derived from a variety of public agency and/or private commercial sources such as Riverside County Transportation and Land Management Agency, Thomas Brothers Mapping, the Stephen P. Teale Data Center, GIS Technology Center, State of California, the United States Geologic Survey and the United States National Atlas. These sources may possess varying levels of accuracy and precision and this product is meant only as a guide to the relative position and scale of the depicted features. This GIS document is in no case to be interpreted as fundamental or decisive for purposes of land surveying, field engineering, plan drafting, code enforcement, land boundary determination and/or land acquisition.

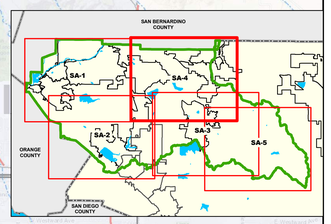
NPDES MUNICIPAL PERMIT
SANTA ANA RIVER WATERSHED
EXHIBIT SA-4
(MORENO VALLEY, PERRIS, CALIMESA, BEAUMONT, SAN JACINTO AREAS)

- CITY MS4 FACILITIES
- COUNTY MS4 FACILITIES
- RCFC&WCD MS4 FACILITIES
- OTHER FACILITIES
- MAJOR OUTFALL SITES
- SAR CORE MONITORING STATIONS
- SANTA ANA RIVER WATERSHED BOUNDARY
- LANDFILL SITES
- SEWAGE TREATMENT PLANTS
- SANTA ANA RIVER/SAN JACINTO RIVER
- BLUE LINE STREAMS
- RIVERSIDE COUNTY BOUNDARY
- INCORPORATED AREAS
- FREEWAYS/HIGHWAYS
- PRIMARY STREETS

N

0 0.5 1 1.5 2 MILES

UPDATED NOVEMBER 2017



SAN BERNARDINO COUNTY
RIVERSIDE COUNTY

CALIMESA

BEAUMONT

SITE

MORENO VALLEY

PERRIS

SAN JACINTO

BANNI

SUNNYMEAD MASTER DRAINAGE PLAN - LINE R-15

SUNNYMEAD MASTER DRAINAGE PLAN - LINE H

SUNNYMEAD MASTER DRAINAGE PLAN - LINE R-7

SUNNYMEAD - CENTERPOINTE STORM DRAIN

MORENO MASTER DRAINAGE PLAN - LINE F-2

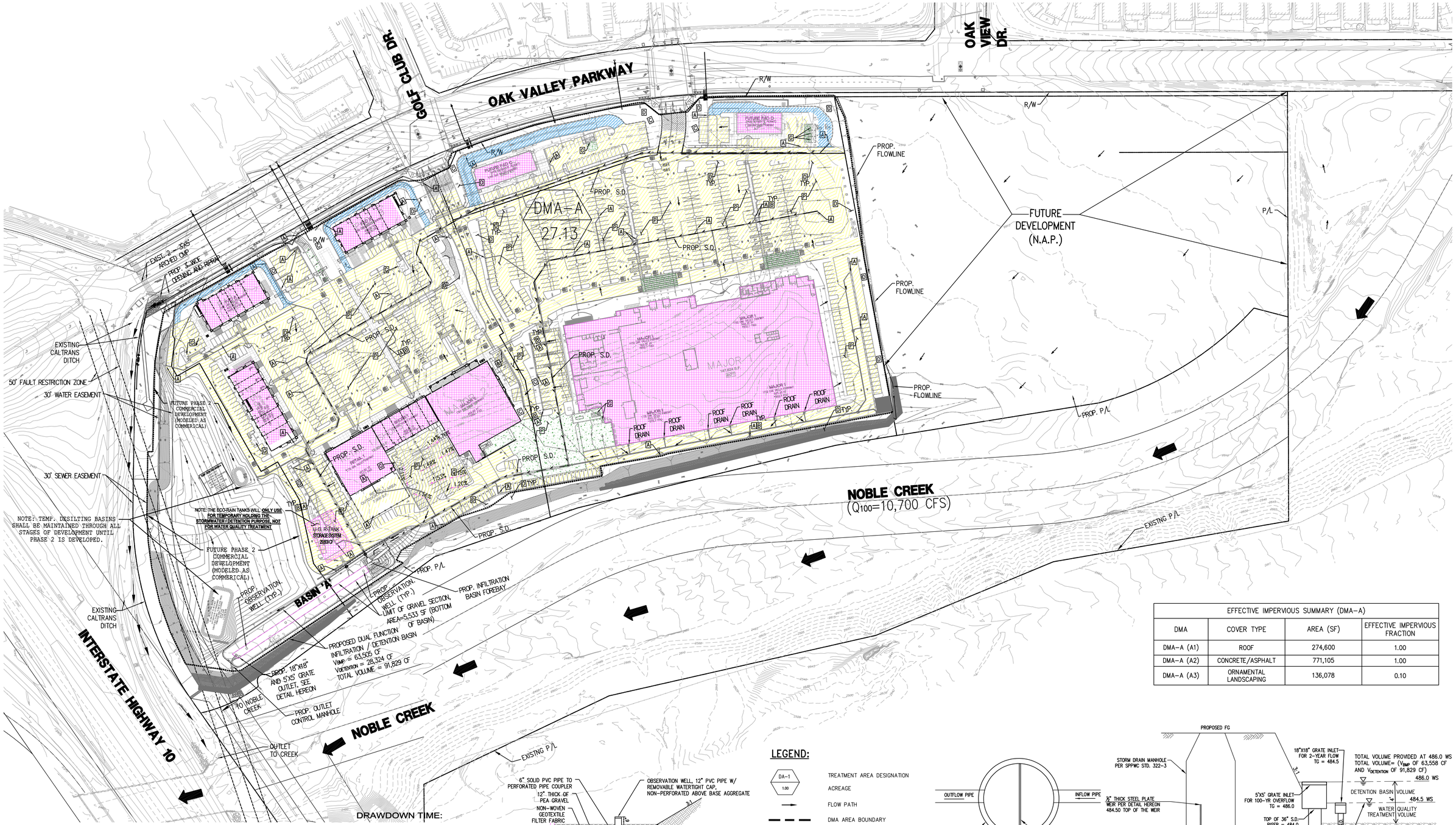
PERRIS VALLEY MASTER DRAINAGE PLAN - LINE S

PERRIS VALLEY MASTER DRAINAGE PLAN - LINE A-1

SAN JACINTO MASTER DRAINAGE PLAN - LINE E

BEAUMONT MASTER DRAINAGE PLAN - LINE 6

SAR-2016 ArcRgn_MS4 Maps_Map4.mxd

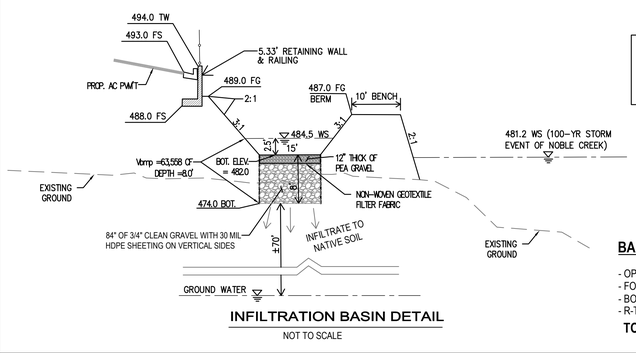


EFFECTIVE IMPERVIOUS SUMMARY (DMA-A)			
DMA	COVER TYPE	AREA (SF)	EFFECTIVE IMPERVIOUS FRACTION
DMA-A (A1)	ROOF	274,600	1.00
DMA-A (A2)	CONCRETE/ASPHALT	771,105	1.00
DMA-A (A3)	ORNAMENTAL LANDSCAPING	136,078	0.10

DRAWDOWN TIME:

BASED ON INFILTRATION RATE OF 9 INCH/HR, FS = 3, AT 48 HOURS DRAW-DOWN TIME, GRAVEL SECTION FOOTPRINT OF 5,533 SF, REFER TO SIZING CALCULATION IN APPENDIX 6.

DRAW-TIME = 46.3 HOURS



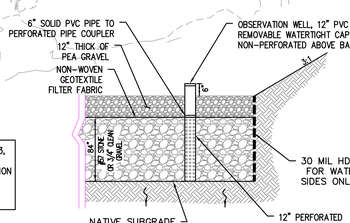
INFILTRATION BASIN DETAIL

NOT TO SCALE

BASIN VOLUME TABULATION:

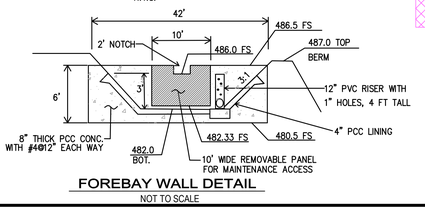
- OPEN BASIN, 15 FT BOTTOM, 4 FT DEEP: 39,070 CF
- FOREBAY AREA, 4 FT DEEP: 5,244 CF
- BOTTOM 8 FT GRAVEL LAYER (40% VOID): 17,706 CF
- R-TANK SYSTEM (DETENTION): 29,809 CF

TOTAL BASIN VOLUME: 91,829 CF



OBSERVATION WELL DETAIL

N.T.S.



FOREBAY WALL DETAIL

NOT TO SCALE

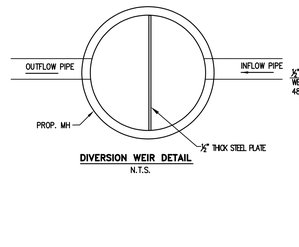
LEGEND:

- DA-1 / 1.00 — TREATMENT AREA DESIGNATION / ACREAGE
- FLOW PATH
- DMA AREA BOUNDARY
- ROOF AREA
- ASPHALT CONCRETE
- PORTLAND CEMENT CONCRETE
- PORTLAND CEMENT CONCRETE
- DECORATIVE PAVEMENT
- TREE / LANDSCAPING

"NO DUMPING - DRAINS TO OCEAN" STENCIL

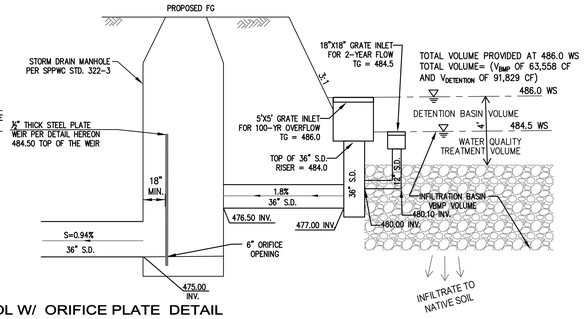
WQMP NOTES:

1. ALL STRUCTURAL BMPs SHALL BE ACCESSIBLE FOR INSPECTION AND MAINTENANCE AND SHALL BEAR A "NO DUMPING – DRAINS TO OCEAN" PAINT PER DETAIL HEREIN. STENCILS ARE AVAILABLE AT THE LOCAL BUILDING AND SAFETY DISTRICT OFFICE.
2. ALL TRASH BINS SHALL BE COVERED.
3. ALL DOWNSPOUTS TO DRAIN TO PROPOSED BMPs.



DIVERSION WEIR DETAIL

N.T.S.



OUTLET CONTROL W/ ORIFICE PLATE DETAIL

N.T.S.

SOURCE CONTROL BMPS:

- A — *INLET FILTER*
- D — *LANDSCAPE/OUTDOOR PESTICIDE USE*
- G — REFUSE AREAS
  NOTE: TRASH ENCLOSURES ARE GRADED TO PREVENT RUNOFF AND RUNON.

NON-STRUCTURAL SOURCE CONTROL BMPs

- C — LANDSCAPE MANAGEMENT BMPs PER CASQA BMP SC-73
- B — CATCH BASIN INSPECTION PROGRAM
- P — VACUUM SWEEPING OF PARKING LOTS/PAVED AREAS PER BMPs SC-43 AND SC-70

80' 40' 0' 80' 160'

GRAPHIC SCALE: 1 INCH = 80 FT

POST-CONSTRUCTION WQMP SITE PLAN
OAKMONT VILLAGE
BEAUMONT, CALIFORNIA

DRC Engineering, Inc.
Civil Engineering/Land Surveying/Land Planning
8offices
40440 INDIANA AVENUE SUITE 215
RIVERSIDE, CA 92506
714-685-6860

Saved: 5/3/2023 2:26 PM By: DWG
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Appendix 2: Construction Plans

Grading and Drainage Plans

PRECISE GRADING PLAN
OAK VALLEY VILLAGE

LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

IN THE CITY OF BEAUMONT
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

NOT FOR CONSTRUCTION

GRADING NOTES

1. ALL GRADING SHALL CONFORM TO THE CITY OF BEAUMONT ORDINANCES, CURRENT ADOPTED CALIFORNIA BUILDING CODE, APPENDIX J, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, "LATEST EDITION" AND RECOMMENDATIONS OF THE SOILS ENGINEER.
2. NO WORK SHALL COMMENCED UNTIL ALL PERMITS HAVE BEEN OBTAINED FROM THE CITY AND OTHER APPROPRIATE AGENCIES.
3. ALL PROPERTY CORNERS SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION /GRADING.
4. DURING ROUGH GRADING OPERATIONS AND PRIOR TO CONSTRUCTION OF PERMANENT DRAINAGE STRUCTURES, TEMPORARY DRAINAGE AND EROSION CONTROL SHOULD BE PROVIDED TD PREVENT PONDING WATER, SEDIMENT TRANSPORTATION, AND DAMAGE TO ADJACENT PROPERTIES.
5. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS.
6. NO FILL SHALL BE PLACED ON EXITING GROUND THAT HAS NOT BEEN CLEARED OF WEEDS. DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL.
7. MAXIMUM CUT AND FILL SLOPE = 2: 1 EXCEPT WHERE SPECIFICALLY APPROVED OTHERWISE.
8. PROVIDE A 5' WIDE BY 1' HIGH BERM OR EQUIVALENT ALONG THE TOP OF ALL FILL SLOPES OVER 5' HIGH.
9. PROVIDE A BROW DITCH DESIGNED TO HANDLE 100 YR STORM FLOWS ALONG THE TOP OF CUT SLOPES.
10. NO OBSTRUCTION OF FLOODPLAIN OR NATURAL WATER COURSES SHALL BE PERMITTED.
11. ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE SHALL CONTINUE TO FUNCTION, ESPECIALLY DURING STORM CONDITIONS, PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING OPERATIONS.
12. CUT AND FILL SLOPES EQUAL TO OR GREATER THAN 3'IN VERTICAL HEIGHT SHALL BE PLANTED WITH GRASS OR GROUND COVER TO PROTECT THE SLOPE FROM EROSION AND INSTABILITY IN ACCORDANCE WITH CITY OF BEAUMONT REQUIREMENTS PRIOR TO FINAL GRADING INSPECTION
13. ALL SLOPES REQUIRED TO BE PLANTED SHALL BE PLANTED WITH APPROVED GROUND COVER AT 12" ON CENTER. SLOPES EXCEEDING 15' IN VERTICAL HEIGHT SHALL BE PLANTED WITH APPROVED TREES SPACED NOT TO EXCEED 20' ON CENTER OR SHRUBS NOT TO EXCEED 10' OR A COMBINATION OF SHRUBS AND TREES NOT TO EXCEED 15' IN ADDITION TO A GRASS MIX GROUND COVER. SLOPES EQUAL TO OR GREATER THAN 4' IN VERTICAL HEIGHT SHALL BE PROVIDED WITH AN IN-GROUND IRRIGATION SYSTEM COMPLETE WITH AN APPROPRIATE BACKFLOW PREVENTION DEVICE PER CITY REQUIREMENTS.
14. IF STEEP SLOPING TERRAIN OCCURS UPON WHICH FILL IS TO BE PLACED. IT MUST BE CLEARED, KEYED, AND BENCHED INTO FIRM NATURAL SOIL FOR FULL SUPPORT. PREPARATION SHALL BF APPROVED BY A SUITABLY QUALIFIED AND REGISTERED GEOTECHNICAL ENGINEER OR GEOLOGIST PRIOR TO PLACEMENT OF FILL MATERIAL.
15. THE GROUND IMMEDIATELY ADJACENT TO A FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5-PERCENT SLOPE) FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10 FEET (3048 MM) OF HORIZONTAL DISTANCE, A 5-PERCENT SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. SWALES USED FOR THIS PURPOSE SHALL BE SLOPED A MINIMUM OF 2 PERCENT WHERE LOCATED WITHIN 10 FEET OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2 PERCENT AWAY FROM THE BUILDING.
16. ALL GRADING SHALL BE CONTINUOUSLY OBSERVED BY A COMPETENT SOILS ENGINEER WHO SHALL VERIFY THAT ALL FILL HAS BEEN PROPERLY PLACED AND WHO SHALL SUBMIT A FINAL COMPACTION REPORT FOR ALL FILLS OVER 1' DEEP.
17. A FINAL GEOTECHNICAL REPORT OF COMPLETION OF THE ROUGH GRADING, STATING SUBSTANTIAL CONFORMANCE WITH THE APPROVED GRADING PLAN, SHALL BE SUBMITTED TO THE BUILDING AND SAFETY DEPARTMENT PRIOR TO REQUESTING INSPECTION AND ISSUANCE OF BUILDING PERMITS. CERTIFICATIONS SHALL INCLUDE LINE GRADES, ELEVATIONS, AND LOCATION OF CUT/FILL SLOPES.
18. A LAND SURVEYOR OR ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING SHALL SUBMIT A PAD CERTIFICATION FOR ALL PADS. THE ELEVATION WITH RESPECT TO MEAN SEA LEVEL SHALL BE GIVEN. IF AN ELEVATION WITH RESPECT TO ADJACENT GROUND SURFACE IS REQUIRED, THE ACTUAL DISTANCE ABOVE THE ADJACENT GROUND SHALL BE GIVEN.
19. A GEOTECHNICAL ENGINEER OR GEOLOGIST SHALL SUBMIT TO THE BUILDING AND SAFETY DEPARTMENT AND THE PUBLIC WORKS DEPARTMENT A FINAL GEOTECHNICAL REPORT OF COMPLETION OF FINAL GRADING STATING SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS FOR ALL GRADING DESIGNATED AS "ENGINEERED GRADING".
20. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AT LEAST 24 HOURS IN ADVANCE REQUESTING FINISH LOT GRADE AND DRAINAGE INSPECTION. THIS INSPECTION MUST BE APPROVED PRIOR TO BUILDING PERMIT FINAL INSPECTION FOR EACH LOT.
21. ALL STORM DRAINS, CATCH BASINS, AND STORM WATER RUNOFF STRUCTURES WILL BE PROVIDED WITH ADEQUATE CAPABILITIES TO FILTER AND RETAIN SEDIMENT, GRIT, OIL, AND GREASE TD PREVENT POLLUTION IN STORM WATER RUNOFF IN COMPLIANCE WITH THE CITY OF BEAUMONT'S BEST MANAGEMENT PRACTICES AND BEAUMONT'S DRAINAGE MASTER PLAN FOR STORMWATER AS WELL AS BEST MANAGEMENT PRACTICES IDENTIFIED IN THE CURRENT REPORT OF WASTE DISCHARGE FOR RIVERSIDE COUNTY PERMITTEES.
22. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT TWO DAYS BEFORE DIGGING AT 8-1-1 AND THE FOLLOWING UTILITY OR AGENCIES A MINIMUM OF TWO WORKING DAYS PRIOR TO COMMENCING ANY CONSTRUCTION OR GRADING:
   a. CITY OF BEAUMONT 951.769.8520
   b. VERIZON XXX.XXX.XXXX
   c. SOUTHERN CALIFORNIA GAS COMPANY XXX.XXX.XXXX
   d. BEAUMONT CHERRY VALLEY WATER DISTRICT XXX.XXX.XXXX
   e. EDISON XXX.XXX.XXXX

GRADING NOTES (CONT.)

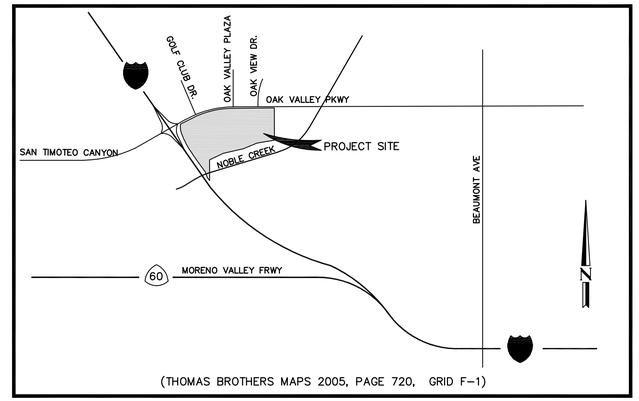
23. TRENCHING FOR UTILITIES AND STRUCTURES IS NOT ALLOWED UNTIL A SOIL COMPACTION REPORT IS SUBMITTED TO AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.
24. THE CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, SAFE, CLEAN AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE CITY'S INSPECTOR. THE ADJACENT STREETS SHALL BE KEPT CLEAN OF SEDIMENT, DEBRIS AND OTHER NUISANCES AT ALL TIMES. THE DEVELOPER SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY THE CONSTRUCTION.
25. ALL OPERATIONS CONDUCTED ON THE SITE OR ADJACENT THERETO SHALL ADHERE TO THE NOISE ORDINANCE SET FORTH BY THE CITY MUNICIPAL CODE. ALL OPERATIONS SHALL BE LIMITED BY THE NOISE ORDINANCE TO THE LIMIT OF DECIBELS SPECIFIED FOR THE AREA AND TIME PERIOD. CONSTRUCTION ACTIVITIES WILL BE LIMITED TO THE PERIOD BETWEEN 7:00 A.M. AND 6:00 P.M. MONDAY THROUGH FRIDAY.
26. ALL OFF-SITE HAUL ROUTES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CITY ENGINEER FOR APPROVAL TWO FULL WORKING DAYS PRIOR TO BEGINNING OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEBRIS OR DAMAGE OCCURRING ALONG THE HAUL ROUTE OR ADJACENT STREETS AS A RESULT OF THE GRADING OPERATION.

STORM DRAIN NOTES

1. CONTRACTOR SHALL CONSTRUCT THE DRAINAGE IMPROVEMENT SHOWN ON THE DRAWINGS IN CONFORMANCE WITH THE REQUIREMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT DESIGN MANUAL STANDARD DRAWINGS, RECENT EDITION, THE SSPWC LATEST EDITION', AND IN CONFORMANCE WITH THE REQUIREMENTS OF THE BEAUMONT DRAINAGE MANAGEMENT PLAN.
2. CONTRACTOR SHALL COMPLY WITH THE STATE AND LOCAL SAFETY CODES DURING THE PROGRESS OF WORK.
3. CONSTRUCTION PROJECTS THAT DISTURB MORE THAN ONE ACRE MUST OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT. OWNER/DEVELOPERS ARE REQUIRED TO FILE A NOTICE OF INTENT (NOI) WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) AND COMPLY WITH ALL REQUIREMENTS OF THE BEAUMONT DRAINAGE MANAGEMENT PLAN. BEAUMONT IS CO-PERMITTEE WITH R.C.F.C. & W.C.D.
4. ALL STORM DRAINS, CATCH BASINS, AND STORM WATER RUNOFF STRUCTURES WILL BE PROVIDED WITH ADEQUATE CAPABILITIES TO FILTER AND RETAIN SEDIMENT AND DIRT, OF, AND GREASE, TO PREVENT POLLUTION IN STORM WATER RUNOFF IN COMPLIANCE WITH THE CITY OF BEAUMONT'S BEST MANAGEMENT PRACTICES AND THE BEAUMONT DRAINAGE MASTER PLAN FOR STORM WATER AS WELL AS BEST MANAGEMENT PRACTICES IDENTIFIED IN THE CURRENT REPORT OF WASTE DISCHARGE FOR RIVERSIDE COUNTY PERMITTEES.
5. CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, SAFE, CLEAN AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE COUNTY'S OR DISTRICT'S INSPECTOR. THE ADJACENT STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. THE DEVELOPER SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY HIS CONSTRUCTION. METHOD OF STREET CLEANING SHALL BE DRY SWEEPING OF ALL PAVED AREAS.
6. CONTRACTOR SHALL BE THE RESPONSIBILITY TO INSTALL AND MAINTAIN DURING CONSTRUCTION, REGULATORY GUIDE AND WARNING SIGNS WITHIN THE PROJECT LIMITS AND ITS SURROUNDINGS TO PROVIDE SAFE PASSAGE FOR THE TRAVELING PUBLIC AND WORKERS UNTIL THE FINAL COMPLETION AND ACCEPTANCE OF THE PROJECT BY THE CITY OF BEAUMONT.
7. CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER, CITY OF BEAUMONT, AND THE DEVELOPER'S ENGINEER, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNERS OR THE DEVELOPER'S ENGINEER.
8. CONTRACTOR SHALL BE THE RESPONSIBILE TO OBTAIN AN ENCROACHMENT PERMIT FOR ALL WORK PERFORMED WITHIN PUBLIC RIGHT-OF-WAY, DEDICATED AND ACCEPTED FOR PUBLIC USE; AND TO BE RESPONSIBLE FOR SATISFACTORY COMPLIANCE FOR ALL CURRENT ENVIRONMENTAL REGULATIONS DURING THE LIFE OF CONSTRUCTION ACTIVITIES FOR THIS PROJECT.
9. CONTRACTOR MUST NOTIFY THE CITY OF BEAUMONT AT (951) 769-8520 AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
10. CONTRACTOR MUST PROVIDE CONSTRUCTION SCHEDULE TO THE CITY OF BEAUMONT AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
11. CONTRACTOR MUST CALL UNDERGROUND SERVICE ALERT AT 811 AT LEAST 48 HOURS BEFORE EXCAVATION.
12. CONTRACTOR IS REQUIRED TO CONTACT ALL UTILITY AGENCIES REGARDING TEMPORARY SUPPORT AND SHORING REQUIREMENTS FOR THE VARIOUS UTILITIES SHOWN IN THE PLANS.
13. THE CONTRACTOR SHALL VERIFY, BY POT HOLING, THE LOCATION OF POTENTIALLY AFFECTED UTILITIES.
14. CONTRACTOR SHALL HAVE GEOTECHNICAL/SOILS ENGINEERING FIRM OBSERVE TRENCHING, BACKFILLING, & SOIL COMPACTION OF ALL UTILITY TRENCHES WITHIN ALL EASEMENTS & ROAD RIGHTS OF WAY. TWO SETS OF COMPACTION REPORTS CERTIFYING THAT WORKS WERE DONE IN CONFORMANCE TO STANDARDS & GEOTECHNICAL REPORT SHALL BE SUBMITTED AFTER EACH UTILITY TRENCH IS COMPLETED & CERTIFIED. COMPACTION REPORT MUST BE SUBMITTED TO THE DEPT. OF PUBLIC WORKS AT LEAST TWO WORKING DAYS BEFORE AGGREGATE BASE MATERIALS ARE PLACED ONSITE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEARING OF THE PROPOSED WORK AREA AND RELOCATION COSTS OF ALL EXISTING UTILITIES.
16. ELEVATIONS AND LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE UNLESS OTHERWISE NOTED. ALL UTILITIES SHOWN ARE TO BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.

STORM DRAIN NOTES (CONT.)

17. ALL ELEVATIONS SHOWN ARE TO THE INVERTS OF PIPE, EXCEPT WHERE OTHERWISE NOTED.
18. STORM DRAIN PROFILES CONTAIN CALL-OUTS AND REFERENCE TO INTERSECTING STORM DRAIN LINES. INTERSECTIONS OF THESE JUNCTIONS ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR IS TO OBTAIN INVERT ELEVATIONS FROM THE RESPECTIVE PROFILE OF THE INTERSECTING PIPE.
19. ALL STATIONING REFERS TO THE CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED.
20. STATIONING FOR LATERALS AND CONNECTOR PIPE REFER TO THE CENTERLINE-CENTERLINE-INTERSECTION STATION.
21. ALL PIPE LENGTHS ARE HORIZONTAL PROJECTIONS (NOT TRUE LENGTHS OF PIPE) AND ARE THE BASIS OF THE ESTIMATES OF QUANTITIES. THE CONTRACTOR SHALL DETERMINE THE TRUE QUANTITY OF PIPE REQUIRED FOR THIS PROJECT PRIOR TO PLACING THE ORDER.
22. ALL CROSS SECTIONS ARE TAKEN LOOKING UPSTREAM.
23. OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES TO BE ABANDONED SHALL BE SEALED WITH 6 INCHES OF CLASS "B"CONCRETE.
24. PIPE CONNECTED TO THE MAINLINE PIPE SHALL CONFORM TO JUNCTION STRUCTURE NO. 4 (JS 229) UNLESS OTHERWISE NOTED.
25. PIPE BEDDING SHALL CONFORM TO R.C.F.C. & W.C.D. STD. DWG. M 815
26. "V" IS THE DEPTH OF INLET AT THE CATCH BASINS MEASURED FROM THE TOP OF THE CURB TO THE INVERT OF CONNECTOR PIPE.
27. HYDRAULIC GRADE LINES SHOWN IN PROFILES ARE FOR 100 YEAR FREQUENCY FLOWS, UNLESS OTHERWISE NOTED.
28. ALL BACKFILL AND BEDDING AROUND STRUCTURES AND PIPES SHALL BE COMPACTED TO NOT LESS THAN 90 PERCENT RELATIVE COMPACTION EXCEPT WHERE SUCH MATERIAL IS PLACED UNDER EXISTING PAVED ROADWAYS. THE TOP 3 FEET, MEASURED FROM THE FINISH PAVING, SHALL BE COMPACTED TO 95 PERCENT RELATIVE COMPACTION.
29. CONTRACTOR SHALL DISPOSE OF ALL EXCESS EXCAVATED MATERIAL AT MANDATORY DISPOSAL SITE.
30. ALL CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS, AND OTHER EXISTING MPROVEMENTS TO BE RECONSTRUCTED IN KIND PER LATEST COUNTY STANDARD AND AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS UNLESS OTHERWISE NOTED. FOR PAVEMENT OVERLAY, 0.10'MIN. FOR FULL LANE WIDTH IS REQUIRED.
31. ALL UNDERGROUND FACILITIES WITH LATERALS SHALL BE IN PLACE PRIOR TO PAVING THE STREET, INCLUDING BUT NOT LIMITED TO, THE FOLLOWING: SEWER, WATER, ELECTRIC, STORM DRAINS.
32. ALL SURVEY MONUMENTS SHALL BE REPLACED AS REQUIRED. MONUMENTS SHALL BE TIED OUT PRIOR TO CONSTRUCTION AND REPLACED UPON COMPLETION OF CONSTRUCTION.



(THOMAS BROTHERS MAPS 2005, PAGE 720, GRID F-1)

VICINITY MAP
NO SCALE

INDEX OF PLAN SHEETS:

1	COVER SHEET, GENERAL NOTES
2	SHEET INDEX MAP
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15-18	STORM DRAIN PLAN
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22-23	ADA/RAMP DETAILS
24-25	DETAILS
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27	HORIZONTAL CONTROL PLAN
28-29	EROSION CONTROL PLAN

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ARCHITECT

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SOIL ENGINEER

GEOTECHNICAL PROFESSIONALS, INC. (GPI)
5736 CORPORATE AVENUE
CYPRESS, CA 90630
CONTACT: PATRICK McGERVEY, GE
(714) 220-2211
REPORT DATED: SEPTEMBER 20, 2024
PROJECT#: 3259.I
REPORT DATED: NOVEMBER 26, 2024 (TARGET ONLY)
PROJECT#: 3259.I

SOILS ENGINEER APPROVAL

THIS PLAN HAS BEEN REVIEWED AND CONFORMS TO RECOMMENDATIONS OF SOILS ENGINEERING/GEOLOGIC REPORTS BY GEOTECHNICAL PROFESSIONALS, INC. DATED 9/20/2024 AND 11/26/2024, PROJ. No. 3259.I.

SIGNATURE

DATE

LEGAL DESCRIPTION

IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BEING PARCELS 1 AND 2 OF LOT LINE ADJUSTMENT NO. 2025-LLA-001 RECORDED _____ AS DOCUMENT NO. _____, TOGETHER WITH PARCELS "A" AND "B" OF LOT LINE ADJUSTMENT NO. 2025-LLA-002 RECORDED _____ AS DOCUMENT NO. _____, TOGETHER WITH LOT "A" OF LOT LINE ADJUSMENT NO. 2025-LLA-003 RECORDED _____ AS DOCUMENT NO. _____, ALL OF OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

NOTE

THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATIONS SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN 5% FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTION OF LOT LINES PROHIBIT 10 FEET OF HORIZONTAL DISTANCE, A 5% SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATIONS. SWALES USED FOR THIS PURPOSE SHALL BE SLOPED A MINIMUM OF 2% WHERE LOCATED WITHIN 10 FEET OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACE WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MAXIMUM OF 1.8% AWAY FROM THE BUILDING.

LEGEND AND ABBREVIATIONS :

PROPERTY LINE/ PROP. LOT LINE
EXISTING LOT LINES
RIGHT OF WAY
PROPOSED LOT LINES
CENTER LINE
EASEMENT
TOP OF SLOPE
2:1 SLOPE SYMBOL
TOE OF SLOPE
EDGE OF PAVEMENT
CHAIN LINK FENCE
R/GB RIDGE/GRADE BREAK
100-YR WATER SURFACE
RETAINING WALL
FLOW LINE
ADA PATHWAY
RETAINING WALL W/ SCREEN WALL
SCREEN WALL
SLOPE-PROTECTION WALL
SCOUR WALL

(60) EX. MAJOR CONTOUR
EX. MINOR CONTOUR
60 PROP. MAJOR CONTOUR
PROP. MINOR CONTOUR
1% RATE OF GRADE
100.00TC / 99.50FL PROPOSED ELEV.

CB CATCH BASIN
CL CENTER LINE
CONC. CONCRETE
DI DRAIN INLET
DRWY DRIVEWAY
FG FINISHED GRADE
FH FIRE HYDRANT
FL FLOWLINE
FS FINISHED SURFACE
HP HIGH POINT
HT HEIGHT
INV INVERT
MH MANHOLE
SD STORM DRAIN
SS SANITARY SEWER
SW STEM WALL
TB TOP OF BERM
TC TOP OF CURB
TF TOP OF FOOTING
TG TOP OF GRATE
TRW TOP OF RETAINING WALL
TW TOP OF WALL
TYP. TYPICAL
WL WATER LINE
WM WATER METER

PRIVATE ENGINEER'S NOTICE TO CONTRACTOR:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR SO THE AT ANY NECESSARY ADJUSTMENTS CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENTS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PREVENT ANY UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

ACCESSIBILITY STANDARDS COMPLIANCE STATEMENT:

DRC ENGINEERING, INC. (THE "CONSULTANT") CONFIRMS TO TARGET THAT CONSULTANT HAS IDENTIFIED AND USED THE CURRENT VERSION OF ALL LOCAL, STATE, AND FEDERAL ACCESSIBILITY GUIDELINES FOR SITE ACCESSIBILITY THE SITE HAS BEEN DESIGNED IN ACCORDANCE WITH, BUT NOT LIMITED TO, CITY, COUNTY, AND STATE ACCESSIBILITY CODES, AND THE CURRENT VERSION OF THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN (ADA STANDARDS), AS AMENDED.

EARTHWORK (PHASE 1)

PROJECT AREA: 66.4 AC (GROSS), 28.7 AC (NET)
RAW CUT = 253,705 CY
RAW FILL = 194,909 CY
EXPORT = 58,796 CY

BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE BEARING OF 14TH STREET BEING NORTH 60°17'20" EAST AS SHOWN ON THE MAP FILED IN BOOK 80, PAGES 78 THROUGH 89, INCLUSIVE, OF RECORDS OF SURVEYS, IN THE OFFICE OF THE COUNTY RECORDER OF RIVERSIDE COUNTY, CALIFORNIA.

WDID: 8 33C408030

DIGALERT Call 2 Working Days Before You Dig! 811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS		CITY

DRC Civil Engineering/Land Surveying/Land Planning
160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT CALIFORNIA INC.NOV.15.1912

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY
TITLE SHEET

SHEET 1 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835xref00 23835xr0101 23835xp0100 rvw_cp_stamp 23835ST01 23835 SITAL_Oak Valley 23835xb0101 23835 AR Bldg CD 23835 AR Target Bldg CD
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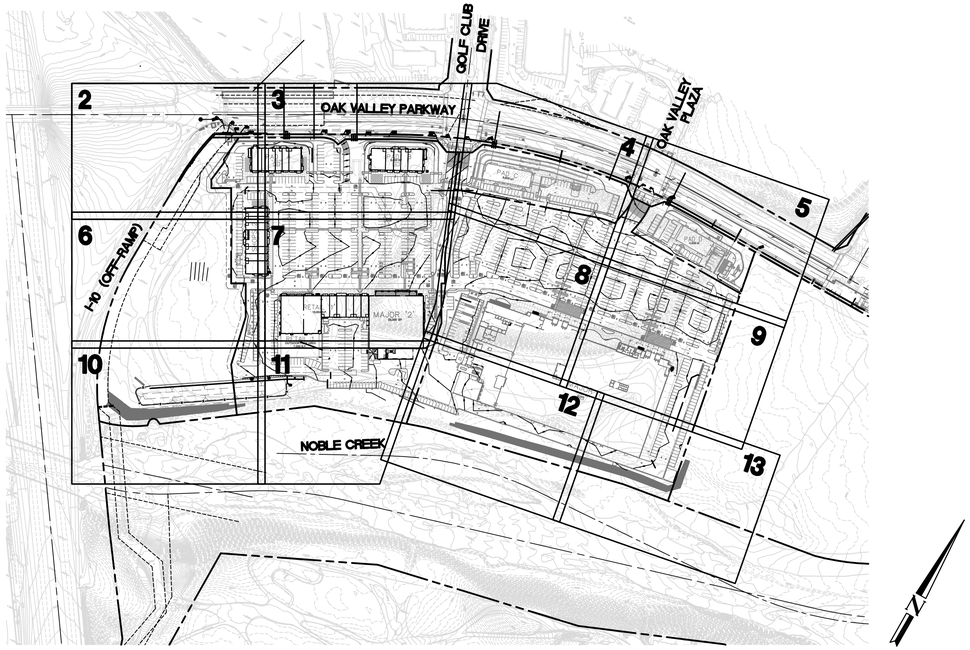
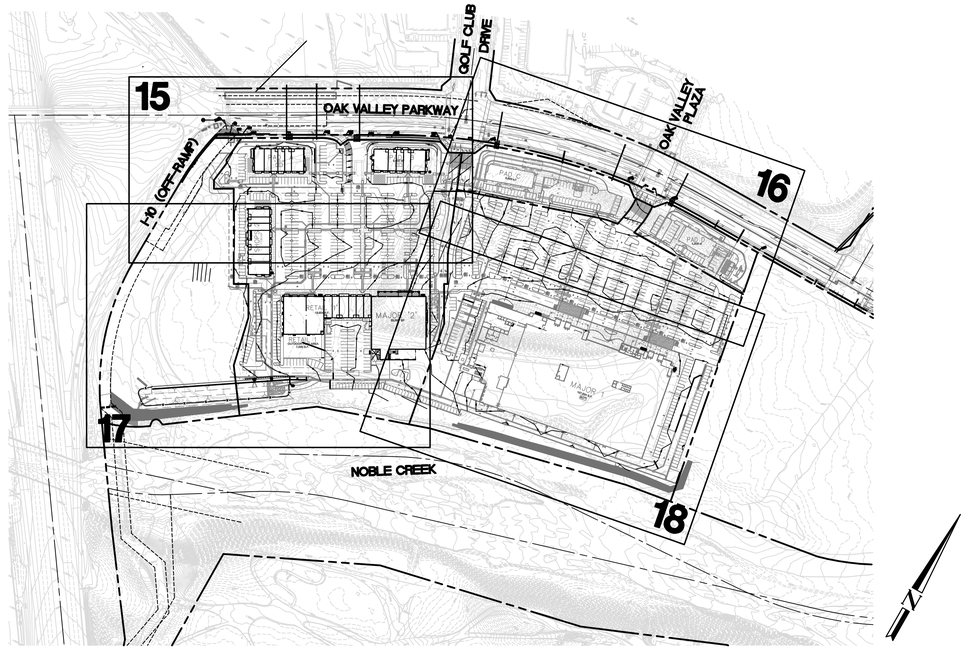


PRECISE GRADING SHEET INDEX MAP

SCALE: 1" = 200'

= SHEET NUMBER



STORM DRAIN SHEET INDEX MAP

SCALE: 1" = 200'

= SHEET NUMBER

CONSTRUCTION NOTES

		PHASE 1		PAD C		PAD D	
		QTY	UNIT	QTY	UNIT	QTY	UNIT
1	CONSTRUCT PCC VERTICAL CURB ONLY PER SPPWC STD. 120-2, TYPE A1-6. CURB HEIGHT PER PLAN.	13,880	LF	1,124	LF	1,024	LF
2	CONSTRUCT 6" PCC CURB & 18" GUTTER PER SPPWC STD. 120-2, TYPE A2-6, W=18".	3,842	LF	455	LF	352	LF
3	CONSTRUCT 0" PCC CURB PER DETAIL ON SHEET 24.	159	LF	0	LF	0	LF
4	CONSTRUCT 0" PCC FLUSH RIBBON CURB PER DETAIL ON SHEET 24.	153	LF	0	LF	0	LF
5	CONSTRUCT 4" PCC ROLLED CURB PER DETAIL ON SHEET 24.	336	LF	0	LF	0	LF
6	CONSTRUCT 0" FLUSH RIBBON CURB TO 4" ROLLED CURB TRANSITION PER DETAIL ON SHEET 24.	32	LF	0	LF	0	LF
7	CONSTRUCT 4" ROLLED CURB TO VERTICAL CURB TRANSITION PER DETAIL ON SHEET 24. VERTICAL CURB HEIGHT PER PLAN.	66	LF	0	LF	0	LF
8	CONSTRUCT 3'-WIDE V-GUTTER PER DETAIL ON SHEET 24.	465	LF	0	LF	119	LF
9	CONSTRUCT 4" THICK PCC SIDEWALK PER COUNTY OF RIVERSIDE STD. 401.	47,112	SF	4,035	SF	1,914	SF
10	CONSTRUCT PCC ADA ACCESS/CURB RAMP WITH TRUNCATED DOMES PER SPPWC STD. 111-5 & PER DETAILS ON SHEETS 22-23.	45	EA	9	EA	4	EA
11	INSTALL TRUNCATED DOMES PER SPPWC STD. 111-5.	1,892	EA	166	EA	66	EA
12	INSTALL LANDSCAPE AREA DRAIN INLET PER STORM DRAIN PLAN ON SHEETS 15-18.	SEE RIGHT		SEE RIGHT		SEE RIGHT	
13	INSTALL GRATED INLET CATCH BASIN PER STORM DRAIN PLAN ON SHEETS 15-18.	SEE RIGHT		SEE RIGHT		SEE RIGHT	
14	INSTALL CURB OPENING CATCH BASIN PER STORM DRAIN PLAN ON SHEETS 15-18.	SEE RIGHT		SEE RIGHT		SEE RIGHT	
15	INSTALL TRENCH DRAIN PER STORM DRAIN PLAN ON SHEETS 15-18.	SEE RIGHT		SEE RIGHT		SEE RIGHT	
16	CONSTRUCT HARDSCAPE PER SEPARATE ARCHITECTURAL PLANS AND/OR TENANT SPECIFICATIONS.	N/A		N/A		N/A	
17	CONSTRUCT ASPHALT PAVEMENT PER PAVING PLAN ON SHEET 26.	PER PAVING PLAN		PER PAVING PLAN		PER PAVING PLAN	
18	CONSTRUCT PCC PAVEMENT PER PAVING PLAN ON SHEET 26.	PER PAVING PLAN		PER PAVING PLAN		PER PAVING PLAN	
19	CONCRETE PAVERS PER SEPARATE ARCHITECTURAL PLANS.	N/A		N/A		N/A	
20	CONSTRUCT TRASH ENCLOSURE PER SEPARATE ARCHITECTURAL PLANS.	N/A		N/A		N/A	
21	CONSTRUCT 1-FT WIDE V-GUTTER PER DETAIL ON SHEET 24.	648	LF	0	LF	172	LF
22	CONSTRUCT RAISED PLANTER WALLS PER SEP. ARCH. PLANS	N/A		N/A		N/A	

CONSTRUCTION NOTES

		PHASE 1		PAD C		PAD D	
		QTY	UNIT	QTY	UNIT	QTY	UNIT
23	INSTALL MONUMENT SIGN PER SEPARATE ARCHITECTURAL PLANS.	N/A		N/A		N/A	
24	CONSTRUCT MASONRY RETAINING WALL PER SEPARATE PLANS AND PERMIT.	9,500	SF	N/A		N/A	
25	CONSTRUCT RETAINING WALL PER SEPARATE STRUCTURAL PLANS	N/A		N/A		N/A	
26	CONSTRUCT DEEPENED FOOTING PER SEPARATE STRUCTURAL PLANS.	N/A		N/A		N/A	
27	CONSTRUCT STEM WALL PER SEPARATE STRUCTURAL PLANS.	N/A		N/A		N/A	
28	CONSTRUCT CONCRETE LINED SOFT BOTTOM CHANNEL (SCOUR WALL) PER RCFC&WCD STD. DWG. NO. CH323.	11,120	SF	0	SF	0	SF
29	CONSTRUCT 4" THICK PCC WITH #6 WIRE MESH ON 2:1 SLOPE PER RIVERSIDE COUNTY STD. 401.	12,320	SF	0	SF	0	SF
30	INSTALL 2" X 6" REDWOOD HEADER PER DETAIL ON SHEET 24.	1,295	LF	0	LF	0	LF
31	LANDSCAPE AREA PER SEPARATE LANDSCAPE PLANS.	N/A		N/A		N/A	
32	CONST. 6" TEMP. AC BERM PER SPPWC STD. 120-3, TYPE D1-6.	86	LF	0	LF	0	LF
33	ADA HANDRAIL PER SEPARATE ARCHITECTURAL PLANS.	N/A		N/A		N/A	
34	INSTALL SPEED DOWEL SLEEVES AT BACK OF CURB @ 24" O.C.	N/A		N/A		N/A	
35	CONSTRUCT GUARDRAIL W/ WOOD POST PER CALTRANS STD PLAN A77L1.	140	LF	0	LF	0	LF
36	CONSTRUCT PARKWAY DRAIN PER SPPWC STD. 151-3. S=18"	10	LF	0	LF		
37	CONSTRUCT CHAIN LINK FENCE PER RCFC&WCD STD. M801.	550	LF				

STORM DRAIN CONSTRUCTION NOTES:

		QTY	UNIT
50	PROTECT EXISTING ARCH CMP PIPE AND CONSTRUCT STRAIGHT HEADWALL FOR DOUBLE CMP PER CALTRANS STD 89B.		N/A
51	INSTALL 4" PVC SDR-35, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.	194	LF
52	INSTALL 6" PVC SDR-35, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.	635	LF
53	INSTALL 8" PVC SDR-35, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.	1,233	LF
54	INSTALL 12" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.	2,288	LF
55	INSTALL 18" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.	1,315	LF
56	INSTALL 24" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.	1,794	LF
57	CONSTRUCT 4" PCC LINING.	1,500	SF
58	CONSTRUCT 36"ø CMP RISER FOR EMERGENCY OVERFLOW	1	EA
59	INSTALL 48" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.	980	LF
60	CONSTRUCT DI1818 JENSEN PRECAST DROP INLET (GRATED) PER DETAIL ON SHEET 25.	30	EA
61	CONSTRUCT DI2424 JENSEN PRECAST DROP INLET (GRATED) PER DETAIL ON SHEET 25.	20	EA
62	CONSTRUCT CURB OPENING CATCH BASIN PER RCFC&WCD STD. CB100; V & W PER PLAN.	2	EA
63	CONSTRUCT 12" WIDE TRENCH DRAIN NDS MODEL BG-FILCOTEN PRO V 300	16	LF
64	INSTALL 12"ø ATRIUM GRATE INLET PER DETAIL ON SHEET 25	4	EA
65	INSTALL HDPE REDUCER (ECCENTRIC). SIZE PER PLAN.	3	EA
66	CONSTRUCT STORM DRAIN MANHOLE PER RCFC&WCD STD. MH251.	8	EA
67	CONSTRUCT STORM DRAIN MANHOLE PER RCFC&WCD STD. MH252.	2	EA
68	CONSTRUCT HEADWALL OUTLET STRUCTURE PER CALTRANS STD PLAN D86B.	5.2	CY
69	INSTALL 9"ø ROCK RIP-RAP PER LATEST GREENBOOK SPECIFICATIONS.	2,440	CY
70	CONSTRUCT INFILTRATION/DETENTION BASIN PER DETAIL ON SHEET 25. ELEVATIONS PER GRADING PLAN ON SHEETS 11 AND 12.	1	LS
71	CONSTRUCT OUTLET CONTROL MANHOLE PER DETAIL ON SHEET 25.	1	EA
72	CONSTRUCT 8" THICK CONCRETE FOREBAY WALL W/ 10' REMOVABLE WEIR PANEL W/ 12" PERFORATED PVC RISER PER DETAIL ON SHEET 25.	1	LS
73	INSTALL PRECON STORMPRISM "SPEQ" DETENTION SYSTEM PER DETAIL ON SHEET 25.	1	LS
74	CAP FOR FUTURE PHASE	7	EA
75	CONSTRUCT 36"ø CMP RISER	1	EA
76	CONSTRUCT 6" WIDE TRENCH DRAIN (H20 LOADING) PER MANUFACTURER SPECIFICATIONS.	10	LF
77	ROOF DRAIN POINT OF CONNECTION PER SEPARATE PLUMBING PLANS.	10	EA
78	INSTALL 36" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.	60	LF
79	INSTALL 4"ø METAL GRATE INLET PER DETAIL ON SHEET 25	1	EA

WDID: 8 33C408030

DIGALERT — Call 2 Working Days Before You Dig 811

BENCHMARK:
BM No. C-3-1-1965
DESC: BRASS DISK TOP CONCRETE POST
LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST
ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL

DESIGN BY:
DRAWN BY:
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Recommended for Approval By: _____ Administrative Engineer Date: _____

Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

INDEX SHEET

SHEET 2 OF 29 SHEETS
FILE NO: PW2025-0240

NOT FOR CONSTRUCTION

EXTERNAL REFERENCES: 23835ma101 23835ce101 23835st101 23835sg100 23835st101 23835 AR Bldg OD 23835 LA Trees 23835 AR Target Bldg OD 23835sgp101 23835st101
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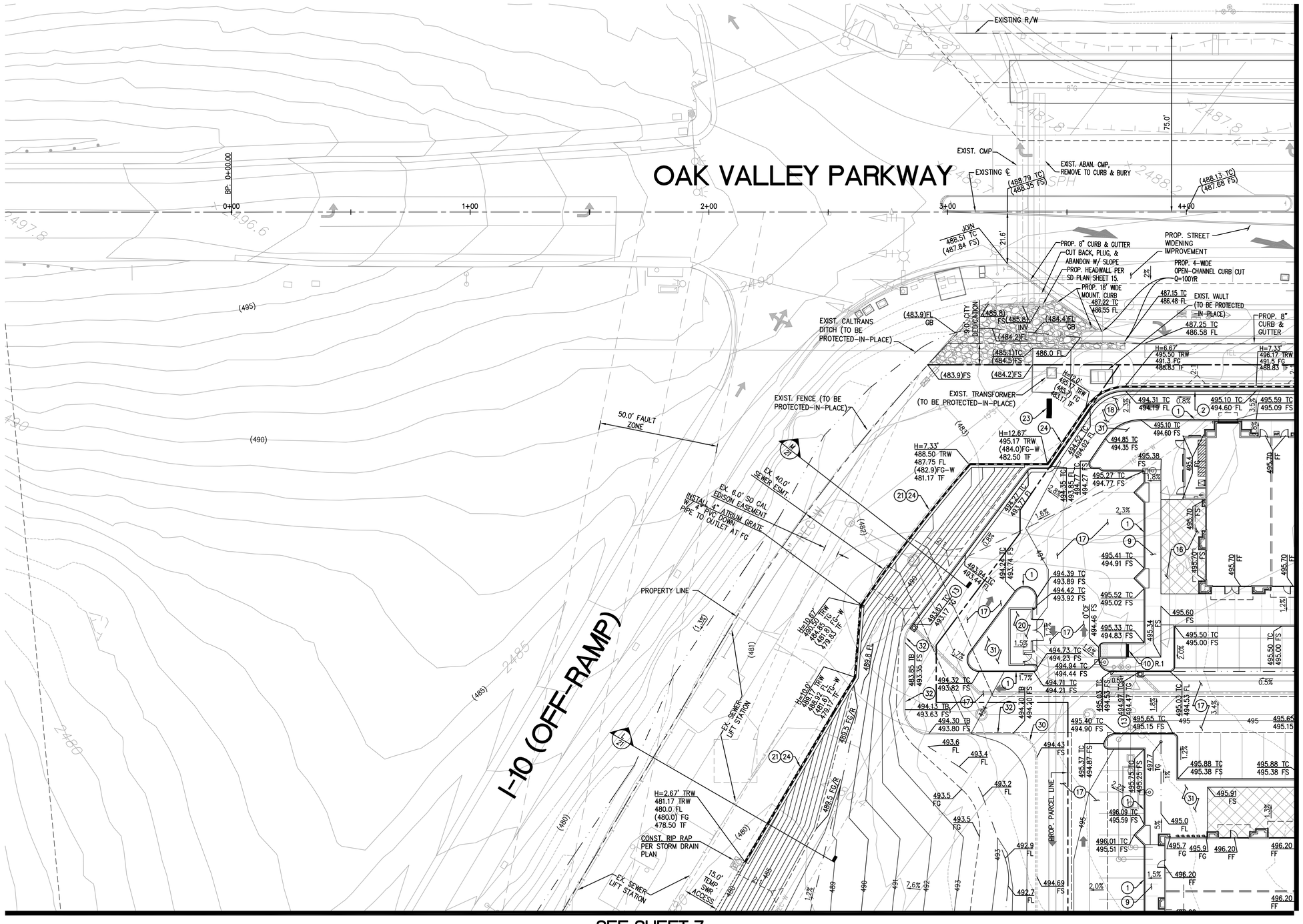

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34. INSTALL SPEED DOWEL SLEEVES AT BACK OF CURB @ 24" O.C.
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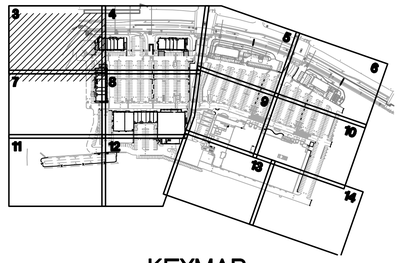
***PAD NOTE**

PAD ELEVATION TO BE VERIFIED BY SOILS ENGINEER PRIOR TO CITY APPROVAL.



KEYMAP
NOT TO SCALE

GRAPHIC SCALE: 1 INCH = 20 FT

WDID: 8 33C408030

NOT FOR CONSTRUCTION

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Call 2 Working Days Before You Dig! 811

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Suite 210
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Civil Engineering/Land Surveying/Land Planning
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SEAL
REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY OF BEAUMONT CALIFORNIA INC.NOV.18, 1912

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

GRADING

SHEET 3 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835xref01 23835xref01 23835xpt01 23835xpt01 23835xpt100 Pens_no_stamp 23835sht01 23835sht01 23835 ESTAL Oak Valley 23835 AR Bldg CD 23835 AR Bldg CD
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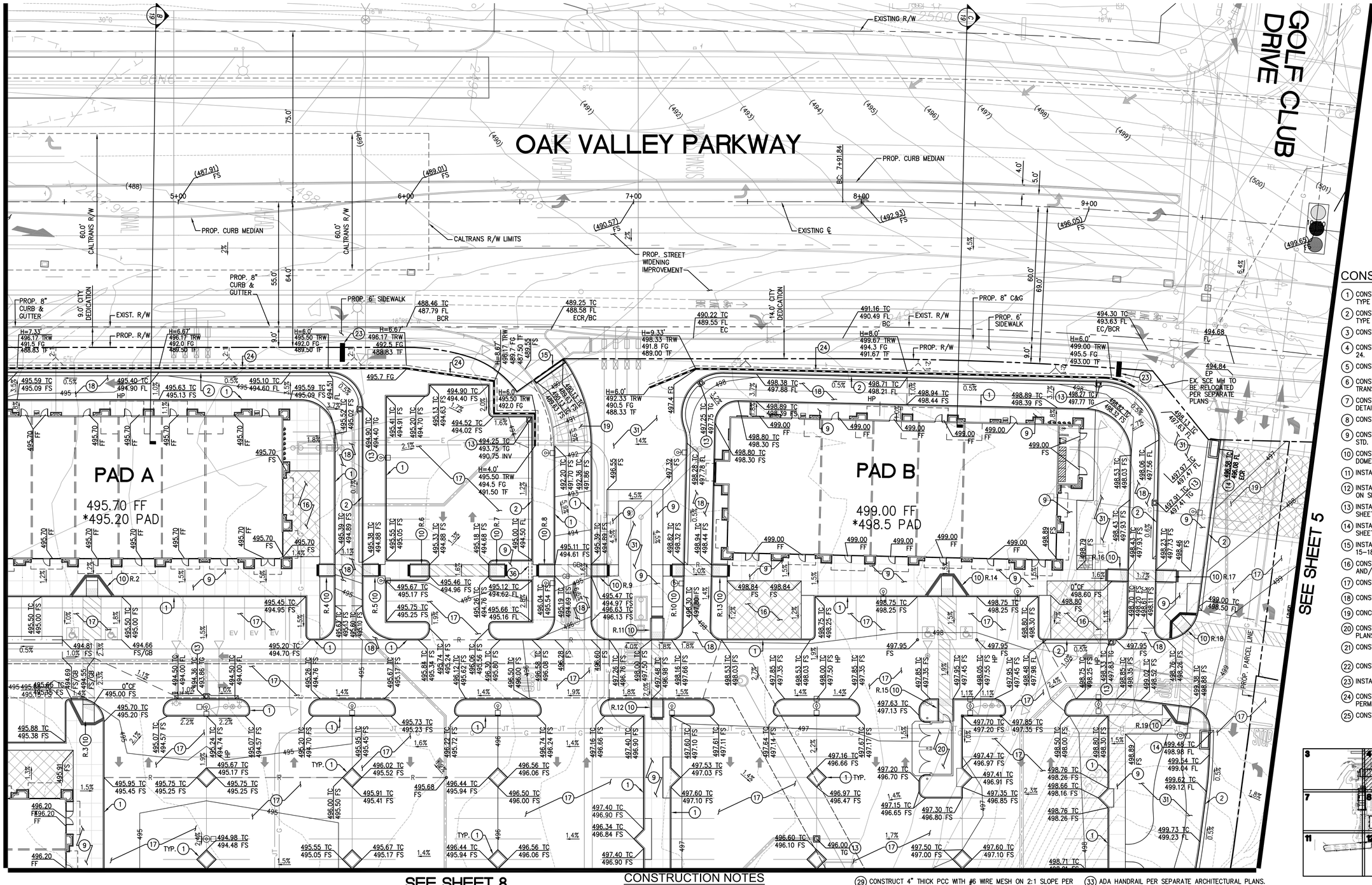

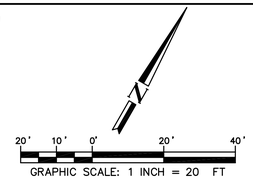

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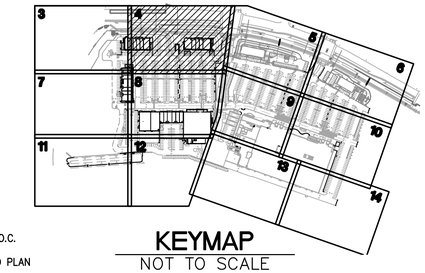

KEYMAP
NOT TO SCALE

WDID: 8 33C408030

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32. CONST. 6" TEMP. AC BERM PER SPPWC STD. 120-3, TYPE D1-6.
33. ADA HANDRAIL PER SEPARATE ARCHITECTURAL PLANS.
34. INSTALL SPEED DOWEL SLEEVES AT BACK OF CURB @ 24" O.C.
35. CONSTRUCT GUARDRAIL W/ WOOD POST PER CALTRANS STD PLAN A77L1.
36. CONSTRUCT PARKWAY DRAIN PER SPPWC STD. 151-3. S=18"

DIGALERT — Call 2 Working Days Before You Dig! 811

BENCHMARK:
BM No. C-3-1-1965
DESC: BRASS DISK TOP CONCRETE POST
LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST
ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER — RONALD W. SKLEPKO — No. C46216 — Exp. 12-31-2026 — CIVIL — STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT CALIFORNIA INC NOV. 18, 1912

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

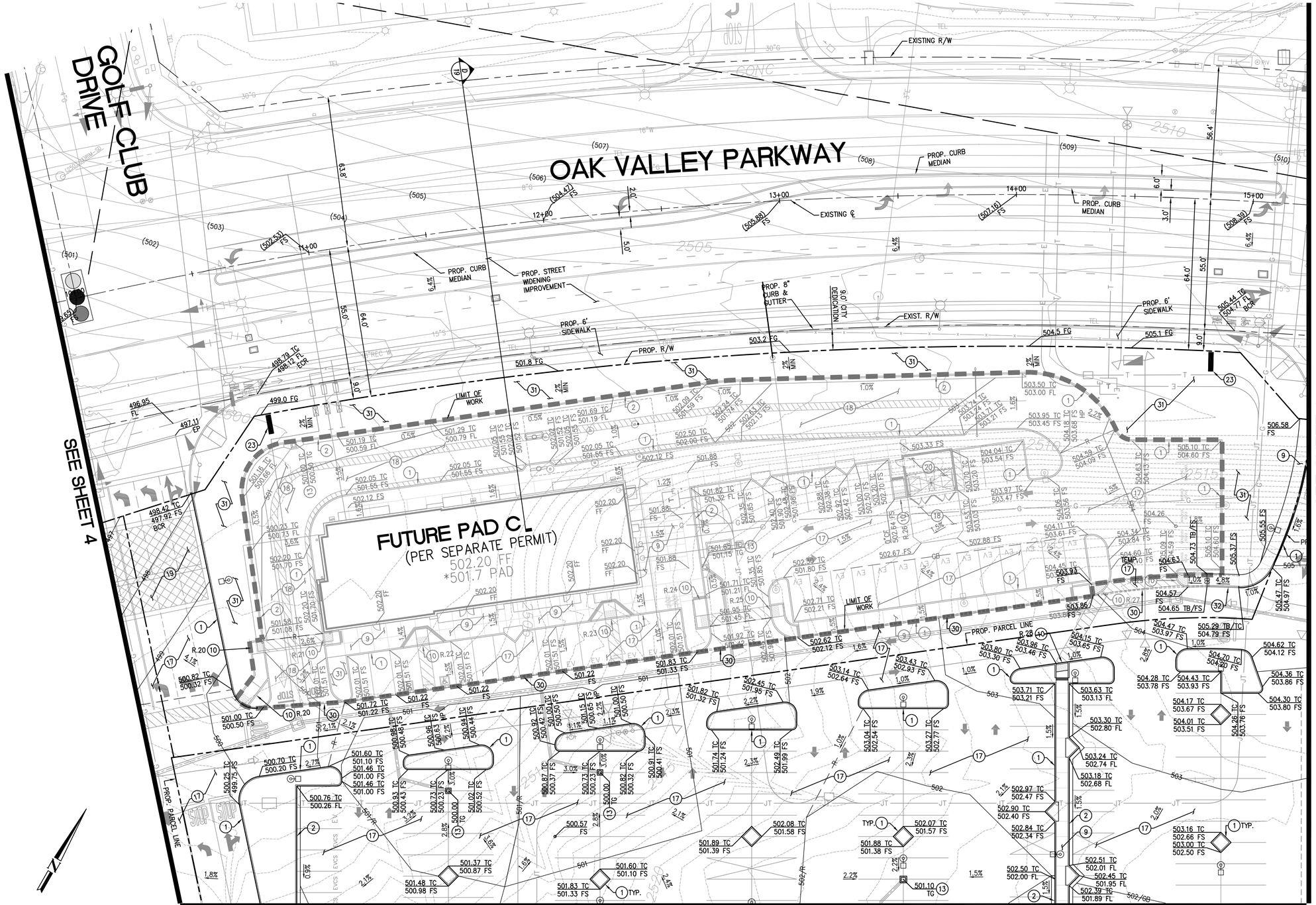
CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

GRADING

SHEET 4 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835xr01 23835xr02 23835xr03 23835xr04 23835xr05 23835xr06 23835xr07 23835xr08 23835xr09 23835xr10 23835xr11 23835xr12 23835xr13 23835xr14 23835xr15 23835xr16 23835xr17 23835xr18 23835xr19 23835xr20 23835xr21 23835xr22 23835xr23 23835xr24 23835xr25 23835xr26 23835xr27 23835xr28 23835xr29 23835xr30 23835xr31 23835xr32 23835xr33 23835xr34 23835xr35 23835xr36 23835xr37 23835xr38 23835xr39 23835xr40



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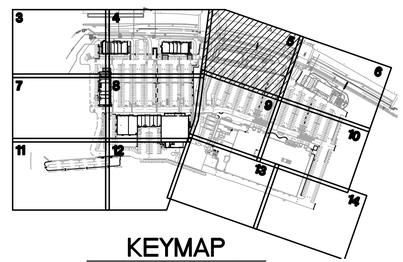

KEYMAP
NOT TO SCALE

GRAPHIC SCALE: 1 INCH = 20 FT

WDID: 8 33C408030

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CITY of BEAUMONT CALIFORNIA INC.NOV.15,1912

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PRECISE GRADING PLANS FOR:
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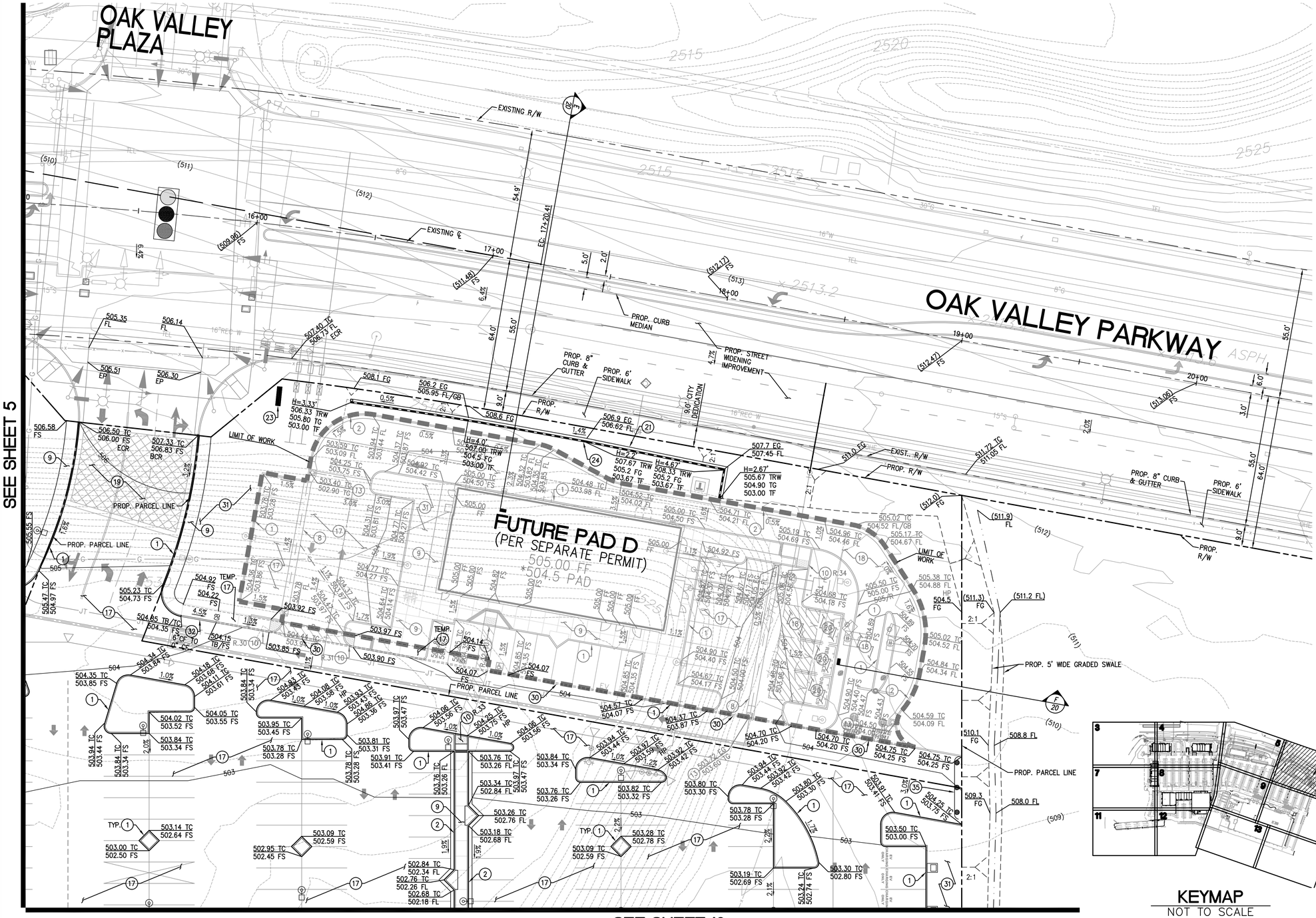
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

GRADING

SHEET 5 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835ml01 23835xl01 23835pg101 23835pg100 res_co_stamp 23835 AR Target Bldg CD 23835 LA Trees 23835 STAL Oak Valley 23835 AR Target Bldg CD
DWG: U:\2023\23835\Engineering\Grading\23835gr01.dwg LAST SAVED: Jun 16, 2025 - 3:04pm BY: MPARRY



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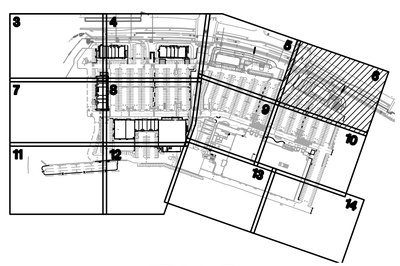

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DIGALERT — Call 2 Working Days Before You Dig 811

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BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
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Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER — RONALD W. SKLEPKO — No. C46216 Exp. 12-31-2026 — CIVIL — STATE OF CALIFORNIA

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CITY of BEAUMONT — CALIFORNIA INC.NOV. 18, 1912

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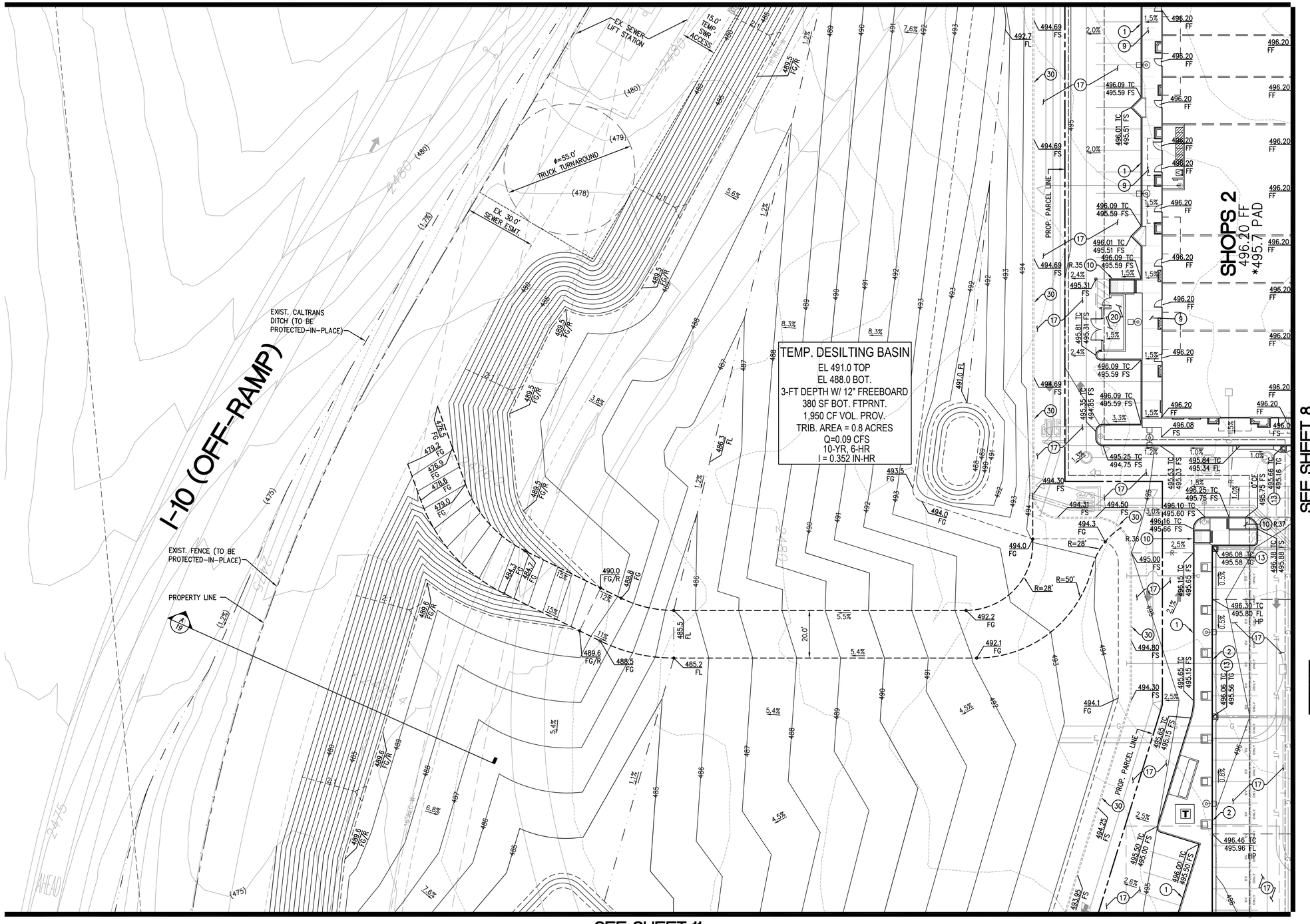
CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

GRADING

SHEET 6 OF 29 SHEETS
FILE NO: PW2025-0240

SEE SHEET 3



SEE SHEET 11

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N

20' 10' 0' 20' 40'

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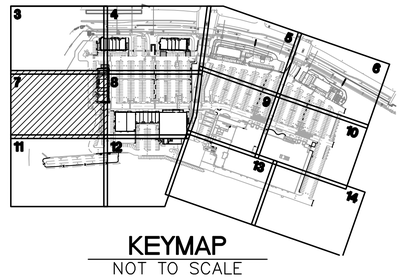

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GRADING

SHEET 7 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835ma100 23835sp100 23835sp100 ms_oa_stamp 23835sh101 23835sh101 23835 SITAL_Oak Valley 23835 AR Bldg CD 23835 AR Bldg CD 23835 LA Trees 23835 AR Target Bldg CD
FILENAME: M:\2023\23-835 Regency Target Beaumont\PW\23835PG103-114_PG.dwg, LAST SAVED ON: Aug 18 2025 9:46am, CFG
PLOTTED BY: HOMER, ON: Aug 18 2025 9:31am

SEE SHEET 4

SEE SHEET 7

SEE SHEET 9

SEE SHEET 12

RETAIL 1
497.80 FF
*497.1 PAD

RETAIL 1
498.80 FF
*498.1 PAD

MAJOR 2
499.80 FF
*499.1 PAD

496.20 FF
*495.7 PAD

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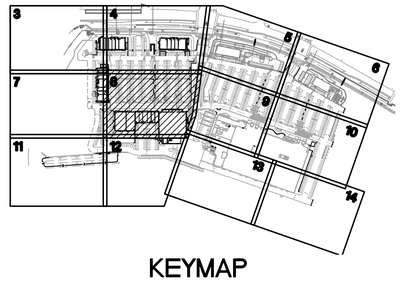

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NOT TO SCALE

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WDID: 8 33C408030

DIGALERT
Call 2 Working Days Before You Dig!
811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL
REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT CALIFORNIA INC. NOV. 18, 1912

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

GRADING

SHEET 8 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835mn100 23835sp100 23835sp101 23835sp102 23835sp103 rem_ce_stamp 23835SIAL_Oak Valley 23835 AR Target Bldg CD 23835 LA Trees 23835 AR Target Bldg CD
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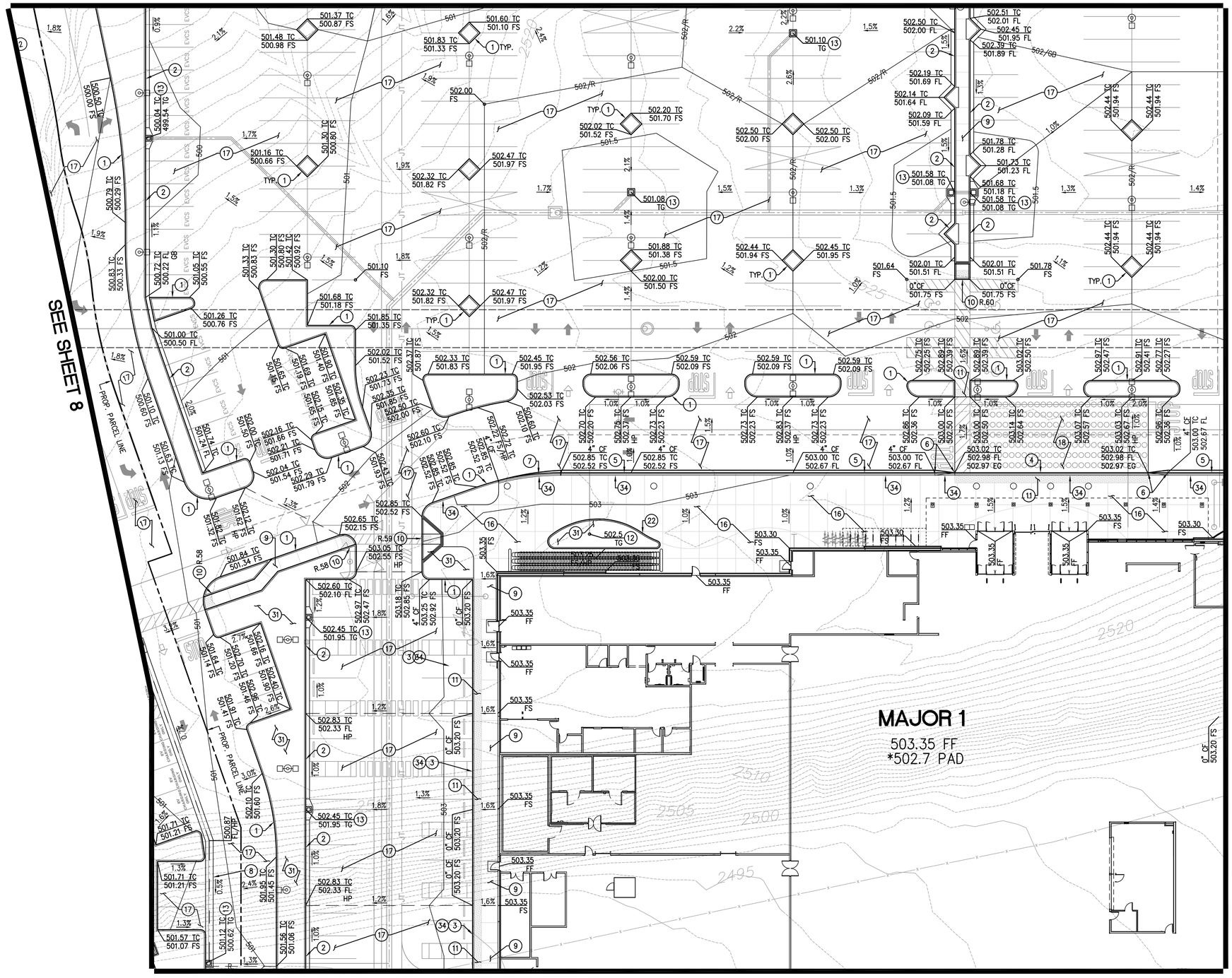
SEE SHEET 5

SEE SHEET 8

SEE SHEET 10

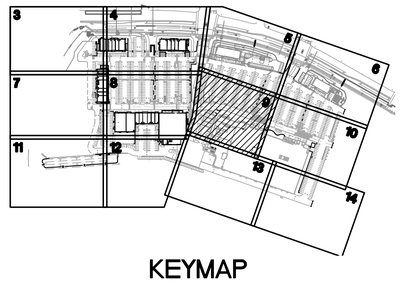


SEE SHEET 13

CONSTRUCTION NOTES

1. CONSTRUCT PCC VERTICAL CURB ONLY PER SPPWC STD. 120-2, TYPE A1-6. CURB HEIGHT PER PLAN.
2. CONSTRUCT 6" PCC CURB & 18" GUTTER PER SPPWC STD. 120-2, TYPE A2-6, W=18".
3. CONSTRUCT 0" PCC CURB PER DETAIL ON SHEET 24.
4. CONSTRUCT 0" PCC FLUSH RIBBON CURB PER DETAIL ON SHEET 24.
5. CONSTRUCT 4" PCC ROLLED CURB PER DETAIL ON SHEET 24.
6. CONSTRUCT 0" FLUSH RIBBON CURB TO 4" ROLLED CURB TRANSITION PER DETAIL ON SHEET 24.
7. CONSTRUCT 4" ROLLED CURB TO VERTICAL CURB TRANSITION PER DETAIL ON SHEET 24. VERTICAL CURB HEIGHT PER PLAN.
8. CONSTRUCT 3'-WIDE V-GUTTER PER DETAIL ON SHEET 24.
9. CONSTRUCT 4" THICK PCC SIDEWALK PER COUNTY OF RIVERSIDE STD. 401.
10. CONSTRUCT PCC ADA ACCESS/CURB RAMP WITH TRUNCATED DOMES PER SPPWC STD. 111-5 & PER DETAILS ON SHEETS 22-23.
11. INSTALL TRUNCATED DOMES PER SPPWC STD. 111-5.
12. INSTALL LANDSCAPE AREA DRAIN INLET PER STORM DRAIN PLAN ON SHEETS 15-18.
13. INSTALL GRATED INLET CATCH BASIN PER STORM DRAIN PLAN ON SHEETS 15-18.
14. INSTALL CURB OPENING CATCH BASIN PER STORM DRAIN PLAN ON SHEETS 15-18.
15. INSTALL TRENCH DRAIN PER STORM DRAIN PLAN ON SHEETS 15-18.
16. CONSTRUCT HARDSCAPE PER SEPARATE ARCHITECTURAL PLANS AND/OR TENANT SPECIFICATIONS.
17. CONSTRUCT ASPHALT PAVEMENT PER PAVING PLAN ON SHEET 26.
18. CONSTRUCT PCC PAVEMENT PER PAVING PLAN ON SHEET 26.
19. CONCRETE PAVERS PER SEPARATE ARCHITECTURAL PLANS.
20. CONSTRUCT TRASH ENCLOSURE PER SEPARATE ARCHITECTURAL PLANS.
21. CONSTRUCT 1-FT WIDE V-GUTTER PER DETAIL ON SHEET 24.
22. CONSTRUCT RAISED PLANTER WALLS PER SEP. ARCH. PLANS
23. INSTALL MONUMENT SIGN PER SEPARATE ARCHITECTURAL PLANS.
24. CONSTRUCT MASONRY RETAINING WALL PER SEPARATE PLANS AND PERMIT.
25. CONSTRUCT RETAINING WALL PER SEPARATE STRUCTURAL PLANS
26. CONSTRUCT DEEPENED FOOTING PER SEPARATE STRUCTURAL PLANS.
27. CONSTRUCT STEM WALL PER SEPARATE STRUCTURAL PLANS.
28. CONSTRUCT CONCRETE LINED SOFT BOTTOM CHANNEL (SCOUR WALL) PER RCFC&WCD STD. DWG. NO. CH323.
29. CONSTRUCT 4" THICK PCC WITH #6 WIRE MESH ON 2:1 SLOPE PER RIVERSIDE COUNTY STD. 401.
30. INSTALL 2" X 6" REDWOOD HEADER PER DETAIL ON SHEET 24.
31. LANDSCAPE AREA PER SEPARATE LANDSCAPE PLANS.
32. CONST. 6" TEMP. AC BERM PER SPPWC STD. 120-3, TYPE D1-6.
33. ADA HANDRAIL PER SEPARATE ARCHITECTURAL PLANS.
34. INSTALL SPEED DOWEL SLEEVES AT BACK OF CURB @ 24" O.C.
35. CONSTRUCT GUARDRAIL W/ WOOD POST PER CALTRANS STD PLAN A77L1.

20' 10' 0' 20' 40'
GRAPHIC SCALE: 1 INCH = 20 FT



KEYMAP
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WDID: 8 33C408030

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GRADING

SHEET 9 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835sht100 23835sht101 23835sht102 23835sht103 23835sht104 23835sht105 23835sht106 23835sht107 23835sht108 23835sht109 23835sht110 23835sht111 23835sht112 23835sht113 23835sht114 23835sht115 23835sht116 23835sht117 23835sht118 23835sht119 23835sht120 23835sht121 23835sht122 23835sht123 23835sht124 23835sht125 23835sht126 23835sht127 23835sht128 23835sht129 23835sht130 23835sht131 23835sht132 23835sht133 23835sht134 23835sht135 23835sht136 23835sht137 23835sht138 23835sht139 23835sht140 23835sht141 23835sht142 23835sht143 23835sht144 23835sht145 23835sht146 23835sht147 23835sht148 23835sht149 23835sht150 23835sht151 23835sht152 23835sht153 23835sht154 23835sht155 23835sht156 23835sht157 23835sht158 23835sht159 23835sht160 23835sht161 23835sht162 23835sht163 23835sht164 23835sht165 23835sht166 23835sht167 23835sht168 23835sht169 23835sht170 23835sht171 23835sht172 23835sht173 23835sht174 23835sht175 23835sht176 23835sht177 23835sht178 23835sht179 23835sht180 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23835 AR Bldg CD 23835 LA Trees 23835 AR Target Bldg CD
Aug 18 2025 9:47am, CFG
23835 STAL_Oak Valley
Aug 18 2025 9:31am PLOTTED BY: HOMER, ON:
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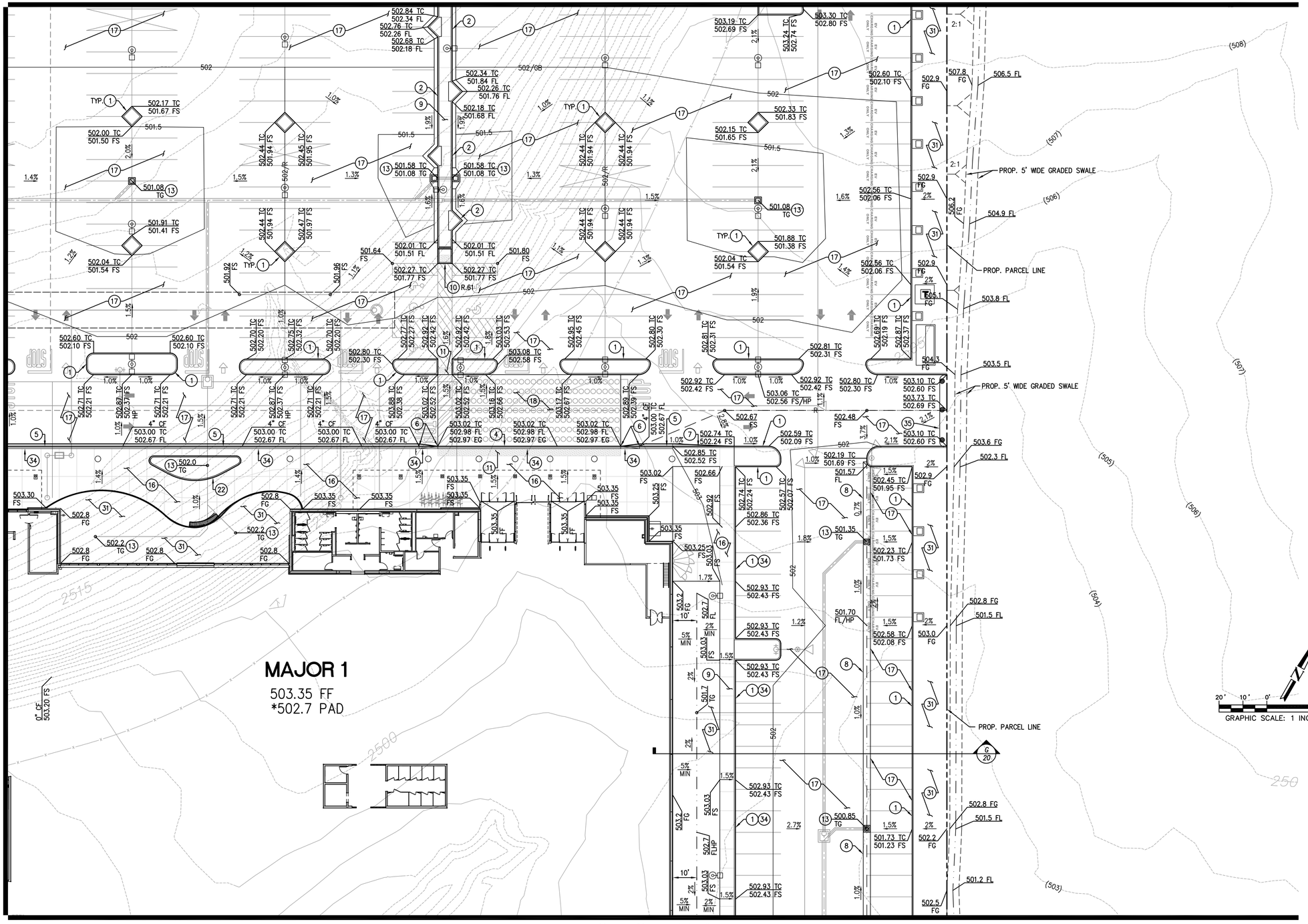
SEE SHEET 6

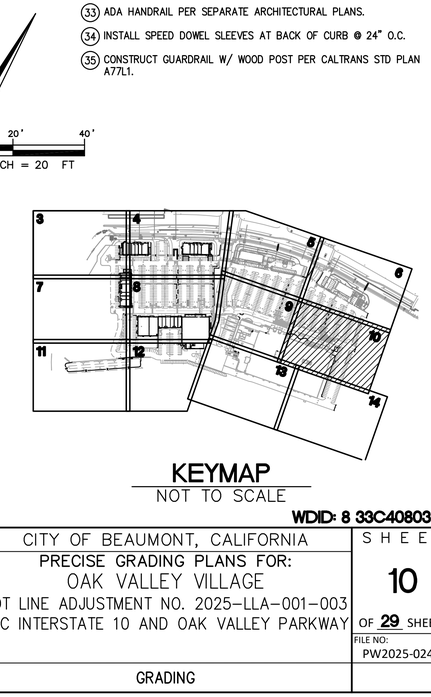
SEE SHEET 9



SEE SHEET 14

CONSTRUCTION NOTES

1. CONSTRUCT PCC VERTICAL CURB ONLY PER SPPWC STD. 120-2, TYPE A1-6. CURB HEIGHT PER PLAN.
2. CONSTRUCT 6" PCC CURB & 18" GUTTER PER SPPWC STD. 120-2, TYPE A2-6, W=18".
3. CONSTRUCT 0" PCC CURB PER DETAIL ON SHEET 24.
4. CONSTRUCT 0" PCC FLUSH RIBBON CURB PER DETAIL ON SHEET 24.
5. CONSTRUCT 4" PCC ROLLED CURB PER DETAIL ON SHEET 24.
6. CONSTRUCT 0" FLUSH RIBBON CURB TO 4" ROLLED CURB TRANSITION PER DETAIL ON SHEET 24.
7. CONSTRUCT 4" ROLLED CURB TO VERTICAL CURB TRANSITION PER DETAIL ON SHEET 24. VERTICAL CURB HEIGHT PER PLAN.
8. CONSTRUCT 3'-WIDE V-GUTTER PER DETAIL ON SHEET 24.
9. CONSTRUCT 4" THICK PCC SIDEWALK PER COUNTY OF RIVERSIDE STD. 401.
10. CONSTRUCT PCC ADA ACCESS/CURB RAMP WITH TRUNCATED DOMES PER SPPWC STD. 111-5 & PER DETAILS ON SHEETS 22-23.
11. INSTALL TRUNCATED DOMES PER SPPWC STD. 111-5.
12. INSTALL LANDSCAPE AREA DRAIN INLET PER STORM DRAIN PLAN ON SHEETS 15-18.
13. INSTALL GRATED INLET CATCH BASIN PER STORM DRAIN PLAN ON SHEETS 15-18.
14. INSTALL CURB OPENING CATCH BASIN PER STORM DRAIN PLAN ON SHEETS 15-18.
15. INSTALL TRENCH DRAIN PER STORM DRAIN PLAN ON SHEETS 15-18.
16. CONSTRUCT HARDSCAPE PER SEPARATE ARCHITECTURAL PLANS AND/OR TENANT SPECIFICATIONS.
17. CONSTRUCT ASPHALT PAVEMENT PER PAVING PLAN ON SHEET 26.
18. CONSTRUCT PCC PAVEMENT PER PAVING PLAN ON SHEET 26.
19. CONCRETE PAVERS PER SEPARATE ARCHITECTURAL PLANS.
20. CONSTRUCT TRASH ENCLOSURE PER SEPARATE ARCHITECTURAL PLANS.
21. CONSTRUCT 1-FT WIDE V-GUTTER PER DETAIL ON SHEET 24.
22. CONSTRUCT RAISED PLANTER WALLS PER SEP. ARCH. PLANS
23. INSTALL MONUMENT SIGN PER SEPARATE ARCHITECTURAL PLANS.
24. CONSTRUCT MASONRY RETAINING WALL PER SEPARATE PLANS AND PERMIT.
25. CONSTRUCT RETAINING WALL PER SEPARATE STRUCTURAL PLANS
26. CONSTRUCT DEEPENED FOOTING PER SEPARATE STRUCTURAL PLANS.
27. CONSTRUCT STEM WALL PER SEPARATE STRUCTURAL PLANS.
28. CONSTRUCT CONCRETE LINED SOFT BOTTOM CHANNEL (SCOUR WALL) PER RCFC&WCD STD. DWG. NO. CH323.
29. CONSTRUCT 4" THICK PCC WITH #6 WIRE MESH ON 2:1 SLOPE PER RIVERSIDE COUNTY STD. 401.
30. INSTALL 2" X 6" REDWOOD HEADER PER DETAIL ON SHEET 24.
31. LANDSCAPE AREA PER SEPARATE LANDSCAPE PLANS.
32. CONST. 6" TEMP. AC BERM PER SPPWC STD. 120-3, TYPE D1-6.
33. ADA HANDRAIL PER SEPARATE ARCHITECTURAL PLANS.
34. INSTALL SPEED DOWEL SLEEVES AT BACK OF CURB @ 24" O.C.
35. CONSTRUCT GUARDRAIL W/ WOOD POST PER CALTRANS STD PLAN A77L1.



KEYMAP
NOT TO SCALE

WDID: 8 33C408030

NOT FOR CONSTRUCTION

DIGALERT
Call 2 Working Days Before You Dig
811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning

Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL
REGISTERED PROFESSIONAL ENGINEER
RONALD W. SKLEPKO
No. C46216
(Exp. 12-31-2026)
CIVIL
STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT CALIFORNIA INC.NOV.18, 1912

Reviewed By: _____ Date: _____
Staff Engineer

Recommended for Approval By: _____ Date: _____
Administrative Engineer

Approved By: _____ Date: _____
City Engineer/Director of Public Works

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

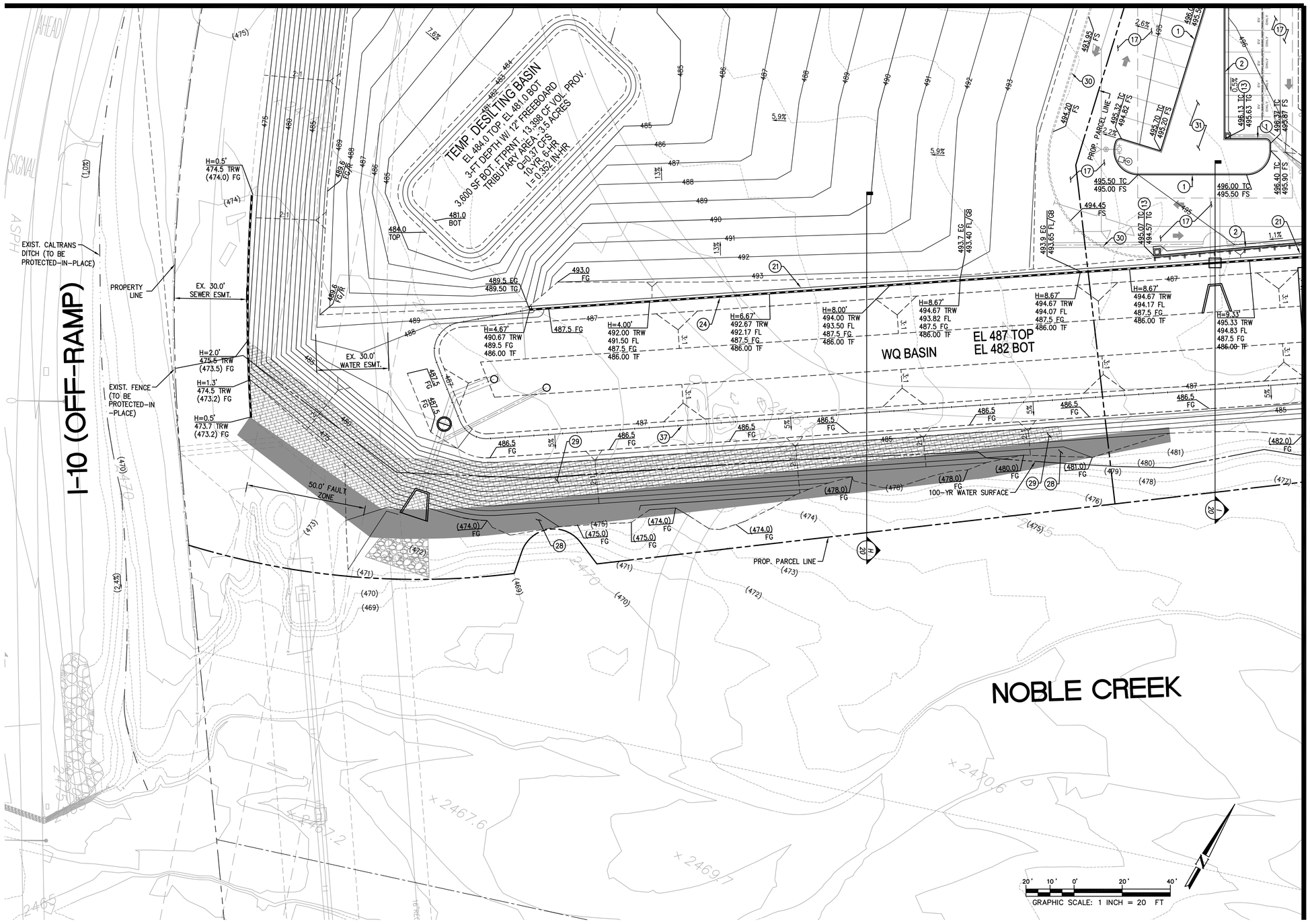
CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

GRADING

SHEET 10 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835st0101, 23835sp0101, 23835sp0100, 23835sp0100, 23835sp0100

SEE SHEET 7



SEE SHEET 12

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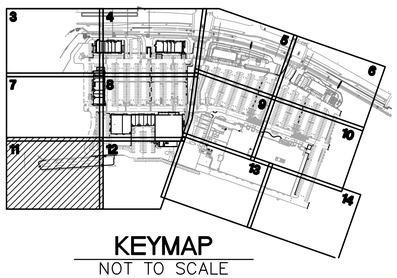
35. CONSTRUCT GUARDRAIL W/ WOOD POST PER CALTRANS STD PLAN A77L1.
36. CONSTRUCT PARKWAY DRAIN PER SPPWC STD. 151-3. S=18"
37. CONSTRUCT CHAIN LINK FENCE PER RCFC&WCD STD. M801.



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ENGINEER		REVISIONS	CITY	

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714-685-6860
Civil Engineering/Land Surveying/Land Planning
Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL
REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT CALIFORNIA INC. NOV. 18, 1912

Reviewed By: _____ Date: _____
Staff Engineer

Recommended for Approval By: _____ Date: _____
Administrative Engineer

Approved By: _____ Date: _____
City Engineer/Director of Public Works

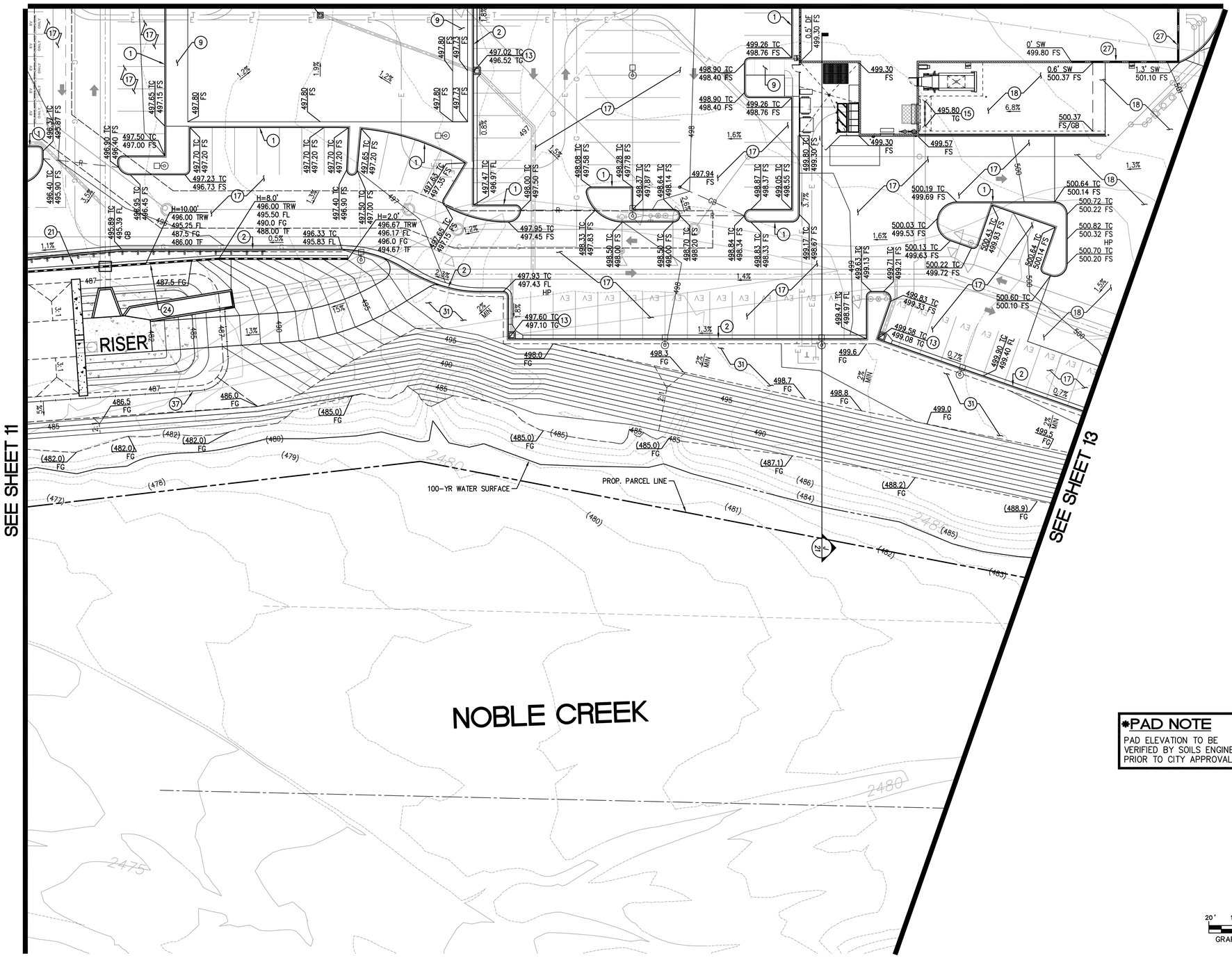
CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

GRADING

SHEET 11 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835sht01 23835sht101 23835sht101 23835pgn100 rev_ce.stamp 23835sht101 23835sht101 23835 SEAL_Oak Valley 23835 AR Bldg CD 23835 AR Target Bldg CD
FILENAME: M:\2023\23-835 Regency Target Beaumont\VPG\23835PG103-114_PG.dwg, LAST SAVED ON: Aug 18 2025 9:47am, CFG
PLOTTED BY: HOMER, ON: Aug 18 2025 9:31am



CONSTRUCTION NOTES

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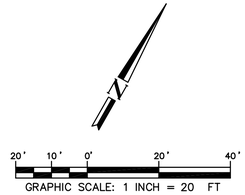
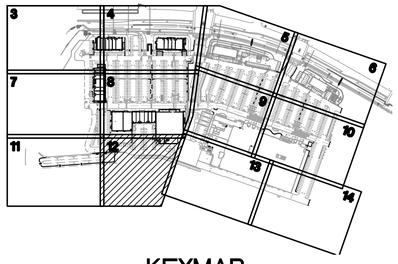
34. INSTALL SPEED DOWEL SLEEVES AT BACK OF CURB @ 24" O.C.
35. CONSTRUCT GUARDRAIL W/ WOOD POST PER CALTRANS STD PLAN A77L1.
36. CONSTRUCT PARKWAY DRAIN PER SPPWC STD. 151-3. S=18"
37. CONSTRUCT CHAIN LINK FENCE PER RCFC&WCD STD. M801.

***PAD NOTE**

PAD ELEVATION TO BE VERIFIED BY SOILS ENGINEER PRIOR TO CITY APPROVAL.





KEYMAP

NOT TO SCALE

WDID: 8 33C408030

NOT FOR CONSTRUCTION

DIGALERT Call 2 Working Days Before You Dig! 811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS		CITY

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

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PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
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SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

GRADING

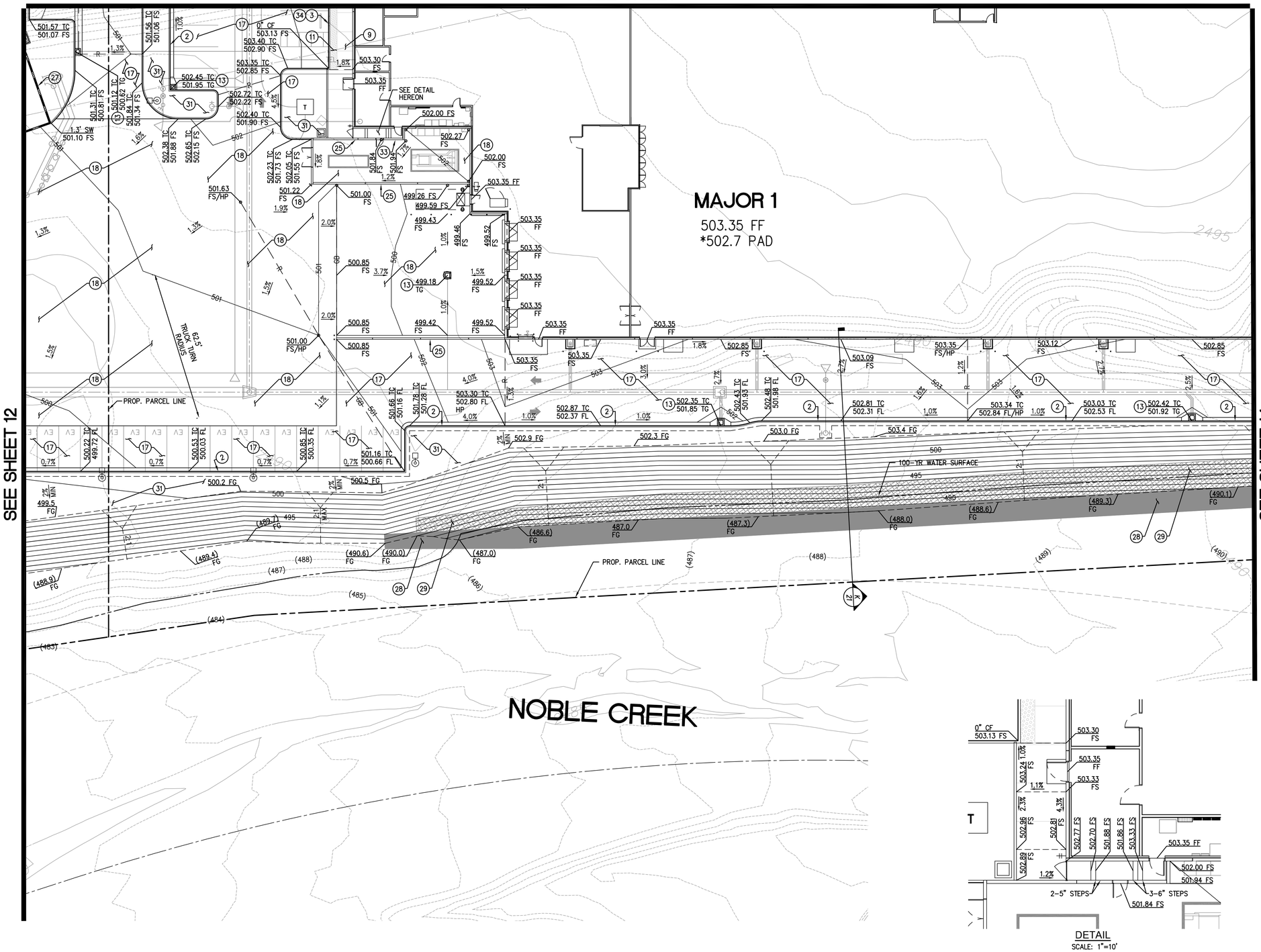
SHEET 12 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835xst101 23835xs101 23835pp101 23835pp100 rws_no_stamp 23835ft101 23835st101 23835 STAL_Oak Valley 23835 AR Bldg CD 23835 AR Target Bldg CD
FILENAME: M:\2023\23-835 Regency Target Beaumont\PG\23835PG103-114_PG.dwg, LAST SAVED ON: Aug 18 2025 9:48am, CFG, PLOTTED BY: HOMER, ON: Aug 18 2025 9:31am

SEE SHEET 9

SEE SHEET 12

SEE SHEET 14



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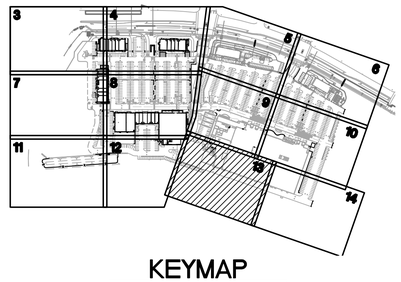
20' 10' 0' 20' 40'

GRAPHIC SCALE: 1 INCH = 20 FT

***PAD NOTE**

PAD ELEVATION TO BE VERIFIED BY SOILS ENGINEER PRIOR TO CITY APPROVAL.

DETAIL
SCALE: 1"=10'



KEYMAP
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WDID: 8 33C408030

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DIGALERT
Call 2 Working Days Before You Dig
811

BENCHMARK:
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ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

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PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

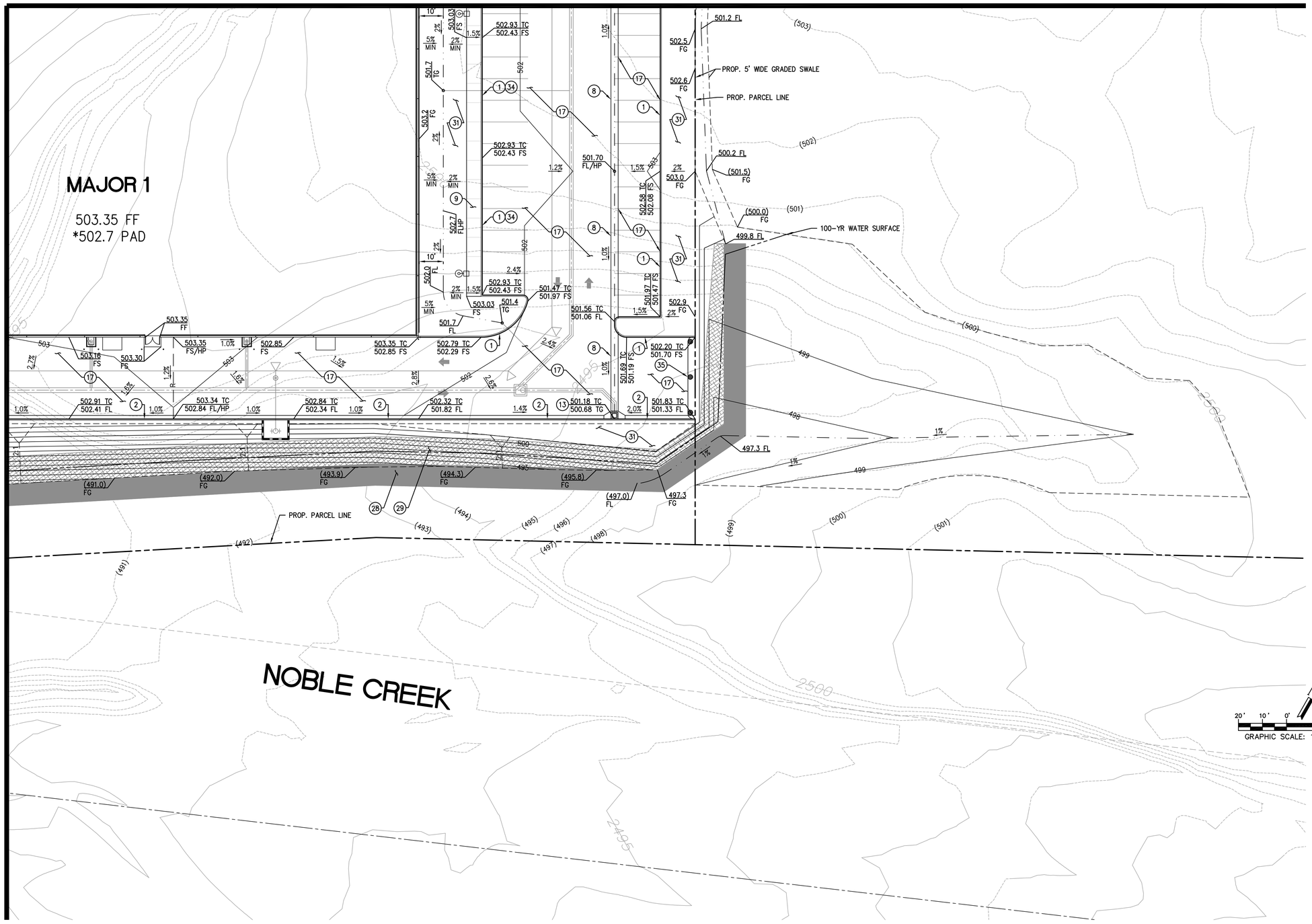
GRADING

SHEET 13 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835xsm100 23835xsl101 23835xgr100 23835xp100 23835xsl101 23835STAL_Oak Valley
FILENAME: M:\2023\23-835 Regency Target Beaumont\PC\23835PG103-114_PG.dwg, LAST SAVED ON: Aug 18 2025 9:31am PLOTTED BY: HOMER, ON: Aug 18 2025 9:48am, CFG:

SEE SHEET 10

SEE SHEET 13



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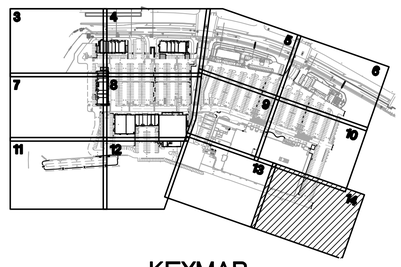

KEYMAP
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WDID: 8 33C408030

NOT FOR CONSTRUCTION

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BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

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ELEV. 2636.329', NGVD 29

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ENGINEER		REVISIONS		CITY

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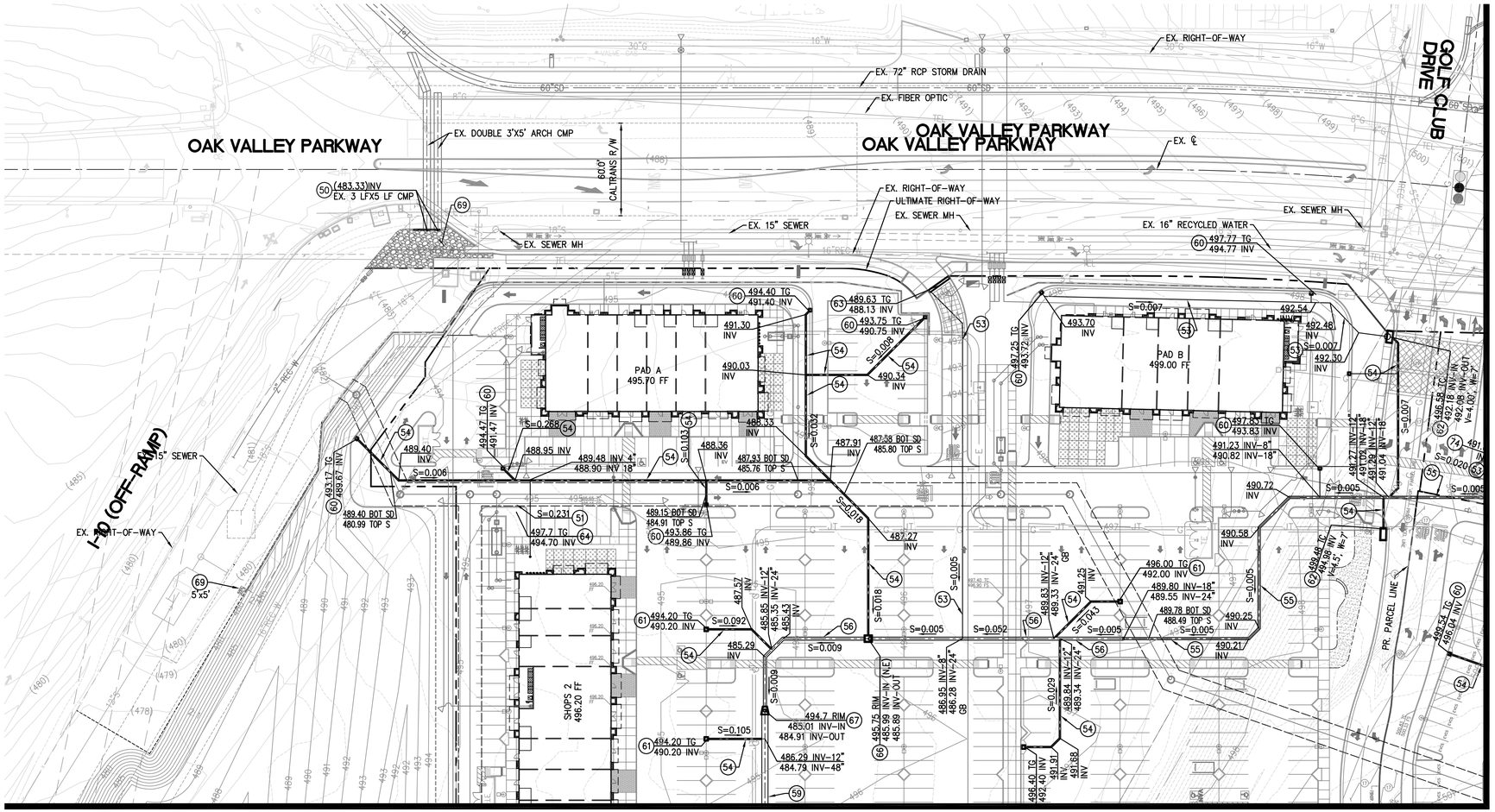
GRADING

SHEET 14 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835xst101 23835xst101 23835sp101 23835sp1100 new_no_stamp 23835sf1101 23835sf1101 23835 STAL_Oak Valley 23835 AR Bldg CD
FILENAME: M:\2023\23-835 Regency Target Beaumont\PG\23835PG0103-114_PG.dwg, LAST SAVED ON: Aug 18 2025 9:31am PLOTTED BY: HOMER, ON: Aug 18 2025 9:48am, CFG: 23835 AR Bldg CD



STORM DRAIN CONSTRUCTION NOTES:

(50) PROTECT EXISTING ARCH CMP PIPE AND CONSTRUCT STRAIGHT HEADWALL FOR DOUBLE CMP PER CALTRANS STD 89B.

(51) INSTALL 4" PVC SDR-35, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(52) INSTALL 6" PVC SDR-35, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(53) INSTALL 8" PVC SDR-35, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(54) INSTALL 12" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(55) INSTALL 18" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(56) INSTALL 24" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(57) CONSTRUCT 4" PCC LINING

(58) CONSTRUCT 36"ø CMP RISER FOR EMERGENCY OVERFLOW

(59) INSTALL 48" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(60) CONSTRUCT DI1818 JENSEN PRECAST DROP INLET (GRATED) PER DETAIL ON SHEET 25.

(61) CONSTRUCT DI2424 JENSEN PRECAST DROP INLET (GRATED) PER DETAIL ON SHEET 25.

(62) CONSTRUCT CURB OPENING CATCH BASIN PER RCFC&WCD STD. CB100; V & W PER PLAN.

(63) CONSTRUCT 12" WIDE TRENCH DRAIN NDS MODEL BG-FILCOTEN PRO V 300

(64) INSTALL 12"ø ATRIUM GRATE INLET PER DETAIL ON SHEET 25

(65) INSTALL HDPE REDUCER (ECCENTRIC). SIZE PER PLAN.

(66) CONSTRUCT STORM DRAIN MANHOLE PER RCFC&WCD STD. MH251.

(67) CONSTRUCT STORM DRAIN MANHOLE PER RCFC&WCD STD. MH252.

(68) CONSTRUCT HEADWALL OUTLET STRUCTURE PER CALTRANS STD PLAN D86B.

(69) INSTALL 9"ø ROCK RIP-RAP PER LATEST GREENBOOK SPECIFICATIONS.

(70) CONSTRUCT INFILTRATION/DETENTION BASIN WITH OBSERVATION WELL (AT 100' O.C. AND LOCATION SHOWN ON PLAN PER DETAIL ON SHEET 25. ELEVATIONS PER GRADING PLAN ON SHEETS 11 AND 12.

(71) CONSTRUCT OUTLET CONTROL MANHOLE PER DETAIL ON SHEET 25.

(72) CONSTRUCT 8" THICK CONCRETE FOREBAY WALL W/ 10' REMOVABLE WEIR PANEL W/ 12" PERFORATED PVC RISER PER DETAIL ON SHEET 25.

(73) INSTALL R-TANK DETENTION SYSTEM PER DETAIL ON SHEET 25.

(74) CAP FOR FUTURE PHASE.

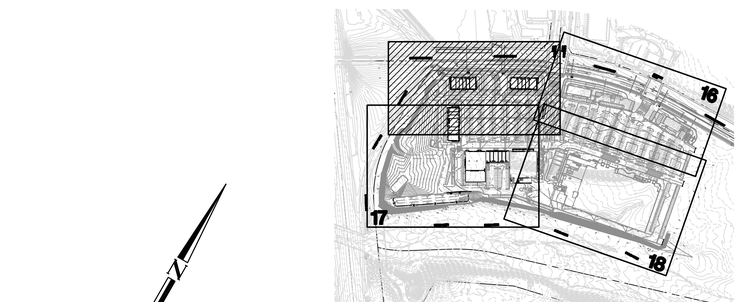
(75) CONSTRUCT 36"ø CMP RISER

(76) CONSTRUCT 6" WIDE TRENCH DRAIN (H20 LOADING) PER MANUFACTURER SPECIFICATIONS.

(77) ROOF DRAIN POINT OF CONNECTION PER SEPARATE PLUMBING PLANS.

(78) INSTALL 36" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(79) INSTALL 4"ø METAL GRATE INLET PER DETAIL ON SHEET 25



KEYMAP
NOT TO SCALE

40' 0' 40' 80' 120'
GRAPHIC SCALE: 1"=40'

WDID: 8 33C408030

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LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS		CITY

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL
REGISTERED PROFESSIONAL ENGINEER
RONALD W. SKLEPKO
No. C46216
Exp. 12-31-2026
CIVIL
STATE OF CALIFORNIA

DESIGN BY:	
DRAWN BY:	
CHECKED BY:	
SCALE:	
DATE:	
JOB NUMBER:	

CITY of BEAUMONT CALIFORNIA INC.NOV.18,1912

Reviewed By: _____ Staff Engineer Date: _____

Recommended for Approval By: _____ Administrative Engineer Date: _____

Approved By: _____ City Engineer/Director of Public Works Date: _____

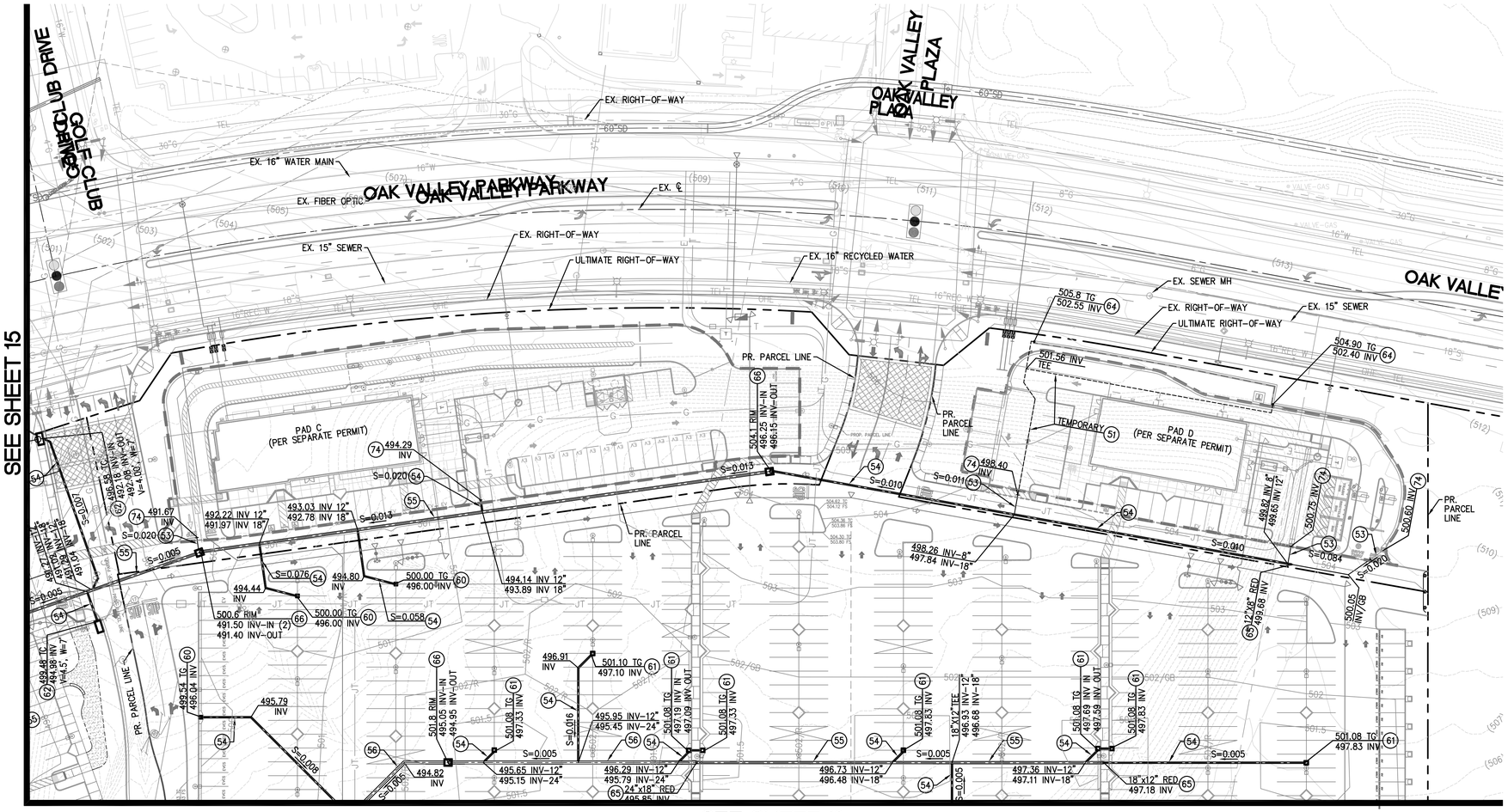
CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

STORM DRAIN PLAN

SHEET 15 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835mn101 23835st101 23835ti101 23835pg100 23835xs101 23835 STAL_Oak Valley 23835sh101 23835 AR Bldg CD 23835 AR Target Bldg CD 23835pg101
FILENAME: M:\2023\23-835 Regency Target Beaumont\PG\23835PG115-118_SD.dwg, LAST SAVED ON: Sep 27 2025 10:45am PLOTTED BY: YANG, ON: Sep 28 2025 6:27pm.



STORM DRAIN CONSTRUCTION NOTES:

(50) PROTECT EXISTING ARCH CMP PIPE AND CONSTRUCT STRAIGHT HEADWALL FOR DOUBLE CMP PER CALTRANS STD 89B.

(51) INSTALL 4" PVC SDR-35, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(52) INSTALL 6" PVC SDR-35, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

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(56) INSTALL 24" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(57) CONSTRUCT 4" PCC LINING

(58) CONSTRUCT 36"ø CMP RISER FOR EMERGENCY OVERFLOW

(59) INSTALL 48" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(60) CONSTRUCT DI1818 JENSEN PRECAST DROP INLET (GRATED) PER DETAIL ON SHEET 25.

(61) CONSTRUCT DI2424 JENSEN PRECAST DROP INLET (GRATED) PER DETAIL ON SHEET 25.

(62) CONSTRUCT CURB OPENING CATCH BASIN PER RCFC&WCD STD. CB100; V & W PER PLAN.

(63) CONSTRUCT 12" WIDE TRENCH DRAIN NDS MODEL BG-FILCOTEN PRO V 300

(64) INSTALL 12"ø ATRIUM GRATE INLET PER DETAIL ON SHEET 25

(65) INSTALL HDPE REDUCER (ECCENTRIC). SIZE PER PLAN.

(66) CONSTRUCT STORM DRAIN MANHOLE PER RCFC&WCD STD. MH251.

(67) CONSTRUCT STORM DRAIN MANHOLE PER RCFC&WCD STD. MH252.

(68) CONSTRUCT HEADWALL OUTLET STRUCTURE PER CALTRANS STD PLAN D86B.

(69) INSTALL 9"ø ROCK RIP-RAP PER LATEST GREENBOOK SPECIFICATIONS.

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(72) CONSTRUCT 8" THICK CONCRETE FOREBAY WALL W/ 10' REMOVABLE WEIR PANEL W/ 12" PERFORATED PVC RISER PER DETAIL ON SHEET 25.

(73) INSTALL R-TANK DETENTION SYSTEM PER DETAIL ON SHEET 25.

(74) CAP FOR FUTURE PHASE.

(75) CONSTRUCT 36"ø CMP RISER

(76) CONSTRUCT 6" WIDE TRENCH DRAIN (H20 LOADING) PER MANUFACTURER SPECIFICATIONS.

(77) ROOF DRAIN POINT OF CONNECTION PER SEPARATE PLUMBING PLANS.

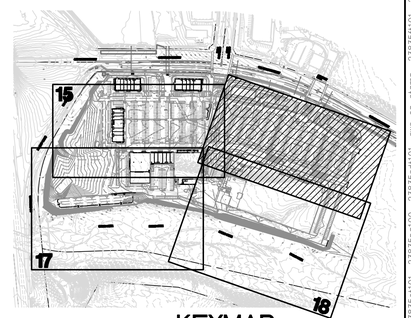
(78) INSTALL 36" HDPE, BEDDING & BACKFILL PER SOIL ENGINEER'S RECOMMENDATIONS.

(79) INSTALL 4"ø METAL GRATE INLET PER DETAIL ON SHEET 25

N

40' 0' 40' 80' 120'

GRAPHIC SCALE: 1"=40'



KEYMAP
NOT TO SCALE

WDID: 8 33C408030

DIGALERT Call 2 Working Days Before You Dig! 811

BENCHMARK:
BM No. C-3-1-1965
DESC: BRASS DISK TOP CONCRETE POST
LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST
ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

DRC
160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

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SCALE:
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CITY of BEAUMONT CALIFORNIA INCS:NOV.18,1912

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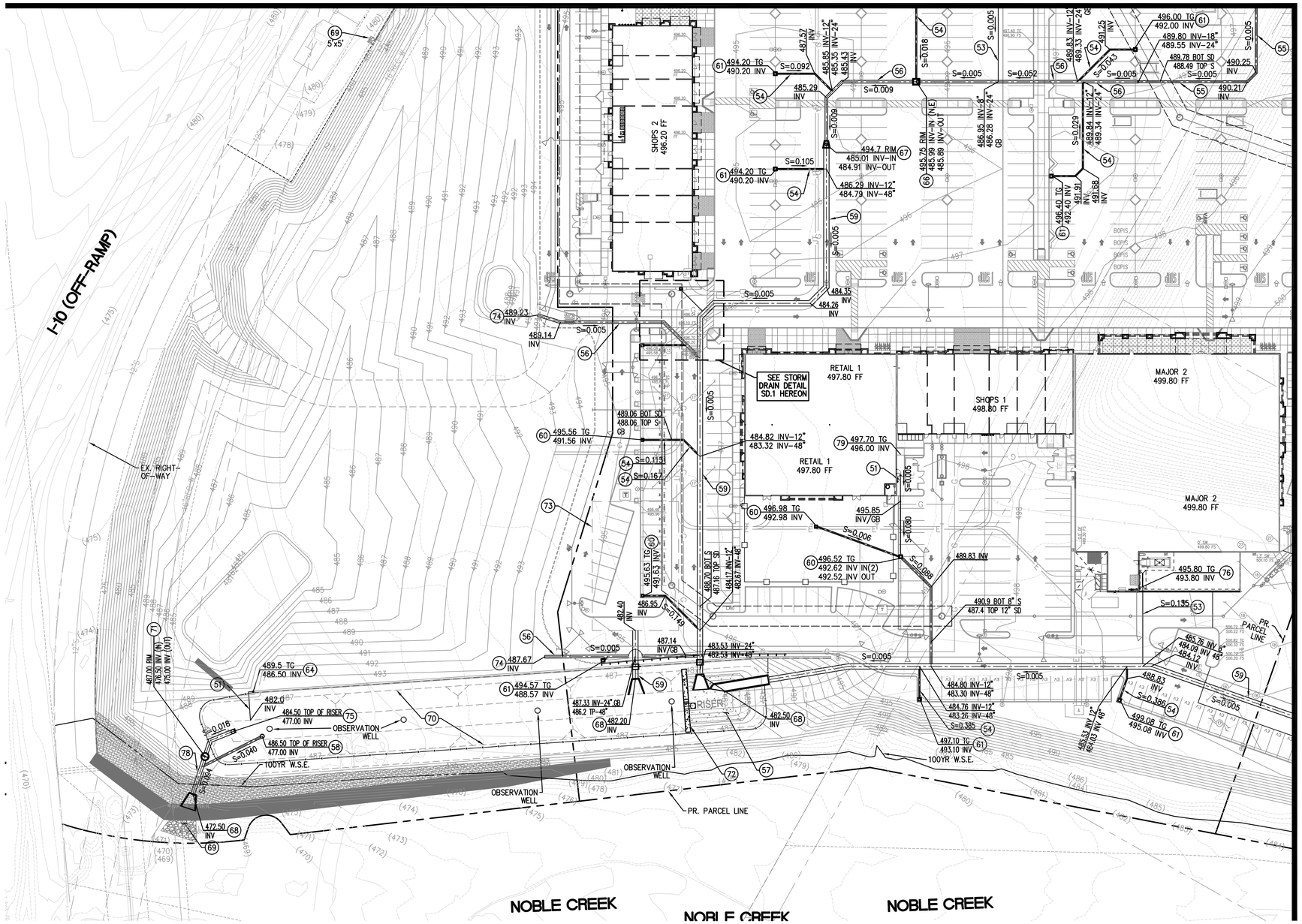
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

STORM DRAIN PLAN

SHEET 16 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835ex101 23835ex100 23835ex101 23835ex101 rwq_no_ostormp 23835ex101 23835 STAL_Oak Valley 23835ap101 23835 AR Rdy CD 23835 LA Trees
FILENAME: M:\2023\23-835 Regency Target Beaumont\PGV\23835PG115-118_SD.dwg, LAST SAVED ON: Sep 27 2025 10:45am PLOTTED BY: YANG, ON: Sep 28 2025 6:27am, CFG:

SEE SHEET 15



NOBLE CREEK NOBLE CREEK NOBLE CREEK

SEE SHEET 18

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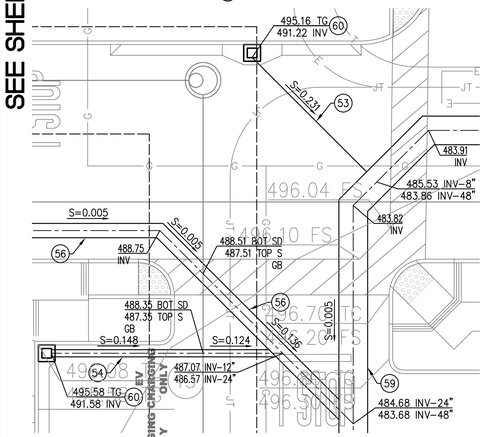
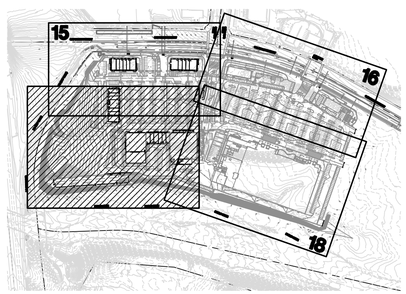


STORM DRAIN DETAIL SD.1
SCALE: 1"=10'



KEYMAP
NOT TO SCALE **WDID: 8 33C408030**

40' 0' 40' 80' 120'
GRAPHIC SCALE: 1"=40'

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811

BENCHMARK:
BM No. C-3-1-1965

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ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL
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RONALD W. SKLEPKO
No. C46216
Exp. 12-31-2026
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CITY of BEAUMONT CALIFORNIA INC.NOV.16.1912

Reviewed By: _____ Date: _____
Staff Engineer

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Administrative Engineer

Approved By: _____ Date: _____
City Engineer/Director of Public Works

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ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

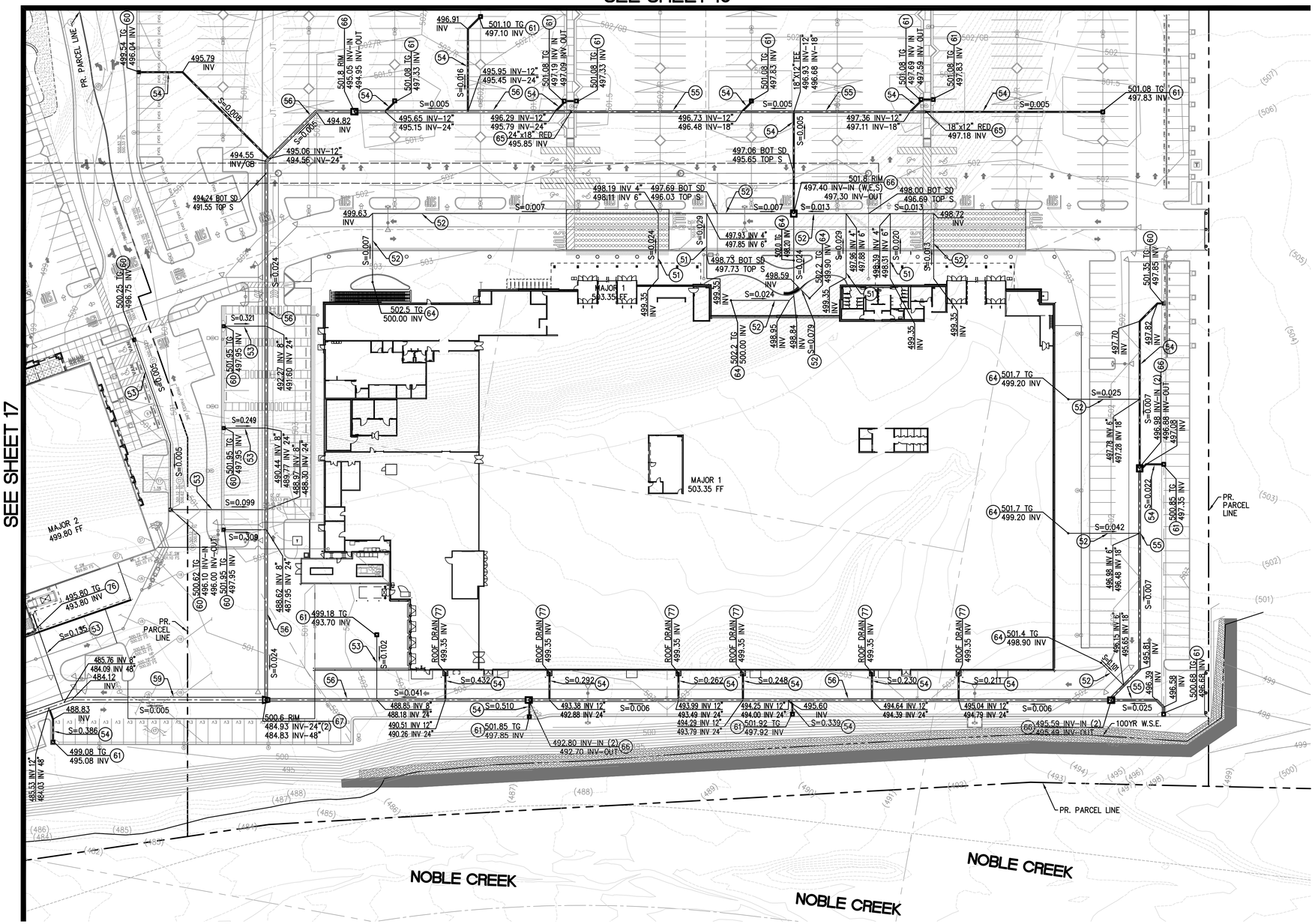
STORM DRAIN PLAN

SHEET 17 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835ms100 23835st100 23835sg100 23835st101 rev_oc_storm 23835ft100 23835ar100 23835 AR Bldg CD 23835 LA Trees 23835 AR Target Bldg CD 23835pplt101
FILENAME: M:\2023\23-835 Regency Target Beaumont\PW\23835PG115-118_SD.dwg, LAST SAVED ON: Sep 27 2025 10:45am PLOTTED BY: YANG, ON: Sep 28 2025 6:28am, CFG:

SEE SHEET 16

SEE SHEET 17



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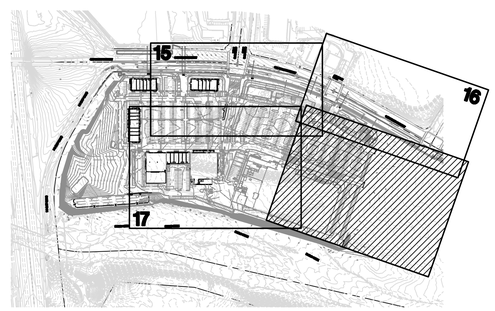

KEYMAP
NOT TO SCALE

WDID: 8 33C408030

DIGALERT
Call 2 Working Days Before You Dig
811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

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Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

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CITY of BEAUMONT CALIFORNIA INC.NOV.18,1912

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Administrative Engineer

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City Engineer/Director of Public Works

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ENGINEERING DIVISION
550E. 6th St
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CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
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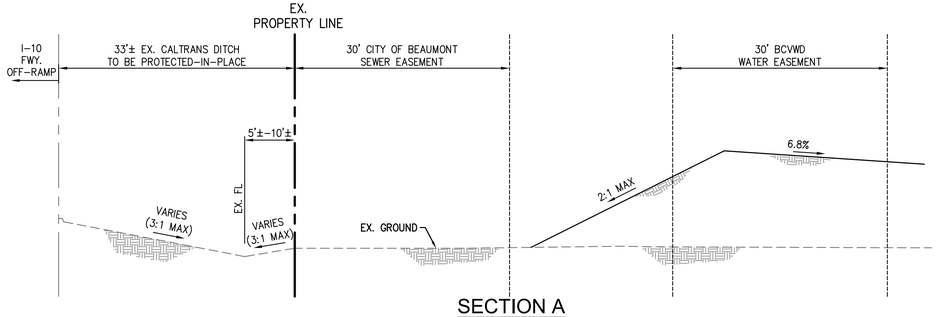
STORM DRAIN PLAN

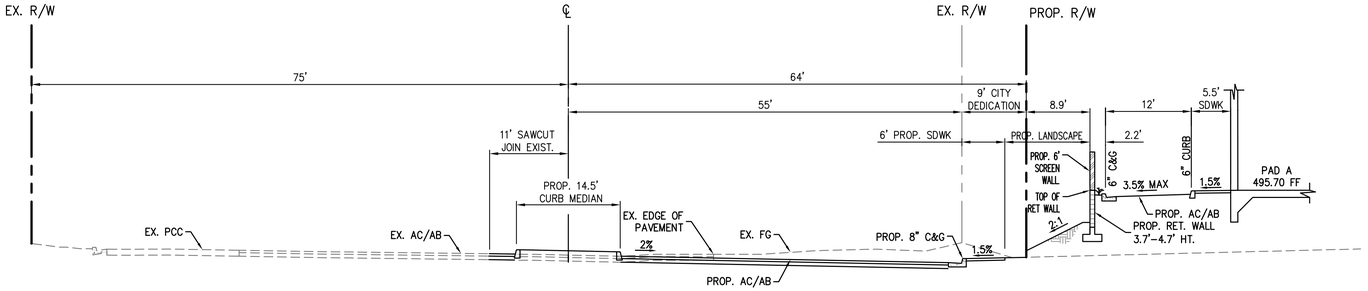
SHEET 18 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835xref01 23835xp100 23835xp101 23835SP01S-118...SD.dwg, LAST SAVED ON: Sep 27 2025 10:45am PLOTTED BY: YANG, ON: Sep 28 2025 6:29am, CFG: M:\2023\23-835 Regency Target Beaumont\PG\23835PG01S-118...SD.dwg, FILENAME: M:\2023\23-835 Regency Target Beaumont\PG\23835PG01S-118...SD.dwg, 23835xref01 23835xp100 23835xp101 23835SH101 23835 SITAL Oak Valley 23835 AR Bldg CD 23835 LA Trees 23835xp101



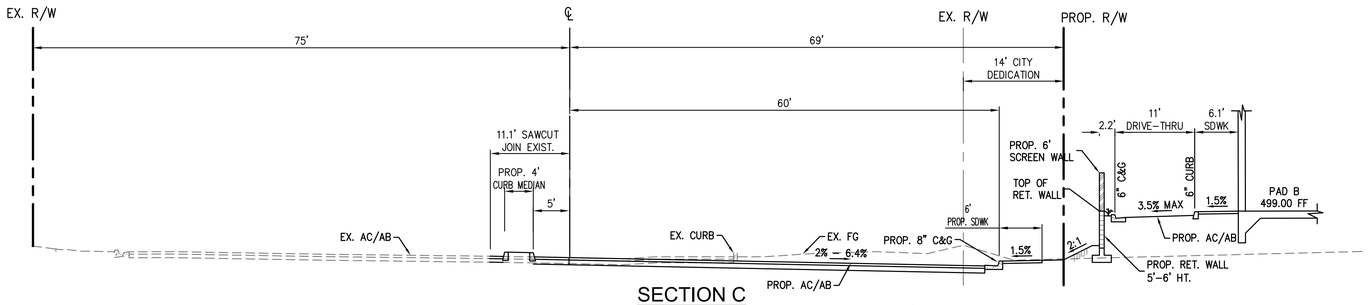
SECTION A

N.T.S.
SEE SHEET 7



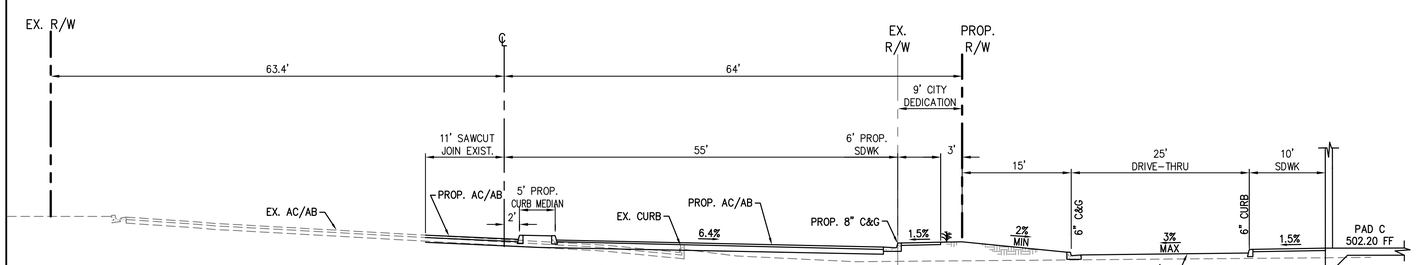
SECTION B

RIVERSIDE COUNTY STD. 91 (MODIFIED URBAN ARTERIAL HIGHWAY)
N.T.S.
SEE SHEET 4



SECTION C

RIVERSIDE COUNTY STD. 91 (MODIFIED URBAN ARTERIAL HIGHWAY)
N.T.S.
SEE SHEET 4



SECTION D

RIVERSIDE COUNTY STD. 91 (MODIFIED URBAN ARTERIAL HIGHWAY)
N.T.S.
SEE SHEET 5

NOT FOR CONSTRUCTION

WDID: 8 33C408030

DIGALERT Call 2 Working Days Before You Dig 811

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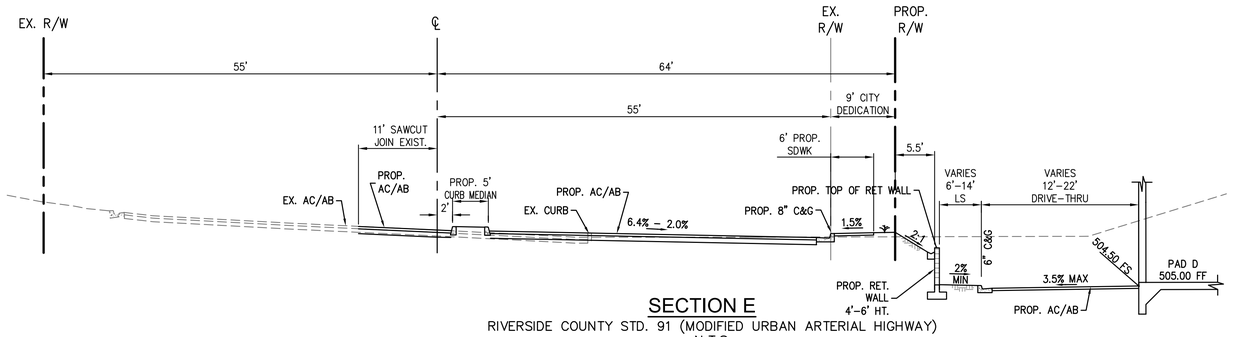
SECTIONS

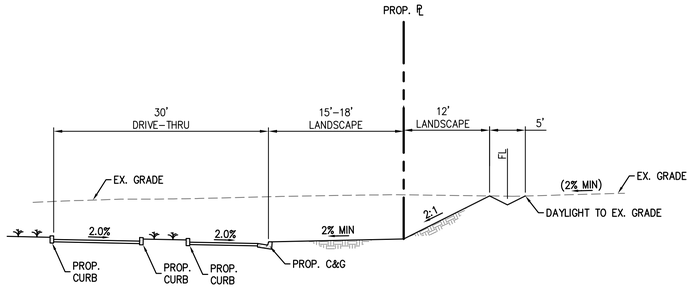
SHEET 19 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835pg100 PRE_GD_sTamp 23835ma101 23835tn101 23835tn102 23835 SAL_Oak Valley 23835pg101 23835 AR Bldg CD 23835 LA Trees
DRAWING: M:\2023\23-835 Beaumont Target Beaumont\Civil\23835GD01.dwg LAYOUT: PW1 Aug 14, 2025 - 11:47am DISTRIBUTED BY: brhunter



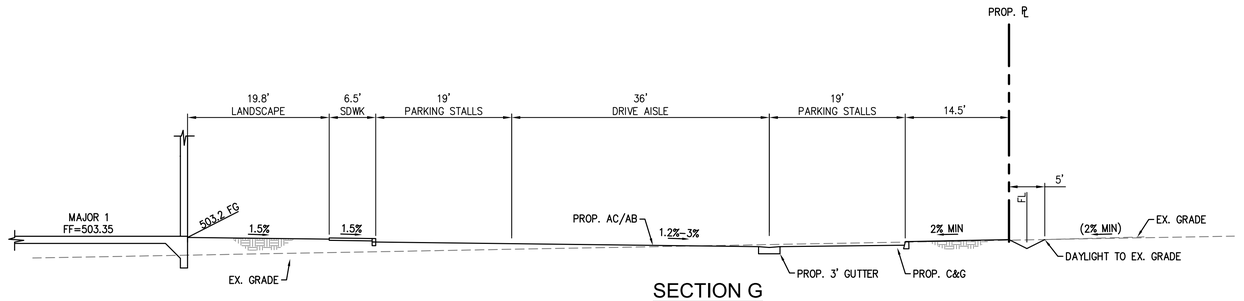
SECTION E

RIVERSIDE COUNTY STD. 91 (MODIFIED URBAN ARTERIAL HIGHWAY)
N.T.S.
SEE SHEET 6



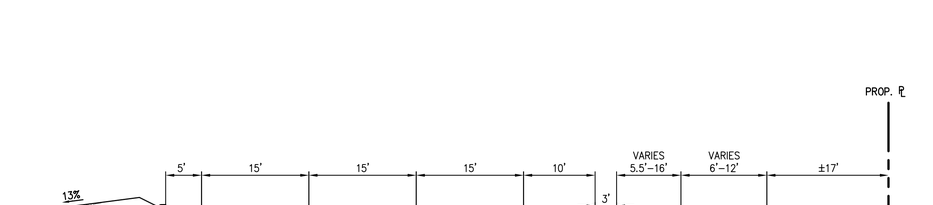
SECTION F

N.T.S.
SEE SHEET 6



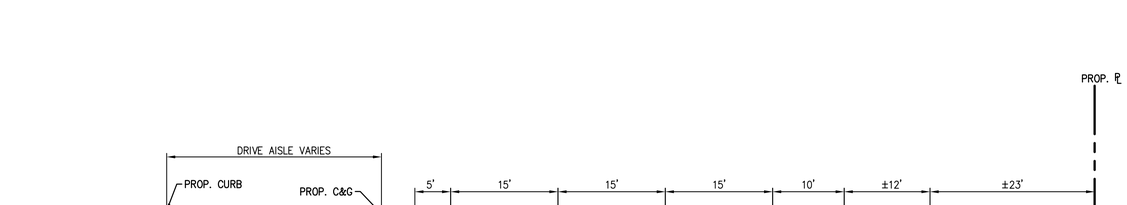
SECTION G

N.T.S.
SEE SHEET 10



SECTION H

N.T.S.
SEE SHEET 11



SECTION I

N.T.S.
SEE SHEET 11

NOT FOR CONSTRUCTION

WDID: 8 33C408030

DIGALERT — Call 2 Working Days Before You Dig 811

BENCHMARK:
BM No. C–3–1–1965
DESC: BRASS DISK TOP CONCRETE POST
LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST
ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714–685–6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL — REGISTERED PROFESSIONAL ENGINEER — RONALD W. SKLEPKO — No. C46216 — Exp. 12–31–2025 — CIVIL — STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

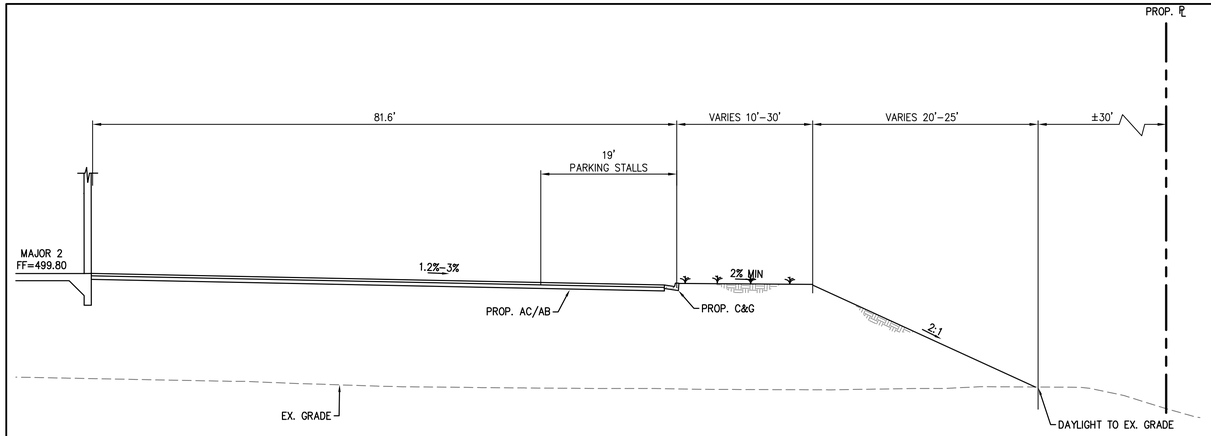
CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769–8520 FAX: (951) 769–8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025–LLA–001–003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

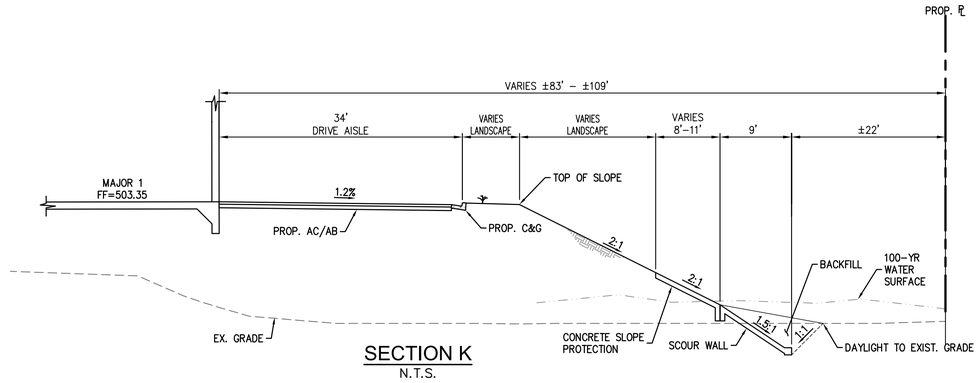
SECTIONS

SHEET 20 OF 29 SHEETS
FILE NO: PW2025–0240

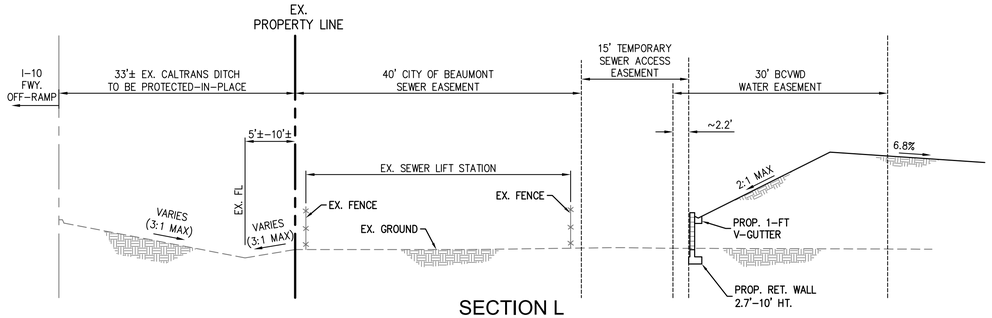
EXTERNAL REFERENCES: 23835pg100 rwp_cs_stamp 23835ma101 23835al101 23835pg101 23835 AR Bldg CD 23835 LA Trees 23835 AR Target Bldg CD



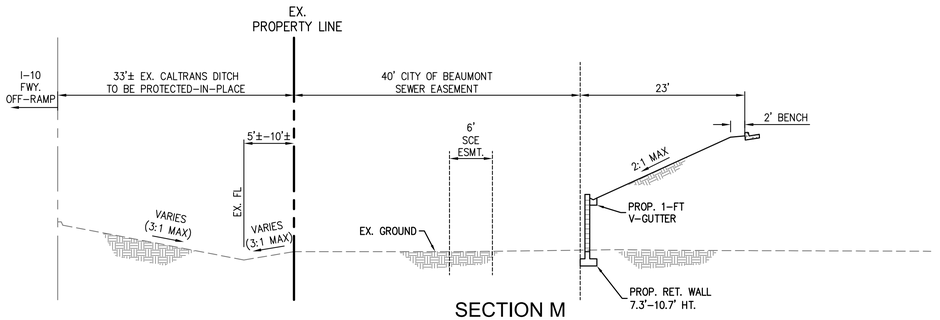
SECTION J
N.T.S.
SEE SHEET 12



SECTION K
N.T.S.



SECTION L
N.T.S.
SEE SHEET 3



SECTION M
N.T.S.
SEE SHEET 3

NOT FOR CONSTRUCTION

WDID: 8 33C408030

DIGALERT Call 2 Working Days Before You Dig 811

BENCHMARK:
BM No. C–3–1–1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714–685–6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12–31–2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT CALIFORNIA INC.NOV.18, 1912

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769–8520 FAX: (951) 769–8526

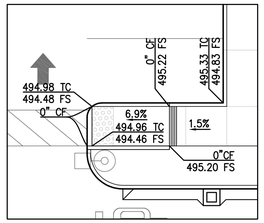
CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025–LLA–001–003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

SECTIONS

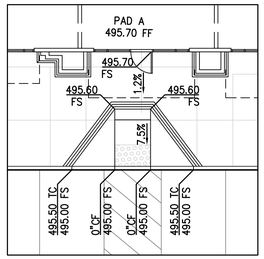
SHEET 21 OF 29 SHEETS
FILE NO: PW2025–0240

EXTERNAL REFERENCES: 23835sg100 PWE_xs.dgn 23835sm101 23835st101 23835st102 23835st103 23835 SPAL_Oak Valley 23835ar101 23835 LA Trees 23835 AR Bldg CD
DLFRAME: M:\2023\23-835\Beaumont Tract Beaumont\DGN\23835DT01.dgn 23835 AR Bldg CD

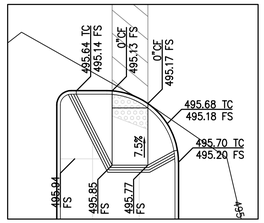
NOT FOR CONSTRUCTION



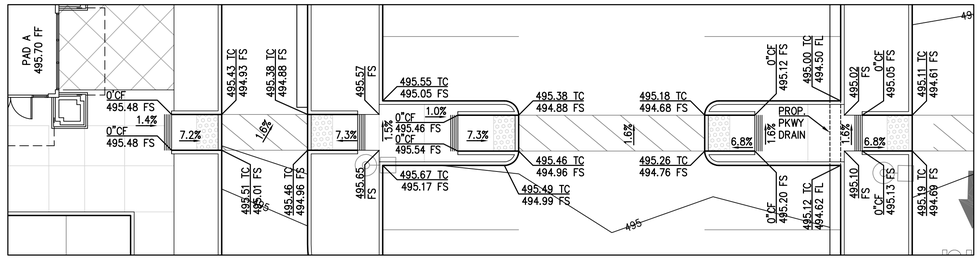
DETAIL R.1
SCALE: 1"=10'
PG SHEET 3



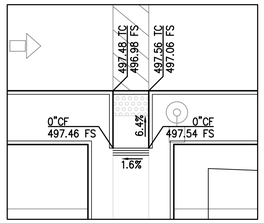
DETAIL R.2
SCALE: 1"=10'
PG SHEET 4



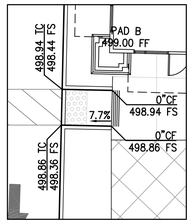
DETAIL R.3
SCALE: 1"=10'
PG SHEET 4



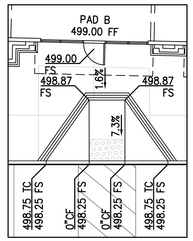
DETAILS R.4, R.5, R.6, R.7, & R.8
SCALE: 1"=10'
PG SHEET 4



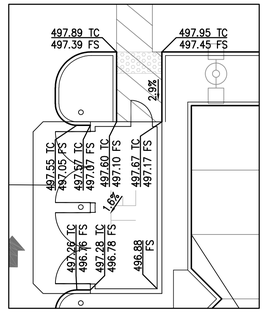
DETAIL R.12
SCALE: 1"=10'
PG SHEET 4



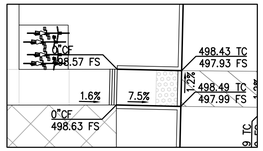
DETAIL R.13
SCALE: 1"=10'
PG SHEET 4



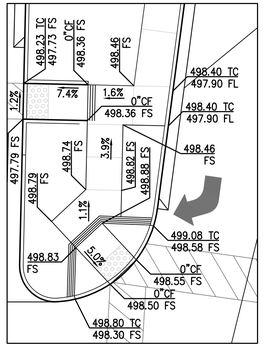
DETAIL R.14
SCALE: 1"=10'
PG SHEET 4



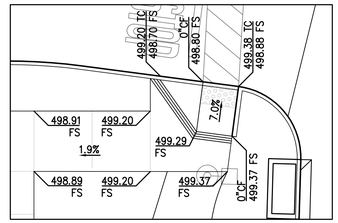
DETAIL R.15
SCALE: 1"=10'
PG SHEET 4



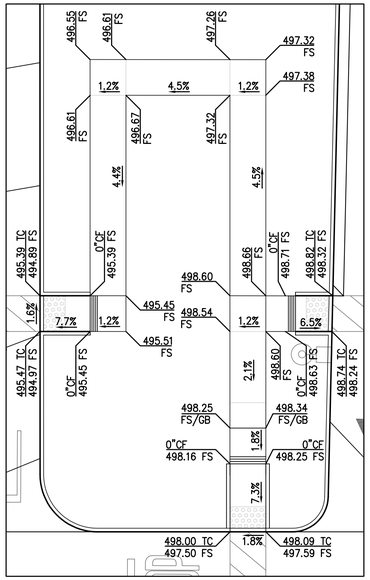
DETAIL R.16
SCALE: 1"=10'
PG SHEET 4



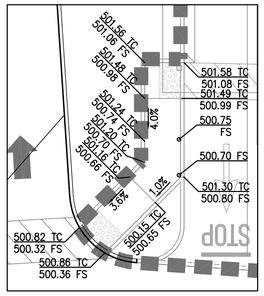
DETAILS R.17 & R.18
SCALE: 1"=10'
PG SHEET 4



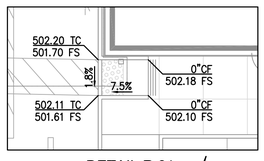
DETAIL R.19
SCALE: 1"=10'
PG SHEET 4



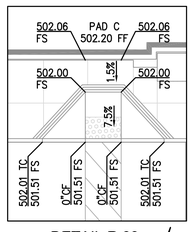
DETAILS R.9, R.10, AND R.11
SCALE: 1"=10'
PG SHEET 4



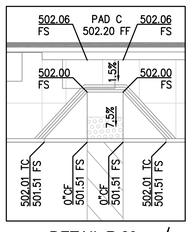
DETAIL R.20
SCALE: 1"=10'
PG SHEET 5



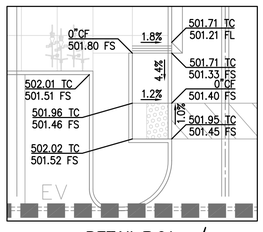
DETAIL R.21
SCALE: 1"=10'
PG SHEET 5



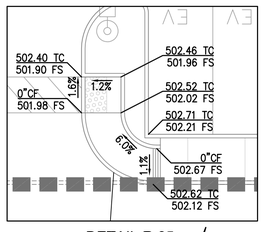
DETAIL R.22
SCALE: 1"=10'
PG SHEET 5



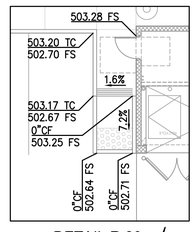
DETAIL R.23
SCALE: 1"=10'
PG SHEET 5



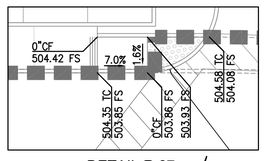
DETAIL R.24
SCALE: 1"=10'
PG SHEET 5



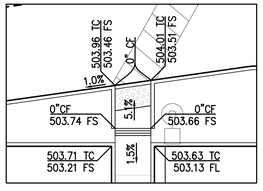
DETAIL R.25
SCALE: 1"=10'
PG SHEET 5



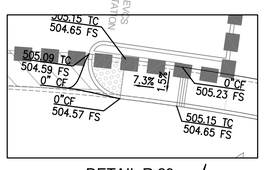
DETAIL R.26
SCALE: 1"=10'
PG SHEET 5



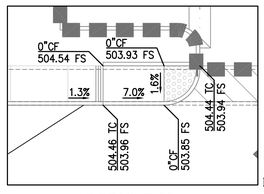
DETAIL R.27
SCALE: 1"=10'
PG SHEET 5



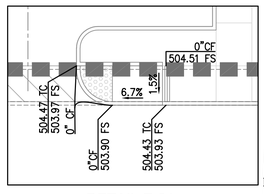
DETAIL R.28
SCALE: 1"=10'
PG SHEET 5



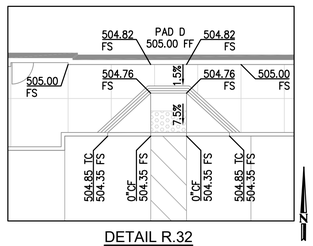
DETAIL R.29
SCALE: 1"=10'
PG SHEET 5



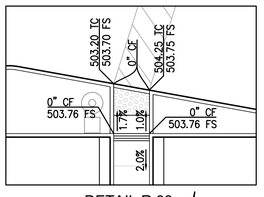
DETAIL R.30
SCALE: 1"=10'
PG SHEET 6



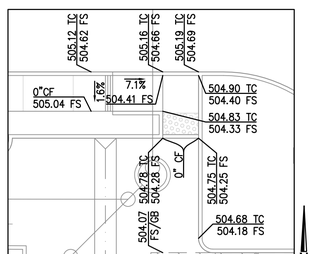
DETAIL R.31
SCALE: 1"=10'
PG SHEET 6



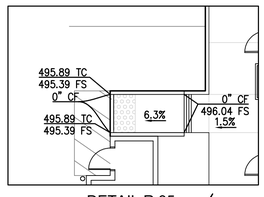
DETAIL R.32
SCALE: 1"=10'
PG SHEET 6



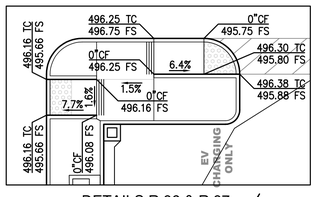
DETAIL R.33
SCALE: 1"=10'
PG SHEET 6



DETAIL R.34
SCALE: 1"=10'
PG SHEET 6



DETAIL R.35
SCALE: 1"=10'
PG SHEET 7



DETAILS R.36 & R.37
SCALE: 1"=10'
PG SHEET 7

WDID: 8 33C408030

DIGALERT
Call 2 Working Days Before You Dig
811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL
REGISTERED PROFESSIONAL ENGINEER
RONALD W. SKLEPKO
No. C46216
Exp. 12-31-2026
CIVIL
STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT
CALIFORNIA
INC.NOV.18, 1912

Reviewed By: _____ Date: _____
Staff Engineer

Recommended for Approval By: _____ Date: _____
Administrative Engineer

Approved By: _____ Date: _____
City Engineer/Director of Public Works

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

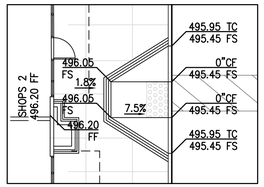
CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

ADA/RAMP DETAILS

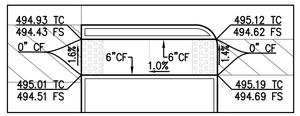
SHEET 22 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835ex100 - new_cb_stamp 23835ex101 - 23835ex101 23835ex101 23835ex101 23835 LA Trees 23835 AR Target Bldg CD
FILENAME: M:\2023\23-835 Regency Target Beaumont\PLV\23835PG122-123_ADA DETAILS.dwg, LAST SAVED ON: Jun 19 2025 12:59pm PLOTTED BY: HOMER, ON: Aug 18 2025 9:09am, CFG:

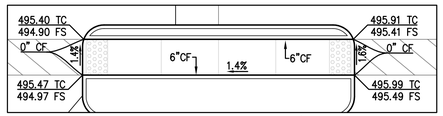
NOT FOR CONSTRUCTION



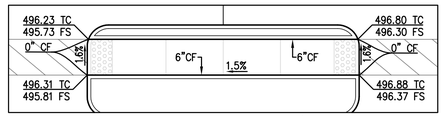
DETAIL R.38
SCALE: 1"=10'
PG SHEET 8



DETAIL R.39
SCALE: 1"=10'
PG SHEET 8



DETAIL R.40
SCALE: 1"=10'
PG SHEET 8



DETAIL R.41
SCALE: 1"=10'
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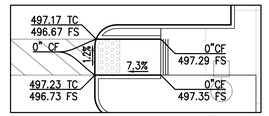

DETAIL R.42
SCALE: 1"=10'
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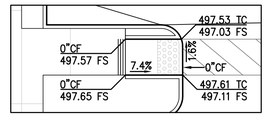
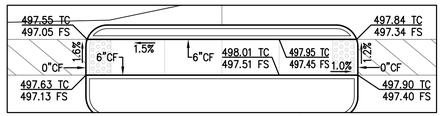


DETAIL R.43
SCALE: 1"=10'
PG SHEET 8



DETAIL R.44
SCALE: 1"=10'
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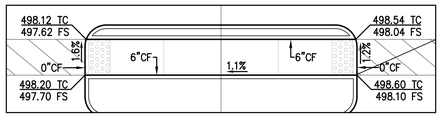

DETAIL R.45
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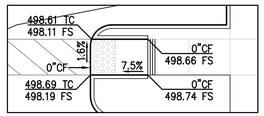
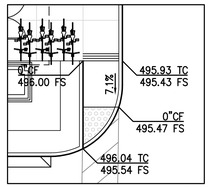
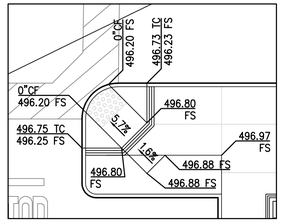
PG SHEET 8



DETAIL R.46
SCALE: 1"=10'
PG SHEET 8



DETAIL R.47
SCALE: 1"=10'
PG SHEET 8



DETAIL R.48
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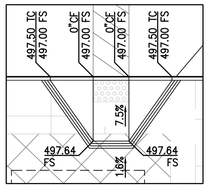

DETAIL R.49
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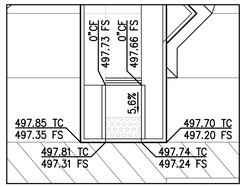

DETAIL R.50
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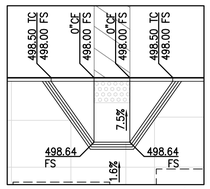
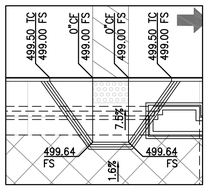
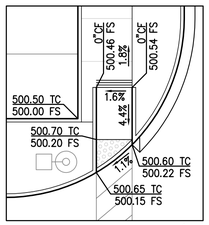


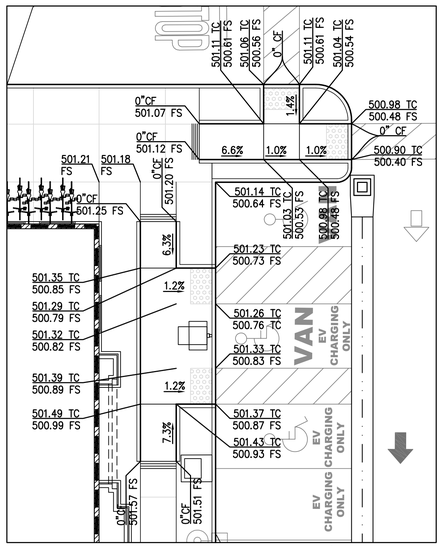
DETAIL R.51
SCALE: 1"=10'
PG SHEET 8



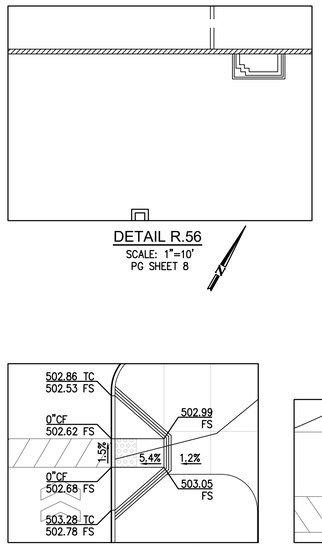
DETAIL R.52
SCALE: 1"=10'
PG SHEET 8



DETAIL R.53
SCALE: 1"=10'
PG SHEET 8



DETAILS R.54 & R.55
SCALE: 1"=10'
PG SHEET 8



DETAIL R.56
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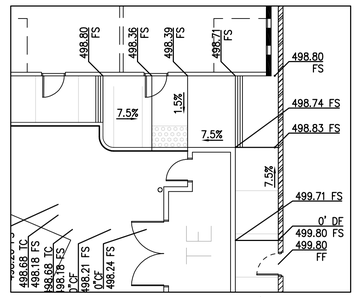
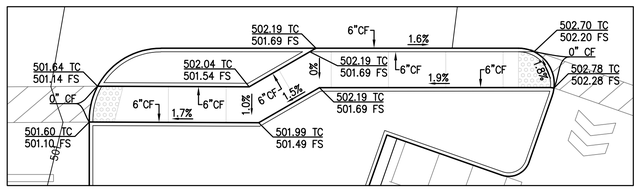
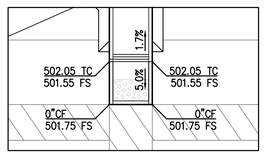


DETAIL R.57
SCALE: 1"=10'
PG SHEET 8

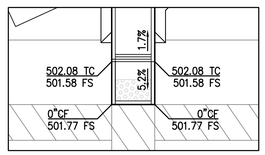


DETAIL R.58
SCALE: 1"=10'
PG SHEET 9

DETAIL R.59
SCALE: 1"=10'
PG SHEET 9



DETAIL R.60
SCALE: 1"=10'
PG SHEET 9



DETAIL R.61
SCALE: 1"=10'
PG SHEET 10

WDID: 8 33C408030

DIGALERT
Call 2 Working Days Before You Dig!
811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL
REGISTERED PROFESSIONAL ENGINEER
RONALD W. SKLEPKO
No. C46216
Exp. 12-31-2026
CIVIL
STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT
CALIFORNIA INC.NOV.18,1912.

Reviewed By: _____ Date: _____
Staff Engineer

Recommended for Approval By: _____ Date: _____
Administrative Engineer

Approved By: _____ Date: _____
City Engineer/Director of Public Works

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

ADA/RAMP DETAILS

SHEET 23 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835grd100 rev_co_stamp 23835mas101 23835mep101 23835str101 23835sta101 23835sta102 23835sta103 23835sta104 23835sta105 23835sta106 23835sta107 23835sta108 23835sta109 23835sta110 23835sta111 23835sta112 23835sta113 23835sta114 23835sta115 23835sta116 23835sta117 23835sta118 23835sta119 23835sta120 23835sta121 23835sta122 23835sta123 23835sta124 23835sta125 23835sta126 23835sta127 23835sta128 23835sta129 23835sta130 23835sta131 23835sta132 23835sta133 23835sta134 23835sta135 23835sta136 23835sta137 23835sta138 23835sta139 23835sta140 23835sta141 23835sta142 23835sta143 23835sta144 23835sta145 23835sta146 23835sta147 23835sta148 23835sta149 23835sta150 23835sta151 23835sta152 23835sta153 23835sta154 23835sta155 23835sta156 23835sta157 23835sta158 23835sta159 23835sta160 23835sta161 23835sta162 23835sta163 23835sta164 23835sta165 23835sta166 23835sta167 23835sta168 23835sta169 23835sta170 23835sta171 23835sta172 23835sta173 23835sta174 23835sta175 23835sta176 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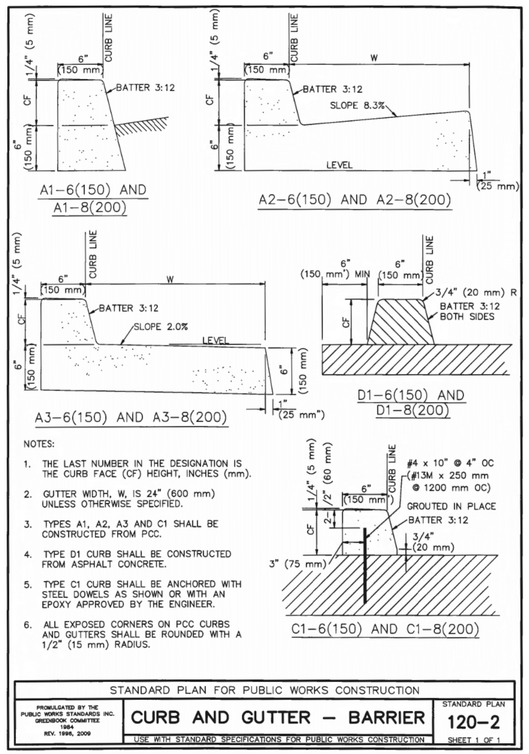
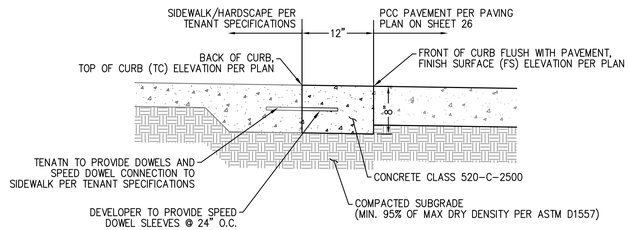
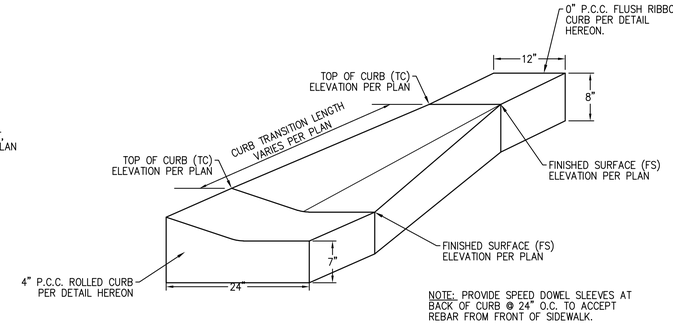


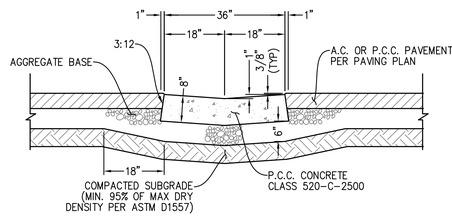
1 2 3 VERTICAL CURB ONLY, 0" CURB, AND CURB & GUTTER
NOT TO SCALE



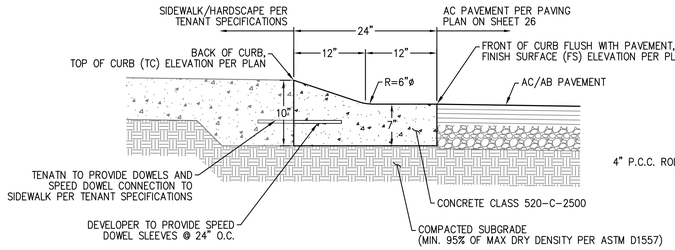
4 0" PCC FLUSH RIBBON CURB
NOT TO SCALE



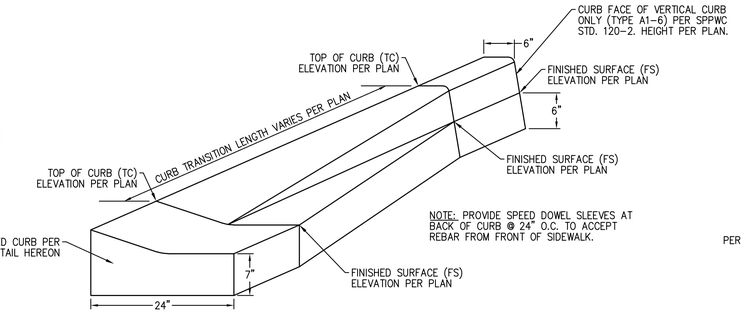
6 0" FLUSH RIBBON CURB TO 4" ROLLED CURB TRANSITION
NOT TO SCALE



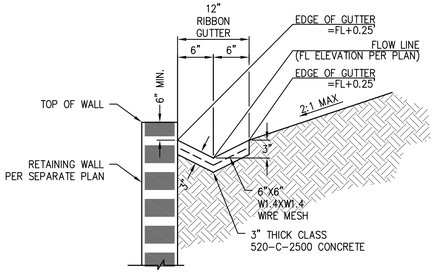
8 3'–WIDE CONCRETE V–GUTTER
NOT TO SCALE



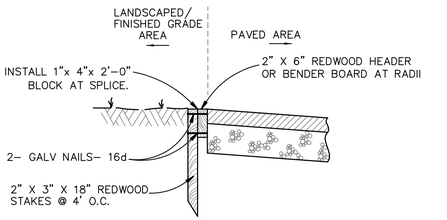
5 4" PCC ROLLED CURB
NOT TO SCALE



7 4" ROLLED CURB TO VERTICAL CURB TRANSITION
NOT TO SCALE



21 12"–WIDE PCC V–GUTTER
NOT TO SCALE



30 REDWOOD HEADER
NOT TO SCALE

NOT FOR CONSTRUCTION

WDID: 8 33C408030

DIGALERT Call 2 Working Days Before You Dig! 811

BENCHMARK:
BM No. C-3-1-1965
DESC: BRASS DISK TOP CONCRETE POST
LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST
ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025–LLA–001–003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

DETAILS

SHEET 24 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835sg100 pws_cg_stamp
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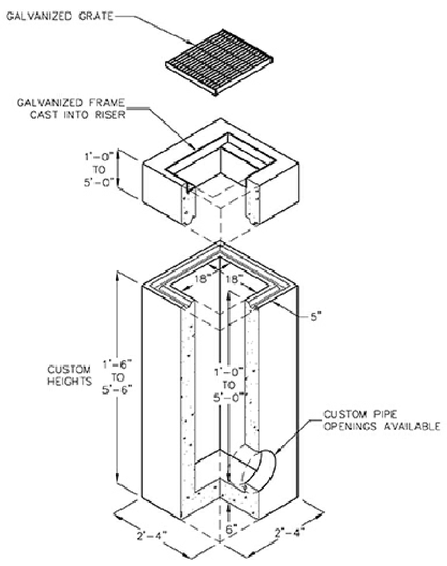


FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

2/1/08
DI1818_1818FG_FF_A.dwg
© 2008 Jensen Precast

Jensen Precast reserves the right to make changes to product design and/or dimensions without notice. Please contact Jensen Precast whenever necessary for confirmation or advice on product design.

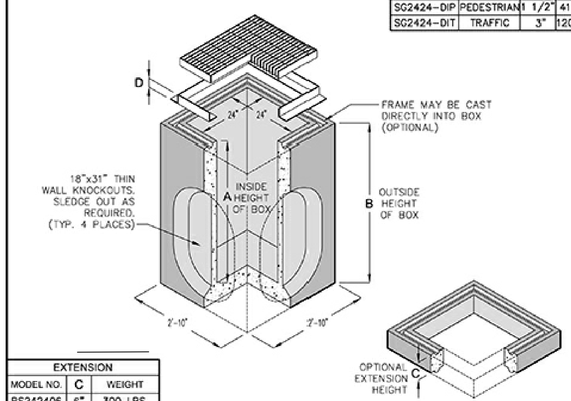
JENSEN PRECAST

60 18"X18" JENSEN PRECAST DROP INLET (DI1818)
NOT TO SCALE

DROP INLET			
MODEL NO.	A	B	*WEIGHT
DI242436	36"	42"	1900 LBS.
DI242448	48"	54"	2500 LBS.

*BOX ONLY

FRAME AND GRATE			
MODEL NO.	RATING	D	WEIGHT
SG2424-DIP	PEDESTRIAN	1 1/2"	41 LBS.
SG2424-DIT	TRAFFIC	3"	120 LBS.



EXTENSION		
MODEL NO.	C	WEIGHT
RS242406	6"	300 LBS.
RS242412	12"	600 LBS.

- FRAME AND GRATE ASSEMBLY AVALIABLE IN TRAFFIC OR PEDESTRIAN MODELS.
- DESIGN FOR H-20-44 BRIDGE LOADING.
- ASSEMBLY TO BE PLACED ON A 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION, CONTACT JENSEN PRECAST.
- ILLUSTRATION IS TYPICAL ONLY OF GENERAL SERIES CONFIGURATION: FOR SPECIFIC CONFIGURATION, CALL JENSEN PRECAST.

24" X 24" DRAIN INLET	JENSEN PRECAST
DRG. DATE: 11-28-00	DI2424

61 24"X24" JENSEN PRECAST DROP INLET (DI2424)
NOT TO SCALE

NOTES:
1. INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF HL-93 LOADING PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
2. FOR INFILTRATION APPLICATIONS, UNCOMPACTED FREE DRAINING BACKFILL (SPEC SECTION 2.03A) TO PROVIDE A LEVEL BASE. SURFACE MUST BE SMOOTH, FREE OF LUMPS OR DEBRIS, AND EXTEND 2' BEYOND R-TANK FOOTPRINT. THE ENGINEER OF RECORD IS RESPONSIBLE FOR ASSESSING THE BEARING CAPACITY OF THE SUBGRADE, AND BASE.
3. FOR INSTALLATIONS IN LANDSCAPED AREAS, THE INSTALLATION OF TREES IS PROHIBITED ABOVE THE R-TANK UNITS. PLEASE CONTACT YOUR LOCAL FERGUSON WATERWORKS REPRESENTATIVE FOR MORE INFORMATION.
4. THE R-TANK SYSTEM IS NOT DESIGNED TO SUPPORT LOADS FROM BUILDINGS OR STRUCTURES. THEREFORE, THE ENGINEER OF RECORD MUST COORDINATE WITH THE PROPER DISCIPLINES TO ENSURE NO STRUCTURAL LOADS ARE IMPARTED UPON THE SYSTEM AND ANY INFILTRATION FROM THE SYSTEM HAS BEEN ACCOUNTED FOR IN THE FOUNDATION DESIGN.

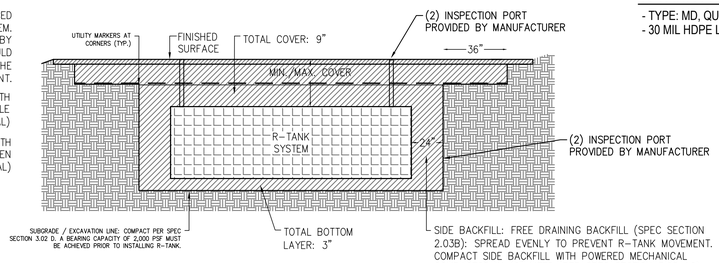
R-TANK UNIT LOAD RATING				
UNIT TYPE	COMPRESSION STRENGTH	HS-20 MIN. COVER*	HS-25 MIN. COVER*	MAX. COVER*
HD	33.0 PSI	20"	24"	6.99'
SD	42.0 PSI	18"	21"	9.99'
MD	64.0 PSI	15"	18"	9.99'
UD	134.0 PSI	12"	15"	6.99'

* MINIMUM AND MAXIMUM COVER ARE MEASURED FROM THE TOP OF THE R-TANK UNIT TO THE TOP OF THE FINISHED SURFACE.

GEOGRID (ACF BX-12) PLACED ABOVE THE R-TANK SYSTEM. OVERLAP ADJACENT PANELS BY 18" MIN. GEOGRID SHOULD EXTEND 3' BEYOND THE EXCAVATION FOOTPRINT.

R-TANK UNITS WRAPPED WITH 8 OZ. NON-WOVEN GEOTEXTILE (OR EQUAL)

EXCAVATION WRAPPED WITH 8 OZ. NON-WOVEN GEOTEXTILE (OR EQUAL)



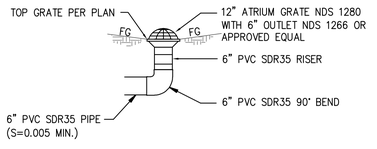
73 R-TANK DETENTION SYSTEM DETAIL
NOT TO SCALE

R-TANK VOLUME PROVIDED:

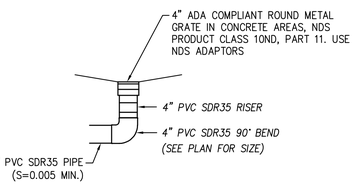
- TOTAL VOLUME PROVIDED BY R-TANK UNITS: 26,493 CF
- TOTAL VOLUME PROVIDED IN STONE: 3,316 CF
- TOTAL STORAGE VOLUME: 29,809 CF

R-TANK PARAMETERS:

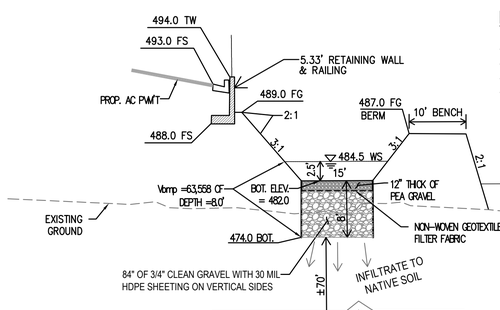
- TYPE: MD, QUAD
- 30 MIL HDPE LINER ON ALL SIDES, TOP AND BOTTOM



64 12"ø LANDSCAPE ATRIUM GRATE DRAIN INLET
NOT TO SCALE



79 4"ø AREA DRAIN INLET
NOT TO SCALE

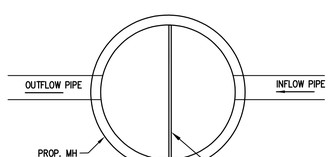


BASIN VOLUME TABULATION:

- OPEN BASIN, 15 FT BOTTOM, 4 FT DEEP: 39,070 CF
- FOREBAY AREA, 4 FT DEEP: 5,244 CF
- BOTTOM 8 FT GRAVEL LAYER (40% VOID): 17,706 CF
- R-TANK SYSTEM (DETENTION): 29,809 CF

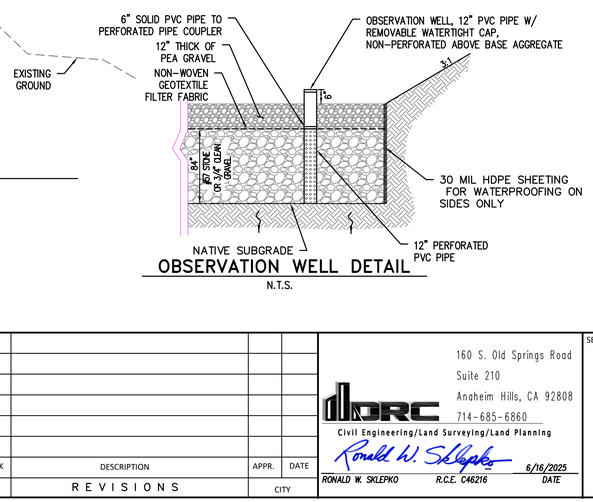
TOTAL BASIN VOLUME: 91,829 CF

70 INFILTRATION/DETENTION BASIN
NOT TO SCALE

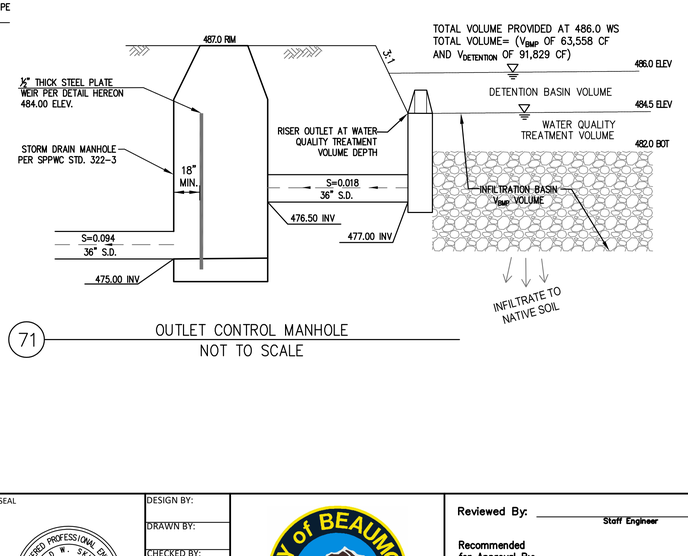


DIVERSION WEIR DETAIL
N.T.S.

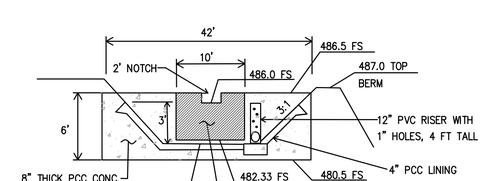
481.2 WS (100-YR STORM EVENT OF NOBLE CREEK)



OBSERVATION WELL DETAIL
N.T.S.



71 OUTLET CONTROL MANHOLE
NOT TO SCALE



72 CONCRETE FOREBAY WALL W/ REMOVABLE WEIR PANEL
NOT TO SCALE

WDID: 8 33C408030

DIGALERT Call 2 Working Days Before You Dig! 811

BENCHMARK:
BM No. C-3-1-1965
DESC: BRASS DISK TOP CONCRETE POST
LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST
ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY OF BEAUMONT CALIFORNIA INC:NOV:18,1912

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

DETAILS

SHEET 25 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835pg100 pwe_co_stamp
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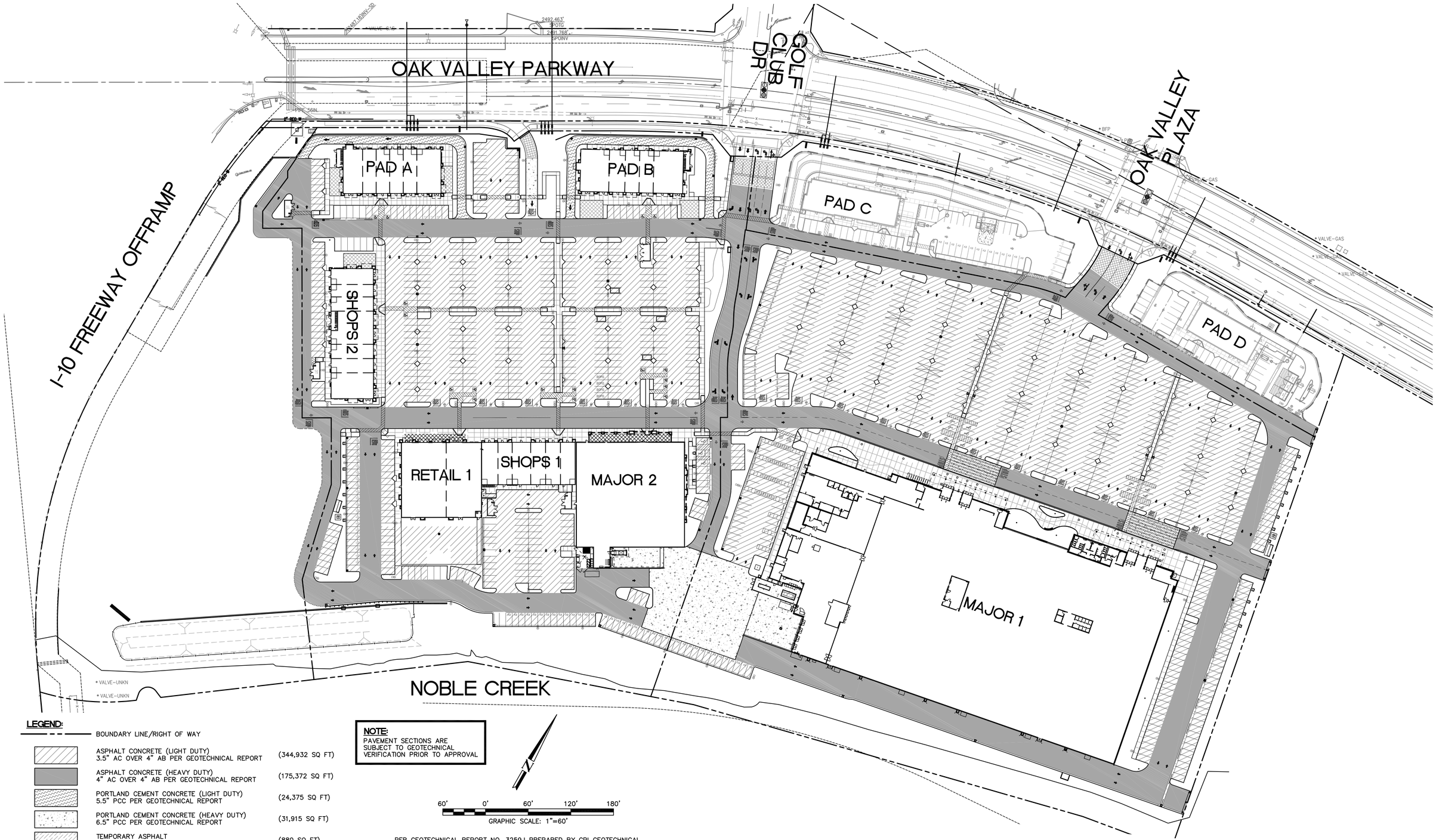

LEGEND:

	BOUNDARY LINE/RIGHT OF WAY	
	ASPHALT CONCRETE (LIGHT DUTY) 3.5" AC OVER 4" AB PER GEOTECHNICAL REPORT	(344,932 SQ FT)
	ASPHALT CONCRETE (HEAVY DUTY) 4" AC OVER 4" AB PER GEOTECHNICAL REPORT	(175,372 SQ FT)
	PORTLAND CEMENT CONCRETE (LIGHT DUTY) 5.5" PCC PER GEOTECHNICAL REPORT	(24,375 SQ FT)
	PORTLAND CEMENT CONCRETE (HEAVY DUTY) 6.5" PCC PER GEOTECHNICAL REPORT	(31,915 SQ FT)
	TEMPORARY ASPHALT 4" MIN.	(880 SQ FT)

NOTE:
PAVEMENT SECTIONS ARE SUBJECT TO GEOTECHNICAL VERIFICATION PRIOR TO APPROVAL

60' 0' 60' 120' 180'
GRAPHIC SCALE: 1"=60'

PER GEOTECHNICAL REPORT NO. 3259.1 PREPARED BY GPI GEOTECHNICAL PROFESSIONALS, INC. ON 11/14/24: THE TOP 12 INCHES BELOW PAVEMENT BASE SHOULD BE SCARIFIED, MOISTURE CONDITIONED, AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

NOT FOR CONSTRUCTION

WDID: 8 33C408030

DIGALERT — Call 2 Working Days Before You Dig! 811

BENCHMARK:
BM No. C-3-1-1965

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LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning

Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO *R.C.E. C46216* *DATE*

SEAL — REGISTERED PROFESSIONAL ENGINEER · RONALD W. SKLEPKO · No. C46216 · Exp. 12-31-2026 · CIVIL · STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT CALIFORNIA INC. NOV. 18, 1912

Reviewed By: _____ Date: _____
Staff Engineer

Recommended for Approval By: _____ Date: _____
Administrative Engineer

Approved By: _____ Date: _____
City Engineer/Director of Public Works

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St.
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

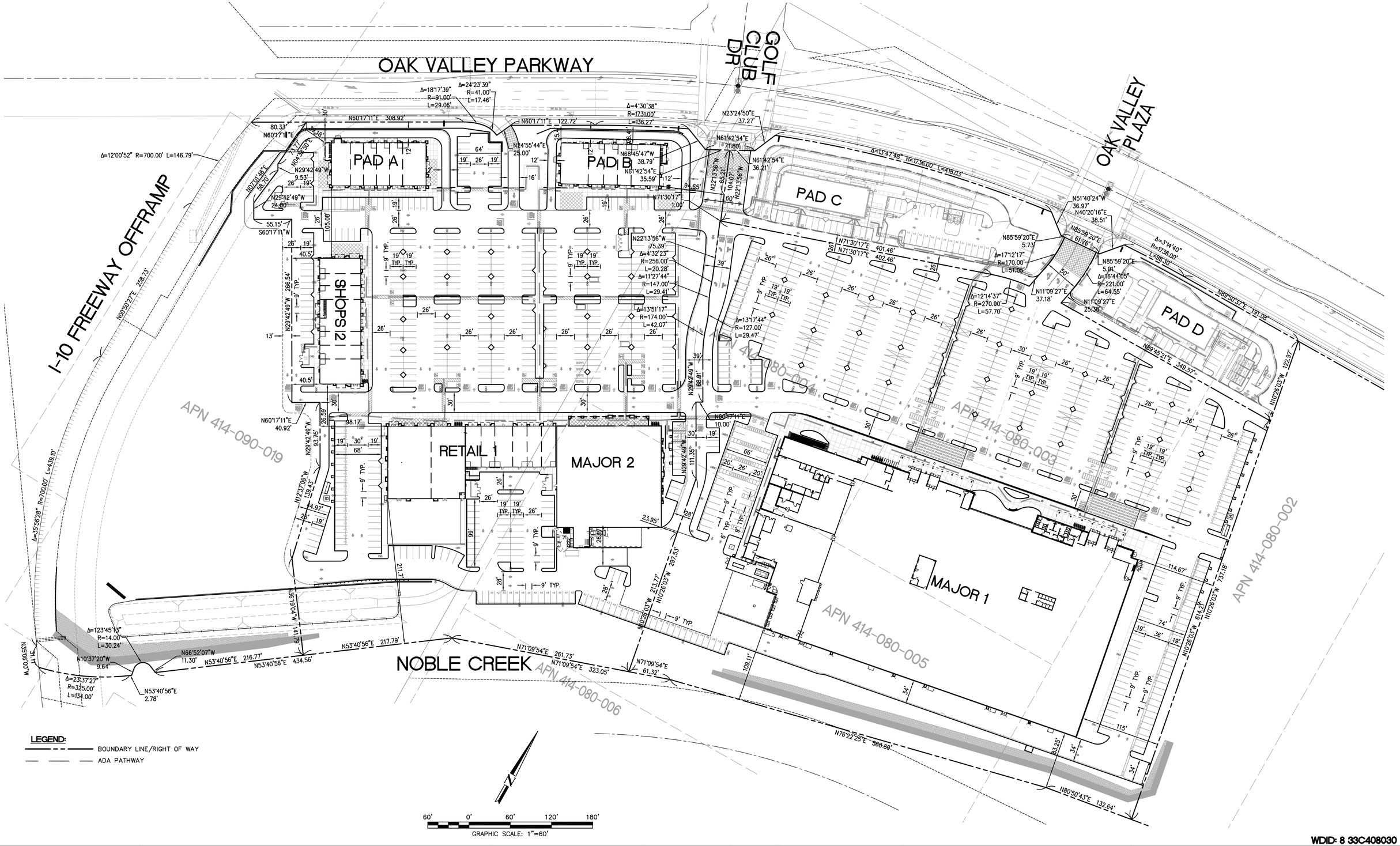
CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

PAVEMENT PLAN

SHEET 26 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835xs100 23835xs101 23835xy100 23835xy101 23835xt101 rec_ce_storm 23835ht101 23835 STAL_Oak Valley 23835se101 23835 AR
FILENAME: M:\2023\23-835 Regency Target Beaumont\VP\23835PG126_PV.dwg, LAST SAVED ON: Aug 15 2025 1:51pm PLOTTED BY: HOMER, ON: Aug 18 2025 9:11am, CFG:

NOT FOR CONSTRUCTION



WDID: 8 33C408030

DIGALERT Call 2 Working Days Before You Dig 811

BENCHMARK:
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BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS		CITY

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
RONALD W. SKLEPKO R.C.E. C46216 6/16/2025 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY OF BEAUMONT CALIFORNIA INC:NOV.18,1912

Reviewed By: _____ Staff Engineer Date: _____
Recommended for Approval By: _____ Administrative Engineer Date: _____
Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

HORIZONTAL CONTROL PLAN

SHEET 27 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835st101 23835sg100 23835sh101 23835sh100 23835sh101 rwe_ao_datamp 23835sh101 23835 STAL_Oak Valley 23835 AR Target Bldg CD 23835 AR Bldg CD
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NOT FOR CONSTRUCTION

EROSION CONTROL NOTES

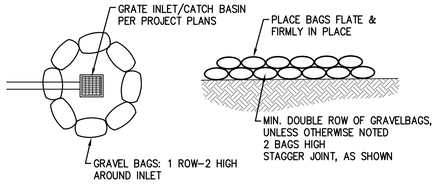
1. IN CASE OF EMERGENCY, CALL: CHRIS SANCHEZ AT (858) 847-4631. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN ISIMMINENT. EROSION CONTROL DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THEAPPROVAL OF THE QSP.
2. ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 72-HOUR RAIN PROBABILITY FORECAST EXCEEDS 50%.
3. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREET, SURGE BERMS, SILT FENCES, AND DESILTING BASINS WITH THE BASINS PUMPED AND WATER TO BE DISPERSED ON SITE.
4. GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE IS TO BE DIRECTED TOWARD DESILTING FACILITIES.
5. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
6. ALL TEMPORARY GRADING HAUL ROADS WITHIN AREAS WHICH ARE TO REMAIN UNDEVELOPED AND NATURAL SHALL BE RESTORED TO NATURAL CONDITIONS AND REVEGETATED WITH NATIVE GRASSES UPON COMPLETION OF GRADING OPERATIONS.
7. STOCKPILING AND/OR VEHICLE STAGING AREAS SHALL BE LOCATED AS FAR AS PRACTICABLE FROM DWELLINGS.
8. EROSION CONTROL DEVICES WILL BE MODIFIED AS NEEDED AS THE PROJECT PROGRESSES.
9. THE PLACEMENT OF ADDITIONAL DEVICES TO REDUCE EROSION DAMAGE WITHIN THE SITE IS LEFT TO THE DISCRETION OF THE QSP.
10. THE QSP SHALL OBSERVE EROSION CONTROL WORK AND MUST INFORM THE CITY AND THE DEVELOPER IF THE WORK IS NOT IN ACCORDANCE WITH THE APPROVED PLAN.

DRAINAGE, EROSION/DUST CONTROL

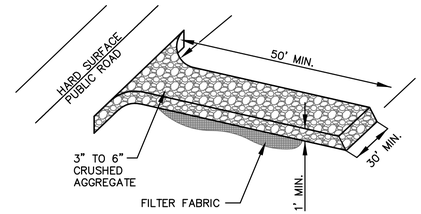
1. DRAINAGE ACROSS PROPERTY LINES SHALL NOT EXCEED THAT WHICH EXISTED PRIOR TO GRADING. EXCESS OR CONCENTRATED DRAINAGE SHALL BE CONTAINED ON SITE OR DIRECTED TO AN APPROVED DRAINAGE FACILITY. EROSION OF THE GROUND IN THE AREA OF THE DISCHARGE SHALL BE PREVENTED BY INSTALLATION OF NON-EROSIVE DOWN DRAINS OR OTHER DEVICES.
2. PROVIDE A PAVED SLOPE INTERCEPTOR DRAIN ALONG THE TOP OF CUT SLOPES WHERE THE DRAINAGE PATH IS GREATER THAN 40 FEET TOWARDS THE CUT SLOPE.
3. PROVIDE 5' WIDE BY 1' HIGH BERM ALONG THE TOP OF ALL FILL SLOPES STEEPER THAN 3:1 (HORIZONTAL TO VERTICAL).
4. THE GROUND SURFACE IMMEDIATELY ADJACENT TO THE BUILDING FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF LESS THAN ONE VERTICAL UNIT IN 20 UNITS HORIZONTAL (5-PERCENT SLOPE) FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE FOUNDATION.
5. NO OBSTRUCTION OF NATURAL WATER COURSES SHALL BE PERMITTED.
6. DURING ROUGH GRADING OPERATIONS AND PRIOR TO CONSTRUCTION OF PERMANENT DRAINAGE STRUCTURES, TEMPORARY DRAINAGE CONTROL (BEST MANAGEMENT PRACTICES, BMPs) SHALL BE PROVIDED TO PREVENT PONDING WATER AND DRAINAGE TO ADJACENT PROPERTIES
7. DUST CONTROL SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS.
8. FUGITIVE DUST CONTROL: CONSTRUCTION SITES SUBJECT TO PM10 FUGITIVE DUST MITIGATION SHALL COMPLY WITH AQMD RULE 403.1
9. ALL EXISTING DRAINAGE COURSES AND STORM DRAIN FACILITIES SHALL CONTINUE TO FUNCTION. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING OPERATIONS.
10. FOR ALL SLOPES STEEPER THAN 4 TO 1 (H/V): ALL SLOPES EQUAL TO OR GREATER THAN 3' IN VERTICAL HEIGHT ARE REQUIRED TO BE PLANTED WITH AN APPROVED DROUGHT-TOLERANT GROUND COVER AT A MINIMUM SPACING OF 12" ON CENTER OR AS APPROVED BY THE ENGINEER OF RECORD OR THE REGISTERED LANDSCAPE ARCHITECT AND DROUGHT-TOLERANT SHRUBS SPACED AT NO MORE THAN 10' ON CENTER. SLOPES EXCEEDING 15' IN VERTICAL HEIGHT SHALL BE PLANTED WITH APPROVED SHRUBS NOT TO EXCEED 15' IN ADDITION TO THE GRASS OR GROUND COVER. SLOPES THAT REQUIRE PLANTING SHALL BE PROVIDED WITH AN IN-GROUND IRRIGATION SYSTEM EQUIPPED WITH AN APPROPRIATE BACKFLOW DEVICE PER C.P.C. CHAPTER 6. THE SLOPE PLANTING AND IRRIGATION SYSTEM SHALL BE INSTALLED AS SOON AS POSSIBLE UPON COMPLETION OF ROUGH GRADING. ALL PERMANENT SLOPE PLANTING SHALL BE ESTABLISHED AND IN GOOD CONDITION PRIOR TO SCHEDULING PRECISE GRADE INSPECTION.

WHEN ONE ACRE OR MORE IS BEING DISTURBED

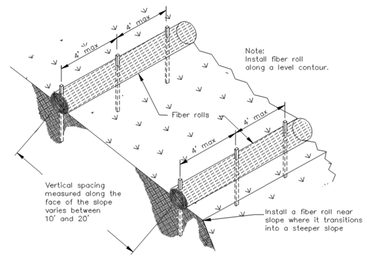
1. CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMPs) FOR THE MANAGEMENT OF STORM WATER AND NON-STORMWATER DISCHARGES SHALL BE DOCUMENTED ON THE GRADING PLAN. ARRANGEMENTS SHALL BE MADE BY THE DEVELOPER TO RETAIN THE SWPPP ON THE JOBSITE THROUGHOUT THE TIME OF CONSTRUCTION. THE IMPLEMENTATION AND MAINTENANCE OF THE SITE BMPs IS REQUIRED TO MINIMIZE JOBSITE EROSION AND SEDIMENTATION. ARRANGEMENTS SHALL BE MADE BY THE DEVELOPER TO MAINTAIN THOSE BMPs THROUGHOUT THE TIME OF CONSTRUCTION.
2. EROSION CONTROL BMPs SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT AND/OR MINIMIZE THE ENTRAINMENT OF SOIL IN RUNOFF FROM DISTURBED SOIL AREAS ON CONSTRUCTION SITES.
3. SEDIMENT CONTROL BMPs SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT AND/OR MINIMIZE THE TRANSPORT OF SOIL FROM THE CONSTRUCTION SITE.
4. GRADING SHALL BE PHASED TO LIMIT THE AMOUNT OF DISTURBED AREA EXPOSED TO THE EXTENT FEASIBLE.
5. AREAS THAT ARE CLEARED AND GRADED SHALL BE LIMITED TO ONLY THE PORTION OF THE SITE THAT IS NECESSARY FOR CONSTRUCTION. THE CONSTRUCTION SITE SHALL BE MANAGED TO MINIMIZE THE EXPOSURE TIME OF DISTURBED SOIL AREAS THROUGH PHASING AND SCHEDULING OF GRADING AND THE USE OF TEMPORARY AND PERMANENT SOIL STABILIZATION.
6. ONCE DISTURBED, SLOPES (TEMPORARY OR PERMANENT) SHALL BE STABILIZED IF THEY WILL NOT BE WORKED WITHIN 21 DAYS. DURING STORM SEASON, ALL SLOPES SHALL BE STABILIZED PRIOR TO PREDICTED STORM EVENT. CONSTRUCTION SITES SHALL BE REVEGETATED AS EARLY AS FEASIBLE AFTER SOIL DISTURBANCE.
7. STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO ELIMINATE OR REDUCE SEDIMENT TRANSPORT FROM THE SITE OR STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
8. CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OTHER THAN STORMWATER (NON-STORMWATER DISCHARGES) ARE PROHIBITED, EXCEPT AS AUTHORIZED BY AN INDIVIDUAL NPDES PERMIT, THE STATEWIDE GENERAL PERMIT-CONSTRUCTION ACTIVITY. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, SOLVENTS, DETERGENTS, GLUES, LIME, PESTICIDES, HERBICIDES, FERTILIZERS, WOOD PRESERVATIVES, AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS, FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS, CONCRETE AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES; WASTES FORM ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; WASTES FROM STREET CLEANING; AND SUPER-CHLORINATED POTABLE WATER FROM LINE FLUSHING AND TESTING. DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON-SITE PHYSICALLY SEPARATE FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
9. RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITE AND MUST NOT BE DISCHARGED TO RECEIVING WATERS OR LOCAL STORM DRAIN SYSTEM.
10. APPROPRIATE BMPs FOR CONSTRUCTION-RELATED MATERIALS, WASTES, SPILLS, OR RESIDUES SHALL BE IMPLEMENTED TO ELIMINATE OR REDUCE TRANSPORT FORM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJOINING PROPERTIES BY WIND OR RUNOFF.
11. ALL CONSTRUCTION CONTRACTORS AND SUBCRONTACTOR PERSONAL ARE TO BE TRAINED IN THE IMPLEMENTATION AND USE OF THE REQUIRED BMPs AND GOOD HOUSEKEEPING MEAURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS AND ALL TRAINING DOCUMENTATION SHALL BE MAINTANED IN THE SWPPP.
12. DISCHARGING CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED INTO THE CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES MAY REQUIRE A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE REGIONAL WATER QUALITY BOARD.
13. BMPs SHALL BE MAINTAINED AT ALL TIMES. IN ADDITION, BMPs SHALL BE INSPECTED PRIOR TO PREDICTED STORM EVENTS AND FOLLOWING STORM EVENTS.
14. AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED OF IN TRASH OR RECYCLE BINS.



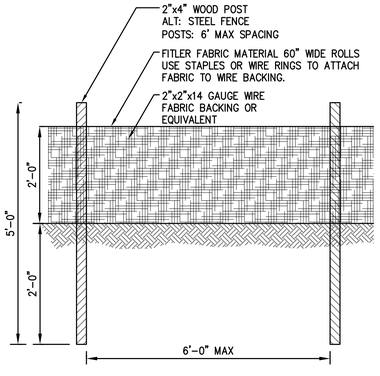
SE-10 TYPICAL GRAVELBAG DETAIL
NOT TO SCALE

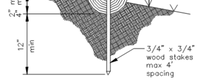


TC-1 STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



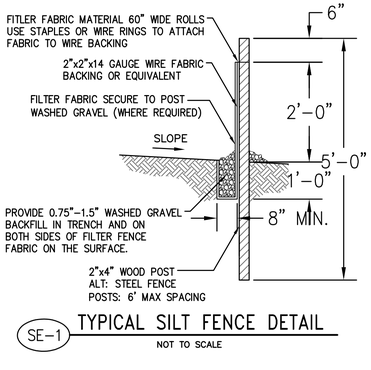
TYPICAL FIBER ROLL INSTALLATION
N.T.S.





ENTRENCHMENT DETAIL
N.T.S.

SE-5 FIBER ROLL
NOT TO SCALE



SE-1 TYPICAL SILT FENCE DETAIL
NOT TO SCALE

EROSION CONTROL STATEMENT:

DRC ENGINEERING INC. HAS PREPARED THESE PLANS IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND STATE/LOCAL POLLUTION PREVENTION AND EROSION CONTROL REQUIREMENTS.

STAGING AREA AND ACCESS ROAD NOTES:

a. DEVELOPER MUST PROVIDE, INSTALL, AND MAINTAIN DURING THE PROJECT CONSTRUCTION PERIOD THE ALL-WEATHER STAGING AREA, ALL-WEATHER ACCESS ROAD, ALL-WEATHER CONSTRUCTION SURFACE, AND TEMPORARY UTILITIES. ALL-WEATHER IS DEFINED AS A COMPACTED, NON-EXPANSIVE, FREE-DRAINING, DRIVABLE SURFACE ABLE TO WITHSTAND NORMAL CONSTRUCTION TRAFFIC UNDER ALL WEATHER CONDITIONS. THE LOCATION FOR A 20,000 SF ALL-WEATHER CONSTRUCTION STAGING AREA MUST BE APPROVED BY THE TARGET PROJECT MANAGER AND CONSTRUCTED WITHIN 100 FEET OF THE BUILDING MAIN ENTRANCE. DO NOT LOCATE THE STAGING AREA OVER EXISTING PERMANENT UTILITIES OR THOSE PLANNED FOR INSTALLATION.

b. PROVIDE TEMPORARY UTILITIES TO THE STAGING AREA AND/OR BUILDING PAD. VERIFY TEMPORARY UTILITIES LOCATION WITH TARGET'S OWNER'S SITE REPRESENTATIVE BEFORE INSTALLATION. UTILITY CONSUMPTION IS METERED AND PAID BY TARGET.
   1. ELECTRIC – 600 AMP, 480/277 VOLT, 3-PHASE, 4-WIRE SERVICE TO POLE; TERMINAL/METERING POLE; METER SOCKET AND ENCLOSURE; TRANSFORMERS AS REQUIRED BY LOCAL UTILITY, TO BUILDING PAD AT PERMANENT SERVICE LOCATION AND EXTEND SERVICE TO THE STAGING AREA. DO NOT ROUTE SERVICE THROUGH OR UNDER THE BUILDING PAD OR THE PERIMETER ALL WEATHER CONSTRUCTION SURFACE. VERIFY WITH THE TARGET DEVELOPMENT MANAGER SOUTHERN GEOGRAPHIC LOCATIONS THAT MAY REQUIRE 1200 AMP SERVICE.
   2. WATER – 1½-INCH MINIMUM TO BUILDING AREA.
   3. TELEPHONE – 25-PAIR TO STAGING AREA.

WDID: 8 33C408030

DIGALERT — Call 2 Working Days Before You Dig! 811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS	CITY	

DRC Civil Engineering/Land Surveying/Land Planning
160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860

Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL: REGISTERED PROFESSIONAL ENGINEER · RONALD W. SKLEPKO · No. C46216 · Exp. 12-31-2026 · CIVIL · STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY of BEAUMONT CALIFORNIA INC. NOV. 15, 1912

Reviewed By: _____ Date: _____ Staff Engineer
Recommended for Approval By: _____ Date: _____ Administrative Engineer
Approved By: _____ Date: _____ City Engineer/Director of Public Works

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

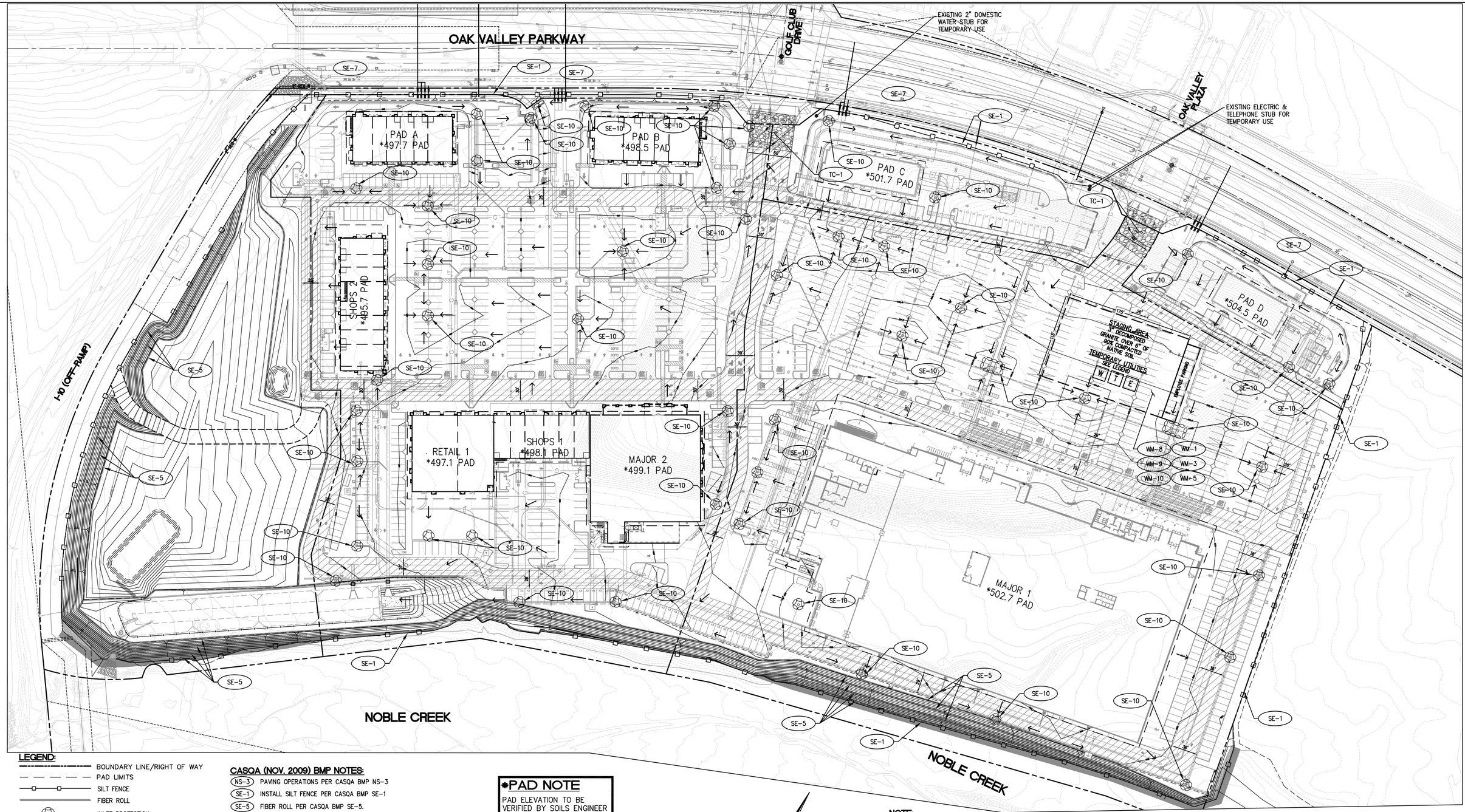
CITY OF BEAUMONT, CALIFORNIA
PRECISE GRADING PLANS FOR:
OAK VALLEY VILLAGE
LOT LINE ADJUSTMENT NO. 2025-LLA-001-003
SEC INTERSTATE 10 AND OAK VALLEY PARKWAY

EROSION CONTROL

SHEET 28 OF 29 SHEETS
FILE NO: PW2025-0240

EXTERNAL REFERENCES: 23835ent01 23835ent02 23835ent03 23835ent04 23835ent05 23835ent06 23835ent07 23835ent08 23835ent09 23835ent10 23835ent11 23835ent12 23835ent13 23835ent14 23835ent15 23835ent16 23835ent17 23835ent18 23835ent19 23835ent20 23835ent21 23835ent22 23835ent23 23835ent24 23835ent25 23835ent26 23835ent27 23835ent28 23835ent29 23835ent30 23835ent31 23835ent32 23835ent33 23835ent34 23835ent35 23835ent36 23835ent37 23835ent38 23835ent39 23835ent40

NOT FOR CONSTRUCTION



LEGEND:

- BOUNDARY LINE/RIGHT OF WAY
- PAD LIMITS
- SILT FENCE
- FIBER ROLL
- INLET PROTECTION
- GRAVEL BAGS
- STABILIZED CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING AREA
- DIRECTION OF FLOW
- ALL-WEATHER CONSTRUCTION ROAD 24 FEET MINIMUM

CASQA (NOV. 2009) BMP NOTES:

- (NS-3) PAVING OPERATIONS PER CASQA BMP NS-3
- (SE-1) INSTALL SILT FENCE PER CASQA BMP SE-1
- (SE-5) FIBER ROLL PER CASQA BMP SE-5.
- (SE-7) STREET SWEEPING PER CASQA BMP SE-7.
- (SE-10) CONSTRUCT STORM DRAIN INLET PROTECTION PER CASQA BMP SE-10
- (TC-1) [1]CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE PER CASQA BMP TC-1
- (EC-1) CONSTRUCTION SCHEDULING PER CASQA BMP EC-1.
- (WE-1) WIND EROSION CONTROL PER CASQA BMP WE-1.
- (WM-1) MATERIAL DELIVERY AND STORAGE PER CASQA BMP WM-1.
- (WM-3) STOCKPILE LOCATION PER CASQA BMP WM-3
- (WM-5) SOLID WASTE MANAGEMENT PER CASQA BMP WM-5.
- (WM-8) CONCRETE WASTE MANAGEMENT PER CASQA BMP WM-8.
- (WM-9) SANITARY & SEPTIC MANAGEMENT CASQA PER BMP WM-9.
- (WM-10) LIQUID WASTE MANAGEMENT PER BMP WM-10

[1] CONTRACTOR SHALL PLACE TC-1 AS NEEDED

***PAD NOTE**

PAD ELEVATION TO BE VERIFIED BY SOILS ENGINEER PRIOR TO CITY APPROVAL.

60' 0' 60' 120' 180'

GRAPHIC SCALE: 1"=60'

NOTE:

PROVIDE 24" WIDE ALL WEATHER ACCESS ROAD FROM PUBLIC STREET TO STAGING AREA AND BUILDING AREA.

PROVIDE 24' WIDE ALL WEATHER CONSTRUCTION SURFACE NOT LESS THAN 5 FEET OR MORE THAN 10 FEET FROM WALL AROUND TARGET BUILDING AREA.

ALLOWED ALL WEATHER ACCESS SURFACING:
ALT. 1: 3" CLASS 2 AGGREGATE BASE OVER 6" OF COMPACTED NATIVE SOIL (90%)

ALT. 2: 2-2/2" OF TYPE B ASPHALT CONCRETE OVER 6" COMPACTED NATIVE (90%)

- W — PROVIDE TEMPORARY WATER SERVICE & METER (1-1/2" MIN.)
- T — PROVIDE TEMPORARY TELEPHONE SERVICE (25 PAIR)
- E — PROVIDE TEMPORARY ELECTRICAL (1200 AMP, 480/277 VOLT, 3-PHASE, 4-WIRE)

WDID: 8 33C408030

DIGALERT — Call 2 Working Days Before You Dig 811

BENCHMARK:
BM No. C-3-1-1965

DESC: BRASS DISK TOP CONCRETE POST

LOC: AT THE NWC OF BEAUMONT AV. & 13TH ST, 130FT W OF BEAUMONT AV, 25FT N OF 13TH ST, 4FT E OF PP No. 12148845E, 1FT W OF MARKER POST

ELEV. 2636.329', NGVD 29

BY	MARK	DESCRIPTION	APPR.	DATE
ENGINEER		REVISIONS		CITY

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860
Civil Engineering/Land Surveying/Land Planning
Ronald W. Sklepko 6/16/2025
RONALD W. SKLEPKO R.C.E. C46216 DATE

SEAL — REGISTERED PROFESSIONAL ENGINEER RONALD W. SKLEPKO No. C46216 Exp. 12-31-2026 CIVIL STATE OF CALIFORNIA

DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
JOB NUMBER:

CITY OF BEAUMONT CALIFORNIA INC.NOV.18,1912

Reviewed By: _____ Staff Engineer Date: _____

Recommended for Approval By: _____ Administrative Engineer Date: _____

Approved By: _____ City Engineer/Director of Public Works Date: _____

CITY OF BEAUMONT, PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
550E. 6th St
Beaumont, CA 92223
TEL: (951) 769-8520 FAX: (951) 769-8526

CITY OF BEAUMONT, CALIFORNIA
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EROSION CONTROL

SHEET 29 OF 29 SHEETS
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EXTERNAL REFERENCES: 23835ent101 23835ept100 23835ept101 23835ept102 23835ept103 23835ept104 23835ept105 23835ept106 23835ept107 23835ept108 23835ept109 23835ept110 23835ept111 23835ept112 23835ept113 23835ept114 23835ept115 23835ept116 23835ept117 23835ept118 23835ept119 23835ept120 23835ept121 23835ept122 23835ept123 23835ept124 23835ept125 23835ept126 23835ept127 23835ept128 23835ept129 23835ept130 23835ept131 23835ept132 23835ept133 23835ept134 23835ept135 23835ept136 23835ept137 23835ept138 23835ept139

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

GEOTECHNICAL
PROFESSIONALS INC.

September 18, 2025

Regency Centers, L.P.
420 Stevens Avenue, Suite 320
Solana Beach, California 92075

Attention: Jena Stucker
Project Manager

Subject: Geotechnical Response to Comment on Infiltration Testing
Proposed Oak Valley Village Retail Center
SEC Interstate 10 & Oak Valley Parkway
Beaumont, California
GPI Project No. 3259.I

Dear Jena:

This letter presents our geotechnical response to a comment provided by the WQMP plan checker from the City of Beaumont. The comment provided below from the City of Beaumont is with respect to the infiltration testing presented in our letters and reports documenting infiltration testing (References 1 to 3).

The comment requiring our response, followed by our response, is as follows:

Comment: *Please note that the geotechnical report attached to this email is older than the report included in the WQMP report. In the most recent version provided, the tests were conducted at the correct locations, but the methodology is inconsistent with acceptable testing methods in Section 2 of Appendix A of the RCFC LID BMP Design Handbook. See attached. We are also requesting the field data to be included in the geotech report attachments. Include discussion on how the percolation rates were converted to infiltration rates.*

Response: GPI performed a total of eight infiltration tests throughout the project site including two tests at the location of Basin "A" as reported in Reference 3. We performed our testing in general accordance with the methodology of the RFC LID BMP Design Handbook (Reference 3) and the County of Riverside Technical Guidance Document.

Due to the caving of the loose dry sands prevalent in the upper 5 feet of the soil profile at the site, we utilized a 4-inch hand auger to install percolation wells rather than our larger hand auger in order to meet the diameter for percolation wells less than 10 feet deep recommended in References 3 and 4.

We calculated the measured infiltration rates using the drop in the water level over the test time increment and corrected using the Porchet Method as outlined on Page 26 of Reference 3. Our results for a measured infiltration rate for sandy soils with fine content

5736 Corporate Avenue • Cypress, CA 90630 • (714) 220-2211 , FAX (714) 220-2122

ranging from 5 to 18 are consistent with anticipated infiltration rates for soil types (Reference 6).

Our field data measurements for the Basin “A” tests are included in tabular format used to calculate measured infiltration rates using the Porchet Method. The tables are included in Attachment A.

We trust this information satisfies your current needs. Please do not hesitate to call if you have questions on the contents of this report.

Respectfully submitted,
Geotechnical Professionals Inc.

Donald A. Cords, G.E.
Principal

Enclosures: References
Attachment A – Test Data Summary

cc: René Varga, DRC Engineering, Inc. (email)

REFERENCES

1. Geotechnical Professionals Inc., “Infiltration Test Results, Proposed Oak Valley Village Retail Center, SEC Interstate 10 and Oak Valley Parkway, Beaumont, California”, GPI Project No. 3259.I, June 12, 2024.

2. Geotechnical Professionals Inc., “Geotechnical Investigation, Proposed Retail Center, SEC Interstate 10 and Oak Valley Parkway, Beaumont, California”, GPI Project No. 3259.I, November 14, 2024.

3. Geotechnical Professionals Inc., “Results of Supplemental Infiltration Testing – Basin “A”, Proposed Oak Valley Village Retail Center, SEC Interstate 10 and Oak Valley Parkway, Beaumont, California”, GPI Project No. 3259.I, May 21, 2025.

4. Riverside County Flood Control and Water Conservation District, ““Appendix A - Infiltration Testing”, Design Handbook for Low Impact Development BMP Design Handbook, rev. September 2011.

5. County of Riverside, (2011), “Appendix VII of Technical Guidance Document – Infiltration Rate Evaluation Protocol and Factor of Safety Recommendations,” dated May 19, 2011.

6. Schueler, Thomas, Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs, 1987.

ATTACHMENT A

BOREHOLE INFILTRATION TEST RESULTS (corrected with Porchet Method)

Riverside County Method-TGD, 2011

Project No. 3259.I Project Name: Oak Valley Date: 5/21/2025

TABLE 1

Test Date 5/17/2025 NOTE: Slowest rate from percolation testing used to calculate infiltration rate

		Water	Water	Total		Initial	Final	Change in	Average	
	Test	Depth	Depth	Depth of	Hole	Water	Water	Height of	Height of	Infiltration
Test Well	Duration	Initial	Final	Test Hole	Diameter	Height	Height	Water	Water	Rate
	(min)	(ft)	(ft)	(ft)	(inches)	(ft)	(ft)	(ft)	(ft)	(in/hr)
	Δt	D_o	D_f	D_T		H_o	H_f	$\Delta H=\Delta D$	H_{avg}	I_t
W-7	1.6	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	12.0
W-7	1.9	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.9
W-7	2.0	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.5
W-7	2.1	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.2
W-7	2.0	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.7
W-7	2.1	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.2
W-7	2.0	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.7
W-7	2.0	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.7

TABLE 2

Test Date 5/17/2025 NOTE: Slowest rate from percolation testing used to calculate infiltration rate

		Water	Water	Total		Initial	Final	Change in	Average	
	Test	Depth	Depth	Depth of	Hole	Water	Water	Height of	Height of	Infiltration
Test Well	Duration	Initial	Final	Test Hole	Diameter	Height	Height	Water	Water	Rate
	(min)	(ft)	(ft)	(ft)	(inches)	(ft)	(ft)	(ft)	(ft)	(in/hr)
	Δt	D_o	D_f	D_T		H_o	H_f	$\Delta H=\Delta D$	H_{avg}	I_t
W-8	1.8	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	10.3
W-8	1.8	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	10.3
W-8	2.0	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.5
W-8	2.0	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.3
W-8	2.1	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	8.9
W-8	2.1	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	8.9
W-8	2.1	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	8.9
W-8	2.1	0.40	0.94	2.30	4	1.90	1.36	0.540541	1.63	9.0

GEOTECHNICAL PROFESSIONALS INC.

May 21, 2025

Regency Centers, L.P.
420 Stevens Avenue, Suite 320
Solana Beach, California 92075

Attention: Jena Stucker
Project Manager

Subject: Results of Supplemental Infiltration Testing – Basin "A"
Proposed Oak Valley Village Retail Center
SEC Interstate 10 & Oak Valley Parkway
Beaumont, California
GPI Project No. 3259.I

Dear Ms. Stucker:

In accordance with your request, this report presents the results of supplemental infiltration testing and analysis performed by Geotechnical Professionals Inc. (GPI) for the design of stormwater infiltration systems at Basin "A" for the subject project. The evaluations were performed in general accordance with the Riverside County – Low Impact Development BMP Design Handbook (Riverside, 2011).

GENERAL

We understand that the site will be developed into a 27.9-acre retail center with several single-story buildings. Other improvements include a freeway sign, infiltration basins, screen walls, drives, parking and landscaping.

We performed a geotechnical investigation for the overall retail site and presented the results in a report dated November 14, 2024 (GPI, 2024) that included six infiltration tests across the site.

Based on information provided by DRC (the Project Civil Engineer) after submitting our report, the stormwater infiltration Basin "A" will be located at the southwest portion of the site which was previously not tested for stormwater infiltration characteristics. The invert of the basin is at Elev. +476 feet, which is approximately 1 foot below existing ground. The location of the proposed stormwater basin (Basin "A") is shown on the attached Figure 1, Site Plan.

This report provides the results of the supplemental infiltration testing performed by GPI for the subject site.

SCOPE OF SERVICES

Our scope of services consisted of one hand auger boring, installation of two test wells, field infiltration testing, infiltration rate analysis, laboratory testing, review of prior data, and the preparation of this report.

FIELD INVESTIGATION

The subsurface conditions at the test locations were investigated by performing a hand auger boring in the vicinity of the proposed stormwater infiltration basin. The boring was advanced to a depth of approximately 5 feet below existing site grades using 4-inch diameter hand auger equipment where it refused on gravelly soils. Bulk samples were obtained and bagged from select depths.

The field exploration for the investigation was performed under the continuous technical supervision of GPI's representative, who visually inspected the site, maintained detailed logs of the boring, classified the soils encountered, and obtained samples for examination and laboratory testing. The soils encountered in the boring were classified in the field and through further examination in the laboratory in accordance with the Unified Soils Classification System. A detailed log of the boring is presented in Figure 2.

We have included the logs for the nearby explorations in this report (BR-4, C-3 and C-4) performed as a part of our previous geotechnical investigation in 2024. These logs are provided in Figures 3 to 5. The purpose of this data is to provide the consistency of the soils to depths of at least 10 feet below the proposed invert elevation.

The boring location was laid out in the field by measuring from existing features at the site.

Upon completion, the boring was backfilled with the excavated soil cuttings. The ground surface elevation at the boring location was estimated from the Post-Construction WQMP Site Plan by DRC Engineering Inc. dated March 16, 2025.

We performed infiltration testing and analysis to confirm the infiltration characteristics of the subsurface soils at the depths of the proposed infiltration basin. The location of the boring, prior explorations, and test wells are shown on the attached Site Plan, Figure 1.

SUBSURFACE CONDITIONS

Our field investigation disclosed a subsurface profile consisting of natural soils at or near the ground surface. The natural soils consisted of predominantly dry to slightly moist layered sands and silty sands with gravel to the 5 foot depth explored which was consistent with our prior explorations in the area.

Groundwater was not encountered in our previous explorations to a depth of 72 feet below existing grades. Alluvial materials in the adjacent Noble Creek channel may contain seasonal groundwater during periods of rain.

Groundwater levels in the site vicinity were evaluated based on groundwater well data provided by the California Department of Water Resources (CDWR) Water Data Library

(wdl.water.ca.gov) at two wells each within about ¾-mile from the site. The groundwater well data readily available from these wells indicates the groundwater level is significantly greater than 100 feet below existing grades.

LABORATORY TESTING

Small bulk samples were carefully packaged in the field and sealed to prevent moisture loss.

The samples were then transported to our Cypress office for examination and testing assignments. Laboratory tests were performed on selected representative samples as an aid in classifying the soils and to evaluate the physical properties of the soils.

Moisture content was determined from a number of samples. The samples were weighed to obtain wet weight and then dried in accordance with ASTM D2216. After drying, the weight of each sample was measured, and moisture content was calculated. Moisture content values are presented on the boring log in Figure 2.

Selected soil samples were dried, weighted, soaked in water until individual soil particles were separated, then washed on the No. 200 sieve. That portion of the material retained on the No. 200 sieve was oven-dried and weighed to determine the percentage of the material passing the No. 200 sieve. A summary of the percentages passing the No. 200 sieve is presented below.

BORING NO.	DEPTH (ft)	SOIL DESCRIPTION	PERCENT PASSING No. 200 SIEVE
BW-7	1	Sand with Silt (SP-SM)	10
BW-7	2.5	Sand with Silt (SP-SM)	5
BW-7	4	Silty Sand (SM)	18

INFILTRATION TESTING

Field Infiltration Testing

The test wells were installed in boreholes drilled using hand auger equipment. The wells consisted of 3-inch diameter perforated PVC casing installed in a 4-inch diameter borehole. Packing material around the slotted sections of the well casing consisted of #3 sand.

Prior to running the infiltration tests, the wells were presoaked in general accordance with the County Guidelines by saturating each well with approximately 1.5 feet of water. Prior to running the infiltration tests, the soils were tested for Sandy Soil Criteria by filling the test holes and taking measurements of the water levels over a period of 25 minutes. Each of the wells exhibited two consecutive measurements of greater than 6 inches of water surface drop in less than 25 minutes, meeting the criteria for Sandy Soils.

The infiltration testing was conducted to achieve at least six consecutive readings as outlined in the County requirements for sandy soils. The tests were performed by measuring the duration a set drop in water level. The initial water heights in the test wells were approximately

2 feet above the bottom of the test well. After each reading, the water level was raised to approximately the same height.

Results

The measured infiltration rates were calculated using the drop in water level over the test increment time and corrected to one-dimensional flow. The lowest measured rate within the last three readings for each well, corrected as indicated above, are presented in the following table and should be used with an appropriate factor of safety.

Test Well No.	Infiltration Depth (ft)	Infiltration Rate (inch/hour)
W-7	3	9
W-8	3	9

Based on information provided, the infiltration depth is approximately 2 feet below the proposed invert elevation of Basin “A”.

After completion of the infiltration testing, the well casings were removed, and the holes were backfilled with the on-site soils.

It should be noted that the infiltration rates are for clean, clear water and do not include effects of sediment, fines, dissolved solids or other debris, as these materials will significantly reduce the infiltration rates of the subsurface soils. Prior to infiltration, water should be cleaned of sediment or other deleterious materials to help reduce the potential for clogging and reduced percolation rates. Should fines or suspended solids be permitted to enter the basin, reduced infiltration rates will result.

Conclusions and Recommendations

Based on our field testing, the site soils at the depth tested are suitable for infiltration at near existing grades to a depth of approximately 5 feet below grades. Previous nearby explorations indicate similar soils with favorable infiltration extend to at least 20 feet below the invert elevation of Basin “A”.

The Civil Engineer should evaluate feasibility of stormwater infiltration using the rates provided above. Additional factors of safety in determining the design infiltration rate of the proposed infiltration basin should be determined by the project Civil Engineer.

The results of our infiltration testing were consistent with those performed in other areas of the site, ranging from 9 to 31 inches per hour (GPI 2024).

We take no exception to using the tested infiltration rates provided above with an appropriate factor of safety for the proposed infiltration basin founded at an elevation of about +476 feet.

LIMITATIONS

The report, exploration logs, and other materials resulting from GPI's efforts were prepared exclusively for use by Regency Centers, L.P. and their consultants in designing the proposed development. The report is not intended to be suitable for reuse on extensions or modifications of the project or for use on any project other than the currently proposed

development as it may not contain sufficient or appropriate information for such uses. If this report or portions of this report are provided to contractors or included in specifications, it should be understood that they are provided for information only. This report cannot be utilized by another entity without the express written permission of GPI. This report is an instrument of our services and remains the property of GPI.

Soil deposits may vary in type, strength, and many other important properties between points of exploration due to non-uniformity of the geologic formations or to man-made cut and fill operations. While we cannot evaluate the consistency of the properties of materials in areas not explored, the conclusions drawn in this report are based on the assumption that the data obtained in the field and laboratory are reasonably representative of field conditions and are conducive to interpolation and extrapolation.

Furthermore, our recommendations were developed with the assumption that a proper level of field observation and construction review will be provided during grading, excavation, and construction by GPI. If field conditions during construction appear to be different than is indicated in this report, we should be notified immediately so that we may assess the impact of such conditions on our recommendations. If construction phase services are performed by others they must accept full responsibility for all geotechnical aspects of the project including this report.

Our investigation and evaluations were performed using generally accepted engineering approaches and principles available at this time and the degree of care and skill ordinarily exercised under similar circumstances by reputable Geotechnical Engineers practicing in this area. No other representation, either express or implied, is included or intended in our report.

Respectfully submitted,
Geotechnical Professionals Inc.

Brendali Melendrez
Staff Engineer

Donald A. Cords, G.E.
Principal

Enclosures: Figure 1 - Site Plan
Figure 2-5 - Logs of Explorations

REFERENCES

California Department of Water Resources, Water Data Library (WDL) Station Map, Wells 339476N1169860W001 and 339519N1169937W001 accessed September 2024, https://wdl.water.ca.gov/waterdatalibrary/Map.aspx.

Geotechnical Professionals Inc., “Geotechnical Investigation, Proposed Retail Center, SEC Interstate 10 and Oak Valley Parkway, Beaumont, California”, GPI Project No. 3259.I, November 14, 2024.

Riverside County, Department of Public Works (2011), “Appendix VII – Infiltration Rate Evaluation Protocol and Factor of Safety Recommendations,” dated May 19, 2011.

EXPLANATION

BR-5 — APPROXIMATE LOCATION AND NUMBER OF PRIOR EXPLORATION (GPI, 2024)

W-8 — APPROXIMATE LOCATION AND NUMBER OF INFILTRATION WELL

BW-7 — APPROXIMATE LOCATION AND NUMBER OF HAND AUGER BORING

GOLF CLUB DR.

OAK VALLEY PARKWAY

APPROXIMATE LOCATION OF STOCKPILE

DMA-A
27.13

PROP. S.D.

PROP. FLOWLINE

R/W

MONUMENT SIGN

CENTER I.D. SIGN

EXIST. 2 - 3'X5' ARCHED CMP

PROP. 3' WIDE OPENING AND RIPRAP

EXISTING CALTRANS DITCH

50' FAULT RESTRICTION ZONE

30' WATER EASEMENT

30' SEWER EASEMENT

ROOF DRAIN

C-3

C-4

W-8

W-7

BR-4

BW-7

BASIN "A"

PROP. P/L

PROP. INFILTRATION BASIN FOREBAY

PROPOSED DUAL FUNCTION INFILTRATION / DETENTION BASIN
V_{IMP} = 63,505 CF
$V_{DETENTION}$ = 31,015 CF
TOTAL VOLUME = 94,520 CF

PROP. OUTLET STRUCTURE
PROP. OUTLET CONTROL MANHOLE
MAX. Q_{OUT}=2.20 CFS
100-YR STORM WILL BYPASS THE ORIFICE PLATE

TO NOBLE CREEK

EXISTING CALTRANS DITCH

PROPOSED FREEWAY SIGN

INTERSTATE HIGHW

NOBLE CREEK
(Q_{100}=13,500 CFS)

N

0 150 300 FEET

BASE MAP REPRODUCED FROM POST-CONSTRUCTION WQMP SITE PLAN PREPARED BY DRC ENGINEERING INC.: DATED 03-16-25

GPI GEOTECHNICAL PROFESSIONALS, INC.

REGENCY OAK VALLEY VILLAGE

GPI PROJECT NO.: 3259.I

SCALE: 1" = 150'

SITE PLAN

FIGURE 1

MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	*DESCRIPTION OF SUBSURFACE MATERIALS*	ELEVATION (FEET)
					This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	
				0		
1.8			B		Natural: **SAND WITH SILT (SP-SM)** light brown, slightly moist to moist, with gravel	
2.0			B			
3.1			B		**SILTY SAND (SM)** brown, slightly moist to moist, with gravel	475
				5	Refusal at 5 feet	

SAMPLE TYPES
- C Rock Core
- S Standard Split Spoon
- D Drive Sample
- B Bulk Sample
- T Tube Sample

DATE DRILLED: 5-17-25

EQUIPMENT USED: 4 " Hand Auger

GROUNDWATER LEVEL (ft): Not Encountered

GPI

PROJECT NO.: 3259.I

OAK VALLEY

LOG OF BORING NO. BW-7

FIGURE 2

MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	*DESCRIPTION OF SUBSURFACE MATERIALS* This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	ELEVATION (FEET)
			B	0	Natural: **SILTY SAND (SM)** light brown to brown, dry, medium dense, with gravel	475
1.7	114	17	D			
2.1	96	6	D	5	**SAND WITH SILT (SP-SM)** brown, dry, loose, with gravel	470
12.7		8	D		**SILTY SAND (SM)** brown, moist, loose	
					SAND (SP) brown, moist, loose, with gravel	
6.4	96	7	S	10	**SILTY SAND (SM)** brown, slightly moist, loose, little recovery	465
10.5	104	7	D	15	@ 15 feet, moist	460
2.7		18	S	20	**SAND WITH SILT (SP-SM)** brown, dry, medium dense, with gravel	455
6.8	108	16	D	25	**SILTY SAND (SM)** brown, slightly moist, medium dense, with gravel	450
6.2		25	S	30		445
					Total Depth 31.5 feet	

SAMPLE TYPES
- C Rock Core
- S Standard Split Spoon
- D Drive Sample
- B Bulk Sample
- T Tube Sample

DATE DRILLED: 8-21-24

EQUIPMENT USED: 8 " Hollow Stem Auger

GROUNDWATER LEVEL (ft): Not Encountered

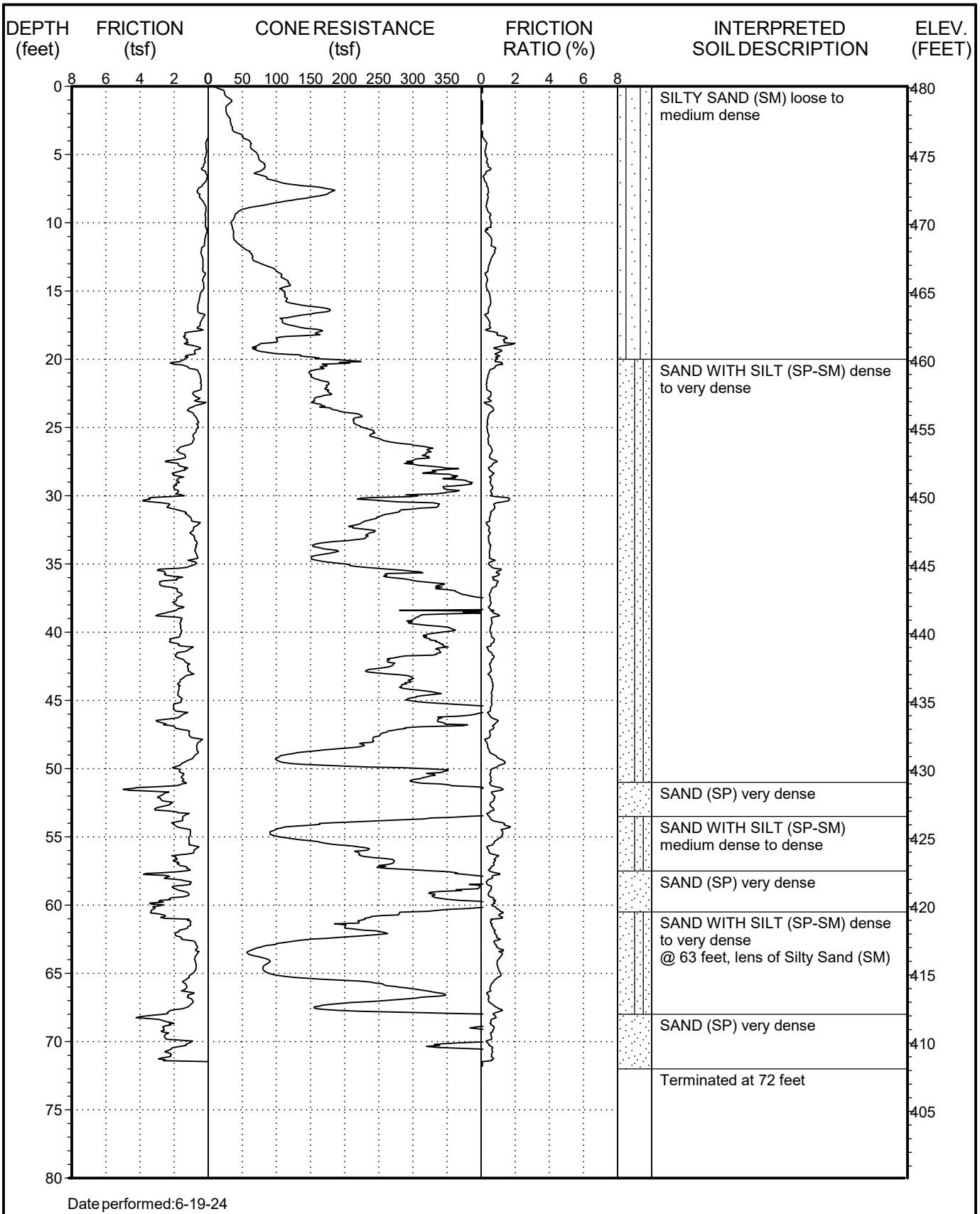
GPI

PROJECT NO.: 3259.I

OAK VALLEY

LOG OF BORING NO. BR-4

FIGURE 3



Date performed:6-19-24

This summary applies only at the location of this cone penetration test and at the time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The interpreted soil description is derived from the friction ratio and cone resistance and is a simplification of actual conditions encountered.

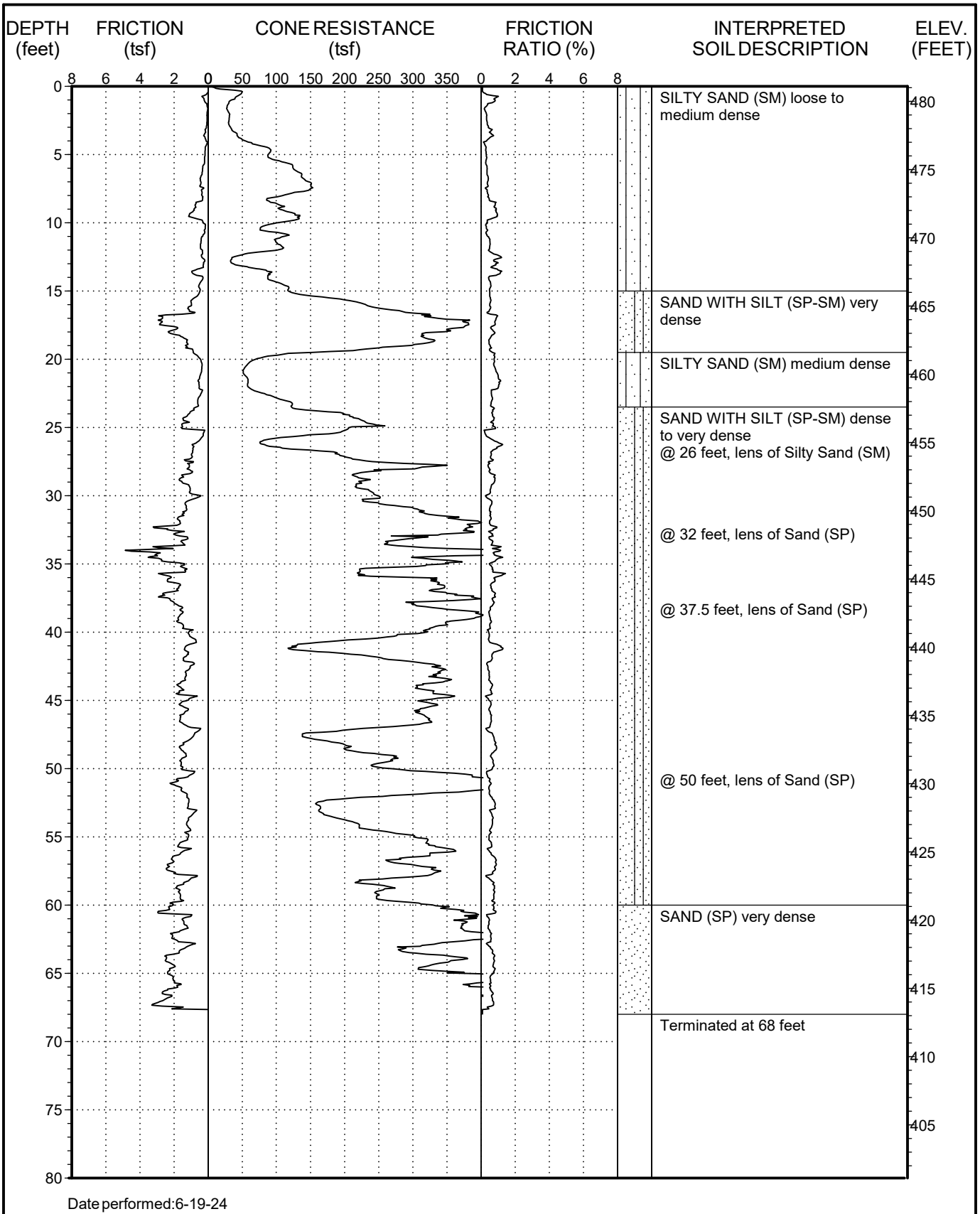
GPI

PROJECT NO.: 3259.I

OAK VALLEY

LOG OF CPT NO. C-3

FIGURE 4



Date performed:6-19-24

This summary applies only at the location of this cone penetration test and at the time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The interpreted soil description is derived from the friction ratio and cone resistance and is a simplification of actual conditions encountered.

GPI

PROJECT NO.: 3259.I

OAK VALLEY

LOG OF CPT NO. C-4

FIGURE 5

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

N/A

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

N/A

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

Undeveloped Portion (Temp Desilting Basin B)

Flow Rate for 10 year 6 hour storm

Q=CIA	C=	0.9	(undeveloped w/ no infiltration)
	I=	0.352	in/hr ([10 yr. 6 hr storm])
	A=	2.3	ac
	Q=	0.73	cfs

Minimum surface area for trapping soil particles (3 ft. min depth/5 ft. max depth)

$A_s=(1.2Q)/V_s$	V_s=	0.00028	(particle size of 0.01 mm at 68°F)
	A_s=	3122.74	sq. ft.

Undeveloped Portion (Temp Desilting Basin A)

Flow Rate for 10 year 6 hour storm

Q=CIA	C=	0.9	(undeveloped w/ no infiltration)
	I=	0.352	in/hr ([10 yr. 6 hr storm])
	A=	0.8	ac
	Q=	0.25	cfs

Minimum surface area for trapping soil particles (3 ft. min depth/5 ft. max depth)

$A_s=(1.2Q)/V_s$	V_s=	0.00028	(particle size of 0.01 mm at 68°F)
	A_s=	1086.17	sq. ft.

R 07 W | R 06 W | R 05 W | R 04 W | R 03 W | R 02 W | R 01 W | R 01 E | R 02 E | R 03 E | R 04 E | R 05 E

T 01 S | T 02 S | T 03 S | T 04 S | T 05 S | T 06 S | T 07 S | T 08 S

SITE
P=0.804"

0.85 MiraLoma
0.61 RiversideNorth
0.54 RiversideSouth
0.68 PigeonPass
0.66 MorenoEast
0.85 Beaumont
0.88 PradoDam
0.51 Woodcrest
0.50 LakeMathews
0.68 PerrisReservoir
0.70 SanJacintoNWS
0.87 VistaGrandeGS
1.18 Idyllwild
0.58 SunCity
0.68 Winchester
0.90 HurkeyCreek
0.70 ElsinoreNWS
1.11 ElCarisoStation
0.77 WildomarLaCresta
0.52 SkinnerLake
0.65 Anza
0.77 SantaRosaPlateau
1.00 TemeculaNWS
0.64 AguangaValley

Santa Ana River Watershed

Santa Margarita Watershed

JURUPA VALLEY | EASTVALE | NORCO | CORONA | RIVERSIDE | MORENO VALLEY | CALIMESA | BEAUMONT | SAN JACINTO | PERRIS | HEMET | CANYON LAKE | LAKE ELSINORE | MENIFEE | WILDOMAR | MURRIETA | TEMECULA

06	05	04	03	02	01
07	08	09	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

N

Rain Gage Locations

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Isohyetal Map for the 85th Percentile 24 hour Storm Event

July 2011

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name: DRC Engineering Inc. | Date: 2/28/2025

Designed by: YH | Case No:

Company Project Number/Name: OAK VALLEY VILLAGE

BMP Identification

BMP NAME / ID: Basin 'A' (Infiltration basin)

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.804 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
DMA-1 (A1)	*274600*	*Roofs*	*1*	*0.89*	*244943.2*			
DMA-1 (A2)	*771105*	*Concrete or Asphalt*	*1*	*0.89*	*687825.7*			
DMA-1 (A2)	*136078*	*Ornamental Landscaping*	*0.1*	*0.11*	*15030.9*			
	1181783	***Total***		**947799.8**	**0.804**	***63502.6***	**63,558**	

Notes:

DRAW-DOWN TIME CALCULATION

PROJECT: 23-835 OAK VALLEY VILLAGE

PERCOLATION LOCATION: Basin A

Total Storage Volume	Percolation Rate (1)	Factor of Safety	Area (2)	Flow Rate	Draw Down Time	
CF	Inch/Hour		SF	CFS	Hour	
63,558	9	3	5,533	0.38	46.33	< 72 Hours

- - Green Cells are output

Note:

1.) See Appendix C for Percolation Test Results, Unfactored Percoation rate

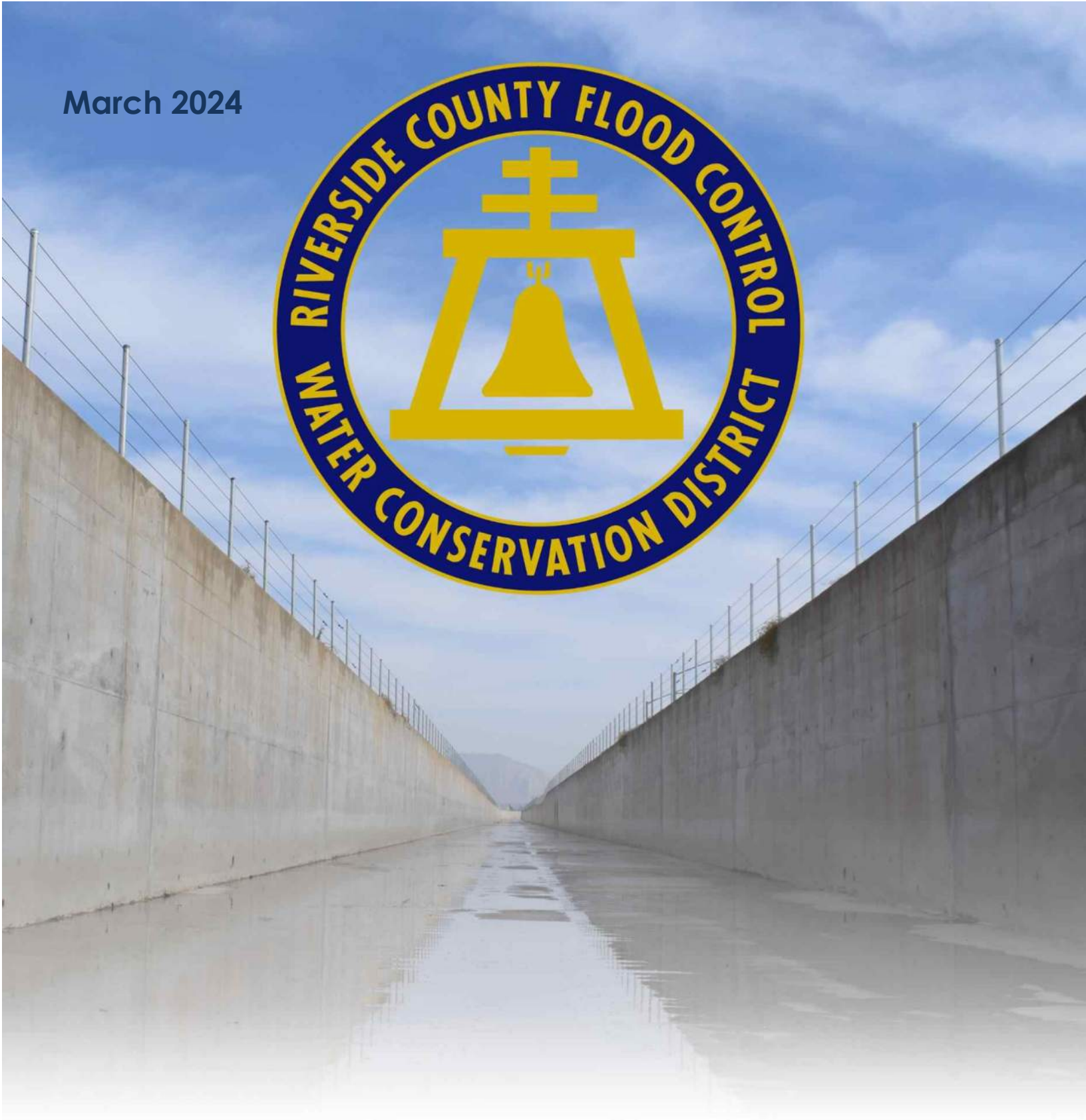
2.) Footprint of proposed bottom of gravel section area (see WQMP Exhibit)

Volume Summary Calculations:

- **Gravel Section Area = 5,533 sf (see WQMP exhibit), V=5,533 sf *8ft*0.4 (Void) = 17,706 cf**
- **Forebay, 4ft deep, volume = 5,244 cf**
- **Aboveground Volume = (5,090 sf + 10,500sf) / 2 * 2.5ft deep = 19,488 cf**
- **Underground R-TANK System Volume = 21,120 CF (NOTE: The R-TANK SYSTEM ONLY FOR TEMPORARY HOLDING THE STORMWATER PURPOSE, NOT FOR WATER QUALITY TREATMENT)**
  Note: Total Volume R-Tank System Provided = 29,809 CF.

  Total Volume Provided = 63,558 CF

March 2024



Hydraulic Design Manual

for Riverside County Flood Control and Water Conservation District

Jason E. Uhley
General Manager - Chief Engineer

10.3.3.3 Spillway Bollards

Where a basin has the potential to receive floating debris, the engineer should consider whether bollards should be installed to trap floating debris within the basin and prevent such material from being conveyed over the spillway, potentially causing downstream impacts. See Section 11.3.2 for more information.

10.3.3.4 Downstream of the Spillway

Emergency escape flow path for any water over the spillway shall be determined. To prevent flood damage to proposed and existing structures, all structures along the emergency escape path shall be protected from flooding by either properly elevating the finished floor in relation to the flow path, or by making sure the structures are setback to provide adequate flow though area in the event the emergency escape of the stormwater runoff is necessary.

Energy dissipation shall be provided at the outside toe of spillway where spillway is in an embankment condition. Otherwise, erosion control measures shall be provided.

10.3.4 Side Slopes

1. Interior and exterior basin slopes shall be 3:1 or flatter.
    - If there are secondary or recreational uses intended, additional constraints may be required by others such as fences, milder slopes, or surfacing.
2. The geotechnical report must specifically address and support basin design, including at minimum the following:
    - Stability of cut/fill and embankment slopes under both in-situ and saturated conditions that can result from the basin-full condition
    - Embankment material requirements and suitability of onsite soils

10.3.5 Basin Floor

1. Minimum bottom footprint of a basin shall be sufficient for the invert maintenance roads described in Section 10.3.11.
2. The basin floor must have positive drainage, be sloped at minimum 2% toward the outlet, and 2% laterally toward the low flow if one is provided. This requirement does not apply to retention basins.
3. A low-flow channel, if required, shall not be placed adjacent to embankments. The low flow channel may either be unlined or lined depending on whether incidental infiltration is desirable. Consult with the maintenance entity to confirm whether a low flow lining is required. If concrete-lined, the lining should be constructed per District Standard Drawing CH333.

10.3.5.1 Dead Storage

Dead storage is created when the outlet to the basin is set higher than the lowest point within the

3.1 INFILTRATION BASIN

Type of BMP	LID - Infiltration
Treatment Mechanisms	Infiltration, Evapotranspiration (when vegetated), Evaporation, and Sedimentation
Maximum Treatment Area	50 acres
Other Names	Bioinfiltration Basin

Description

An Infiltration Basin is a flat earthen basin designed to capture the design capture volume, V_{BMP}. The stormwater infiltrates through the bottom of the basin into the underlying soil over a 72 hour drawdown period. Flows exceeding V_{BMP} must discharge to a downstream conveyance system. Trash and sediment accumulate within the forebay as stormwater passes into the basin. Infiltration basins are highly effective in removing all targeted pollutants from stormwater runoff.

Figure 1 – Infiltration Basin

See Appendix A, and Appendix C, Section 1 of *Basin Guidelines*, for additional requirements.

Siting Considerations

The use of infiltration basins may be restricted by concerns over ground water contamination, soil permeability, and clogging at the site. See the applicable WQMP for any specific feasibility considerations for using infiltration BMPs. Where this BMP is being used, the soil beneath the basin must be thoroughly evaluated in a geotechnical report since the underlying soils are critical to the basin's long term performance. To protect the basin from erosion, the sides and bottom of the basin must be vegetated, preferably with native or low water use plant species.

In addition, these basins may not be appropriate for the following site conditions:

- Industrial sites or locations where spills of toxic materials may occur
- Sites with very low soil infiltration rates
- Sites with high groundwater tables or excessively high soil infiltration rates, where pollutants can affect ground water quality
- Sites with unstabilized soil or construction activity upstream
- On steeply sloping terrain
- Infiltration basins located in a fill condition should refer to Appendix A of this Handbook for details on special requirements/restrictions

Setbacks

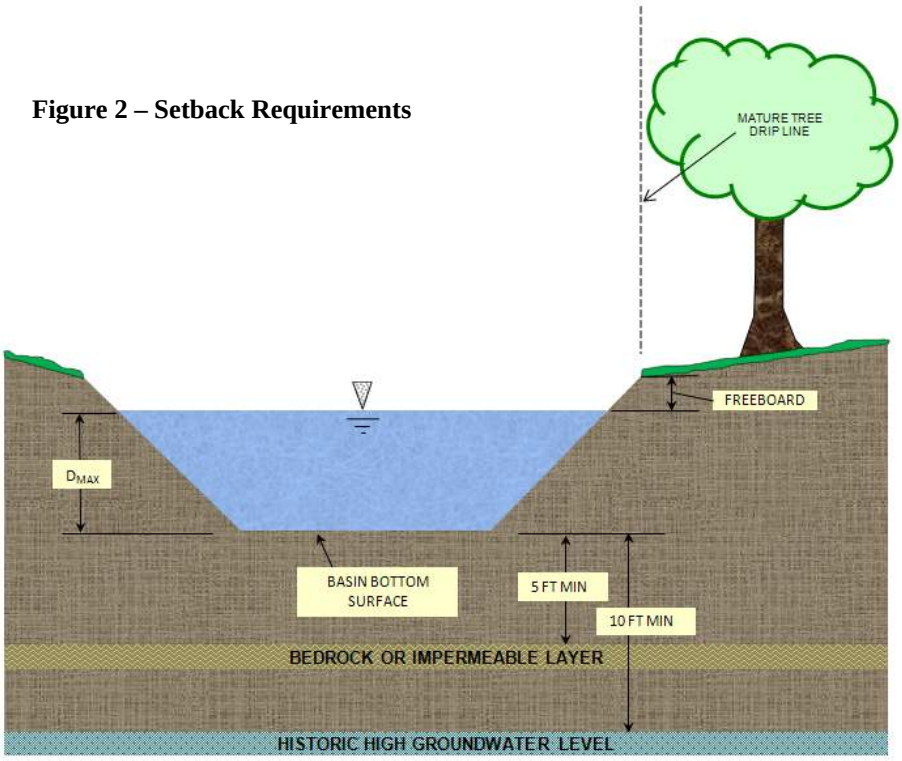
Always consult your geotechnical engineer for site specific recommendations regarding setbacks for infiltration trenches. Recommended setbacks are needed to protect buildings, existing trees, walls, onsite or nearby wells, streams, and tanks. Setbacks should be considered early in the design process since they can affect where infiltration facilities may be placed and how deep they are allowed to be. For instance, depth setbacks can dictate fairly shallow facilities that will have a larger footprint and, in some cases, may make an infiltration basin infeasible. In that instance, another BMP must be selected.

Infiltration basins typically must be set back:

- 10 feet from the historic high groundwater (measured vertically from the bottom of the basin, as shown in Figure 2)
- 5 feet from bedrock or impermeable surface layer (measured vertically from the bottom of the basin, as shown in Figure 2)
- From all existing mature tree drip lines as indicated in Figure 2 (to protect their root structure)
- 100 feet horizontally from wells, tanks or springs

Setbacks to walls and foundations must be included as part of the Geotechnical Report. All other setbacks shall be in accordance with applicable standards of the District's *Basin Guidelines* (Appendix C).

Figure 2 – Setback Requirements



Forebay

A concrete forebay shall be provided to reduce sediment clogging and to reduce erosion. The forebay shall have a design volume of at least 0.5% V_{BMP} and a minimum 1 foot high concrete splashwall / berm. Full height notch-type weir(s), offset from the line of flow from the basin inlet to prevent short circuiting, shall be used to outlet the forebay. It is recommended that two weirs be used and that they be located on opposite sides of the forebay (see Figure 2).

Overflow

Flows exceeding V_{BMP} must discharge to an acceptable downstream conveyance system. Where an adequate outlet is present, an overflow structure may be used. Where an embankment is present, an emergency spillway may be used instead. Overflows must be placed just above the design water surface for V_{BMP} and be near the outlet of the system. The overflow structure shall be similar to the District's Standard Drawing CB 110. Additional details may be found in the District's *Basin Guidelines* (Appendix C).

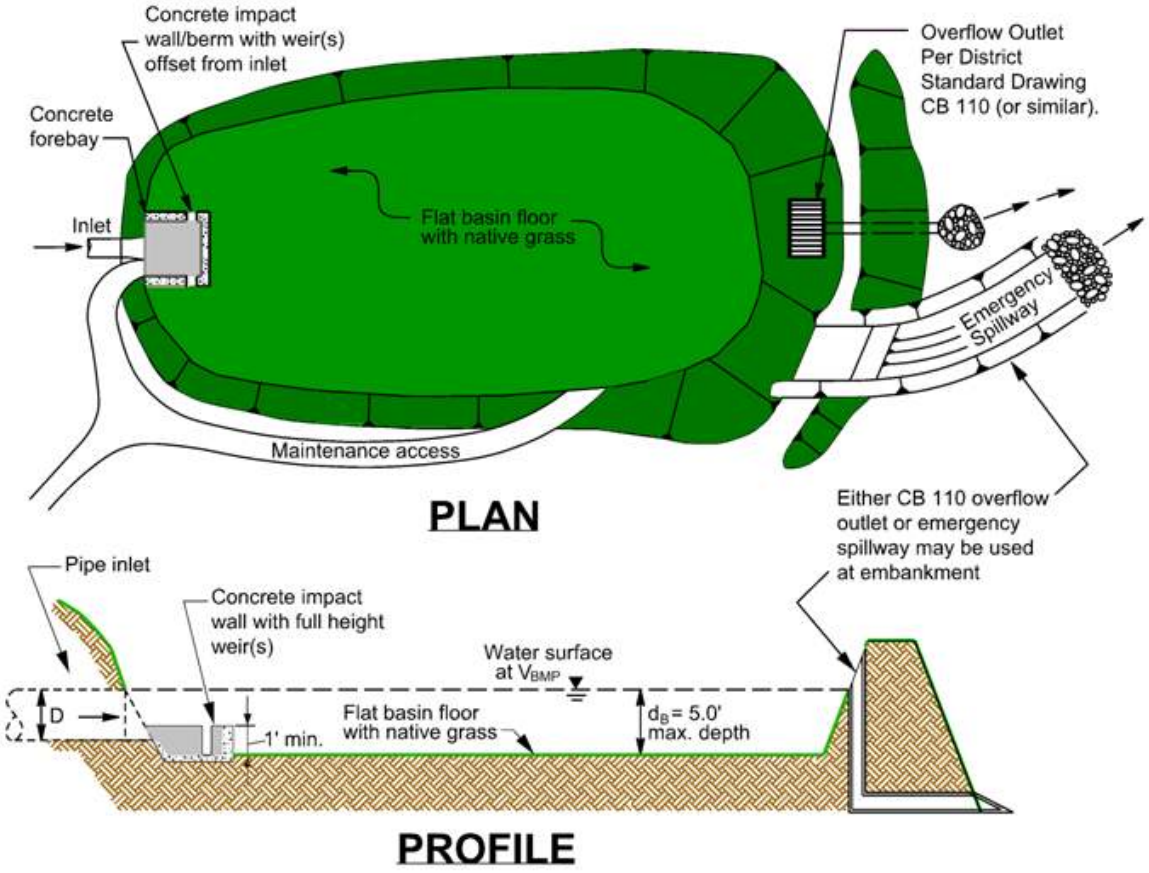


Figure 3 – Infiltration Basin

Landscaping Requirements

Basin vegetation provides erosion protection, improves sediment removal and assists in allowing infiltration to occur. The basin surface and side slopes shall be planted with native grasses. Proper landscape management is also required to ensure that the vegetation does not contribute to water pollution through pesticides, herbicides, or fertilizers. Landscaping shall be in accordance with County of Riverside Ordinance 859 and the District's *Basin Guidelines* (Appendix C), or other guidelines issued by the Engineering Authority.

Maintenance

Normal maintenance of an infiltration basin includes the maintenance of landscaping, debris and trash removal from the surface of the basin, and tending to problems associated with standing water (vectors, odors, etc.). Significant ponding, especially more than 72 hours after an event, may indicate that the basin surface is no longer providing sufficient infiltration and requires aeration. See the District's *Basin Guidelines* (Appendix C) for additional requirements (i.e., fencing, maintenance access, etc.).

Table 1 - Inspection and Maintenance

Schedule	Inspection and Maintenance Activity
Ongoing including just before annual storm seasons and following rainfall events.	• Maintain vegetation as needed. Use of fertilizers, pesticides and herbicides should be strenuously avoided to ensure they don't contribute to water pollution. If appropriate native plant selections and other IPM methods are used, such products shouldn't be needed. If such projects are used, o Products shall be applied in accordance with their labeling, especially in relation to application to water, and in areas subjected to flooding. o Fertilizers should not be applied within 15 days before, after, or during the rain season. • Remove debris and litter from the entire basin to minimize clogging and improve aesthetics. • Check for obvious problems and repair as needed. Address odor, insects, and overgrowth issues associated with stagnant or standing water in the basin bottom. There should be no long-term ponding water. • Check for erosion and sediment laden areas in the basin. Repair as needed. Clean forebay if needed. • Revegetate side slopes where needed.
Annually. If possible, schedule these inspections within 72 hours after a significant rainfall.	• Inspection of hydraulic and structural facilities. Examine the inlet for blockage, the embankment and spillway integrity, as well as damage to any structural element. • Check for erosion, slumping and overgrowth. Repair as needed. • Check basin depth for sediment build up and reduced total capacity. Scrape bottom as needed and remove sediment. Restore to original cross-section and infiltration rate. Replant basin vegetation. • Verify the basin bottom is allowing acceptable infiltration. Use a disc or other method to aerate basin bottom only if there is actual significant loss of infiltrative capacity, rather than on a routine basis[1]. • No water should be present 72 hours after an event. No long term standing water should be present at all. No algae formation should be visible. Correct problem as needed.

1. **CA Stormwater BMP Handbook for New Development and Significant Redevelopment**

Table 2 - Design and Sizing Criteria for Infiltration Basins

Design Parameter	Infiltration Basin
Design Volume	V_{BMP}
Forebay Volume	0.5% V_{BMP}
Drawdown time (maximum)	72 hours
Maximum tributary area	50 acres [2]
Minimum infiltration rate	Must be sufficient to drain the basin within the required Drawdown time over the life of the BMP. The WQMP may include specific requirements for minimum tested infiltration rates.
Maximum Depth	5 feet
Spillway erosion control	Energy dissipators to reduce velocities[1]
Basin Slope	0%
Freeboard (minimum)	1 foot [1]
Historic High Groundwater Setback (max)	10 feet
Bedrock/impermeable layer setback (max)	5 feet
Tree setbacks	Mature tree drip line must not overhang the basin
Set back from wells, tanks or springs	100 feet
Set back from foundations	As recommended in Geotechnical Report

1. **Ventura County's Technical Guidance Manual for Stormwater Quality Control Measures**
2. **CA Stormwater BMP Handbook for New Development and Significant Redevelopment**

Note: The information contained in this BMP Factsheet is intended to be a summary of design considerations and requirements. Additional information which applies to all detention basins may be found in the District's Basin Guidelines (Appendix C). In addition, information herein may be superseded by other guidelines issued by the co-permittee.

INFILTRATION BASIN SIZING PROCEDURE

1. Find the Design Volume, V_{BMP}.
   a) Enter the Tributary Area, $A_{T.}$
   b) Enter the Design Volume, V_{BMP}, determined from Section 2.1 of this Handbook.
2. Determine the Maximum Depth.
   a) Enter the infiltration rate. The infiltration rate shall be established as described in Appendix A: "Infiltration Testing".
   b) Enter the design Factor of Safety from Table 1 in Appendix A: "Infiltration Testing".
   c) The spreadsheet will determine D_1, the maximum allowable depth of the basin based on the infiltration rate along with the maximum drawdown time (72 hours) and the Factor of Safety.

$$D_1 = [(t) \times (I)] / 12s$$

Where I = site infiltration rate (in/hr)
s = safety factor
t = drawdown time (maximum 72 hours)

d) Enter the depth of freeboard.

e) Enter the depth to the historic high groundwater level measured from the top of the basin.

f) Enter the depth to the top of bedrock or other impermeable layer measured from the finished grade.

g) The spreadsheet will determine D_2, the total basin depth (including freeboard, if used) of the basin, based on restrictions to the depth by groundwater and an impermeable layer.

D_2 = Depth to groundwater – (10 + freeboard) (ft);

or

D_2 = Depth to impermeable layer – (5 + freeboard) (ft)

Whichever is least.

h) The spreadsheet will determine the maximum allowable effective depth of basin, D_{MAX}, based on the smallest value between D_1 and D_2. D_{MAX} is the maximum depth of water only and does not include freeboard. D_{MAX} shall not exceed 5 feet.

3. Basin Geometry

a) Enter the basin side slopes, z (no steeper than 4:1).

Use 3:1 per latest Riverside Flood Control District Hydraulic Design Manual, Dated March 27, 2024, Section 10.3.4 Side Slopes for basin, the side slopes shall be no steeper to 3:1 slope. Per meeting with City of Beaumont on February 27, 2024. 3:1 side slope is acceptable.

b) Enter the proposed basin depth, d_B excluding freeboard.

c) The spreadsheet will determine the minimum required surface area of the basin:

$$A_s = V_{BMP} / d_B$$

Where A_s = minimum area required (ft^2)
V_{BMP} = volume of the infiltration basin (ft^3)
d_B= proposed depth not to exceed maximum allowable depth, D_{MAX} (ft)

d) Enter the proposed bottom surface area. This area shall not be less than the minimum required surface area.

4. Forebay

A concrete forebay with a design volume of at least 0.5% V_{BMP} and a minimum 1 foot high concrete splashwall shall be provided. Full-height rectangular weir(s) shall be used to outlet the forebay. The weir(s) must be offset from the line of flow from the basin inlet. It is recommended that two weirs be used and that they be located on opposite sides of the forebay (see Figure 2).

a) The spreadsheet will determine the minimum required forebay volume based on 0.5% V_{BMP}.

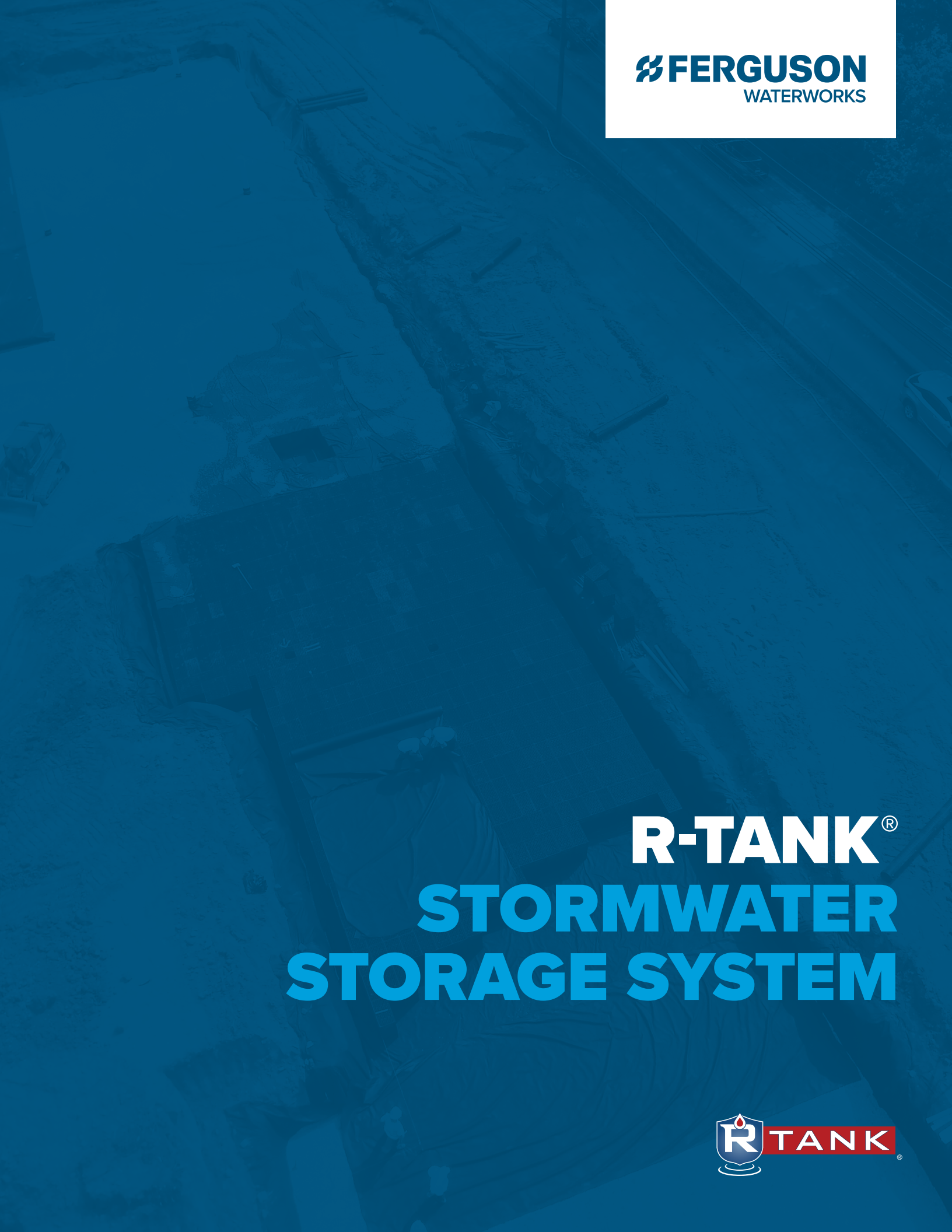
b) Enter the proposed depth of the forebay berm/splashwall (1foot minimum).

c) The spreadsheet will determine the minimum required forebay surface area.

d) Enter the width of rectangular weir to be used (minimum 1.5 inches). Weir width should be established based on a 5 minute drawdown time.

FERGUSON WATERWORKS

R-TANK®
STORMWATER STORAGE SYSTEM



DESIGN CONSIDERATIONS

Many factors will influence the design of the R-Tank system. While this list is not intended to be all-inclusive, the following design considerations are worth highlighting:

CONSTRUCTION LOADS
Construction loads are often the heaviest loads the system will experience. Care must be taken during backfilling and compaction, and post-installation construction traffic should be routed around the system.

BACKFILL MATERIALS
Backfill materials should be angular stone (<1.5" in diameter) or soil (GW, GP, SW or SP per the Unified Soil Classification System). Material must be free from lumps, debris and sharp objects that could cut the geotextile. See the R-Tank narrative specification for additional information.

PRE-TREATMENT
Removing pollutants from runoff before they enter an underground detention system is the smart way to design and build a system. Be sure the system you select will remove heavy sediments, gross pollutants (trash) and biodegradable debris.

LATERAL LOADS
As systems get deeper, the loads acting on the sides of the tank will increase. While vertical loads often control the design, lateral loads should also be considered.

LOAD MODELING
A safety factor of >1.75 is required when designing an R-Tank System using the AASHTO LRFD Bridge Design Specifications. It is also necessary to run your own loading model with site-specific requirements.

R-TANK MODULES
Selecting the right module for your application is critical. See page 3 for an introduction to our solutions. Our team is also here to help you choose what's best for your project.

RUNOFF REDUCTION
Most designs incorporate an outlet to drain the system at a controlled rate and/or an overflow to prevent flooding in extreme events. Any infiltration that can be achieved on the site should also be taken advantage of. Consider raising the invert of your outlet or creating a sump to capture and infiltrate the water quality volume whenever possible.

WATER TABLE
While installing R-Tank below the water table is manageable, a stable base must be created to support the system. A liner can be used to prevent groundwater from entering the system if measures are taken to prevent the system from floating.

R-TANK SPECIFICATIONS

SPECIFICATIONS					
		HD	SD	MD	UD
Item	**Description**	**Value**	**Value**	**Value**	**Value**
Minimum Height	Shortest unit height	17.32"	9.45"	16.93"	14.17"
Maximum Height	Tallest combined height	83.46"	87.48"	79.92"	80.30"
Void Area	Volume available for water storage	95%	95%	95%	95%
Surface Area Void	% of exterior available for infiltration	90%	90%	90%	90%
Vertical Compressive Strength	ASTM D 2412/ASTM F 2318	33.0 psi	42.0 psi	65.0 psi	134.0 psi
Lateral Compressive Strength	ASTM D 2412/ASTM F 2318	20.0 psi	22.0 psi	35.0 psi	19.0 psi
Unit Weight	Weight of plastic per cubic foot of tank	3.62 lbs/cf	3.96 lbs/cf	3.53 lbs/cf	4.33 lbs/cf
Service Temperature	Safe temperature range for use	-14 to 1 67° F	-14 to 167° F	-14 to 167° F	-14 to 167° F
Recycled Content	Use of recycled polypropylene	100%	100%	100%	100%
Minimum Cover	Cover required for HS-20 loading	20"	18"	15"	12"
Maximum Cover	Cover required for HS-25 loading	24"	21"	18"	15"
Maximum Cover	Maximum allowable cover depth	6.99'	9.99'	9.99'	6.99'

R-TANK

BENEFITS

HIGH CAPACITY AND STRENGTH
- 95% internal void
- Supports traffic loading
- Module options for HS-20 and HS-25 rating with cover depths from 12" to 10'

DESIGN AND CONSTRUCTION VERSATILITY
- Modules can be combined into various shapes to use space efficiently and effectively
- Module heights vary from 9" to 7'

INCREASED INFILTRATION AND EXFILTRATION
- 90% surface open area to promote infiltration
- Increases groundwater recharge, reducing post-construction discharge volumes

EASY TO TRANSPORT
- Can be supplied preassembled or unassembled to reduce delivery costs

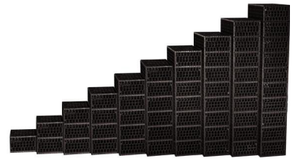
LIGHTWEIGHT AND QUICK TO INSTALL
- Installed by hand; no cranes required
- Reduces site access delays

RECYCLED CONTENT
- Manufactured with post-industrial recycled polypropylene

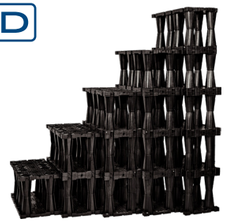
PRODUCTS

R-TANK HD
- Heavy-duty module (33 psi)
- 20" minimum cover
- 84" maximum cover
- Five internal plates
- Standard module for traffic applications

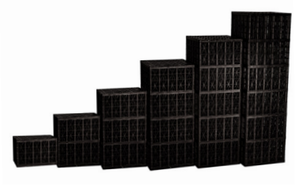
R-TANK SD
- Super-duty module (42 psi)
- Increased lateral strength (22 psi)
- 18" minimum cover
- 120" maximum cover
- Higher safety factors for loading



R-TANK MD
- Mega-duty module (65 psi)
- Exceptional lateral strength (35 psi)
- 15" minimum cover
- 120" maximum cover
- Improved vertical and lateral performance



R-TANK UD
- Ultra-duty module (134 psi)
- Superior lateral strength (19 psi)
- 12" minimum cover
- 84" maximum cover
- Unmatched load support unit



CREATIVE STORMWATER INFRASTRUCTURE APPLICATIONS

ENHANCING GREEN INFRASTRUCTURE

R-Tank is a popular option for stormwater storage in urban linear street applications, enhancing storage capacity in tight spaces. Ferguson offers a series of innovative stormwater filtration media and permeable/porous surfaces that can be strategically combined with R-Tank. This combination creates complete systems that provide water quality while maximizing the volume of runoff stored below.

PRE-TREATMENT USING FILTERS AND SCREENS

Ferguson partners with manufacturers of filtration and screening technologies to reduce the potential for trash and debris to enter underground systems like R-Tank. From including gross-sediment removal devices with R-Tank systems to specific pollutant inlet filters, Ferguson offers a complete selection of decentralized pre-treatment devices.

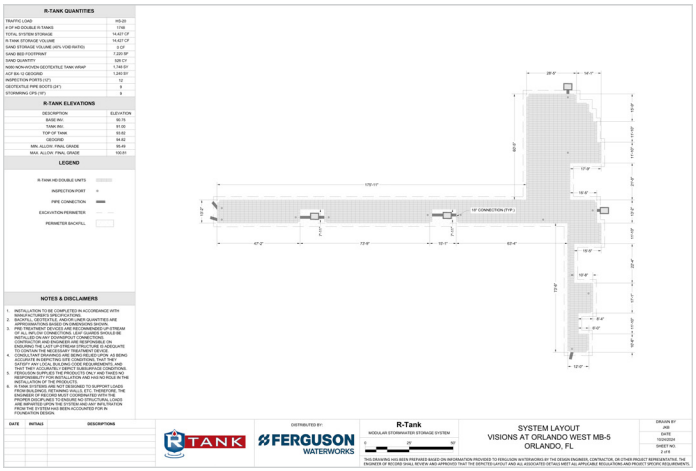
PARTNERING WITH HARVESTING SYSTEMS

Through a partnership with Greyter® Water Systems, Ferguson offers innovative stormwater harvesting solutions for greywater and irrigation applications. Combining an R-Tank system with a Greyter treatment and harvesting system allows properties to reduce their potable water demand by reusing stormwater for applications from toilets to vegetation irrigation.

R-TANK SUPPORT SERVICES

Our regional engineers and designers are experts in both local regulations and innovative urban green street applications and can help develop site-specific solutions using one or a combination of our products. Our team produces high-quality custom layouts and details to support your permitting and construction efforts. From AutoCAD to HydroCAD, we have a variety of design tools to help you move through the permitting process efficiently.

R-TANK®



Contact your local sales associate or visit **FERGUSONWATERWORKS.COM** to get started.

FERGUSON WATERWORKS

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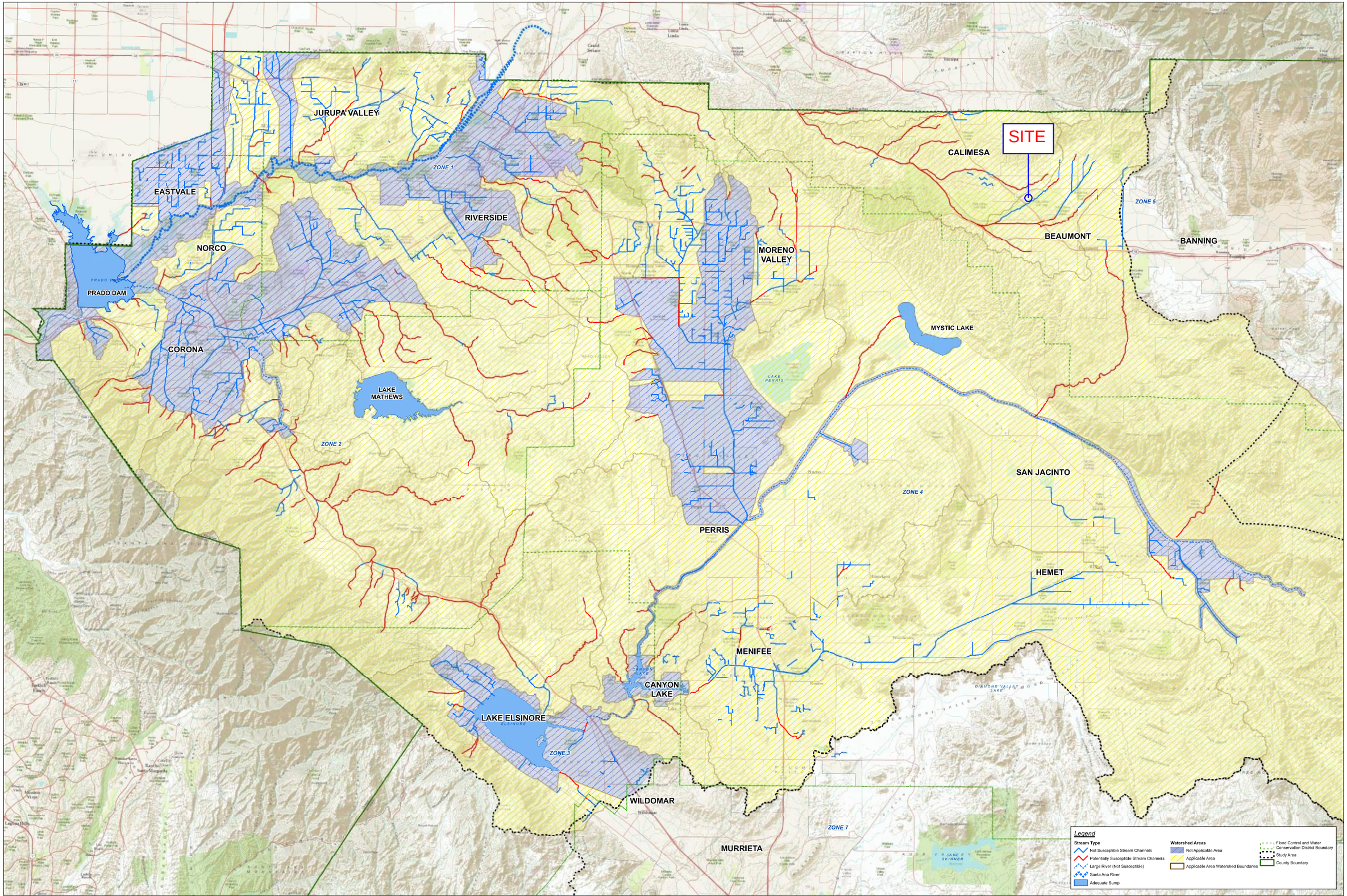
Appendix 7: Hydromodification

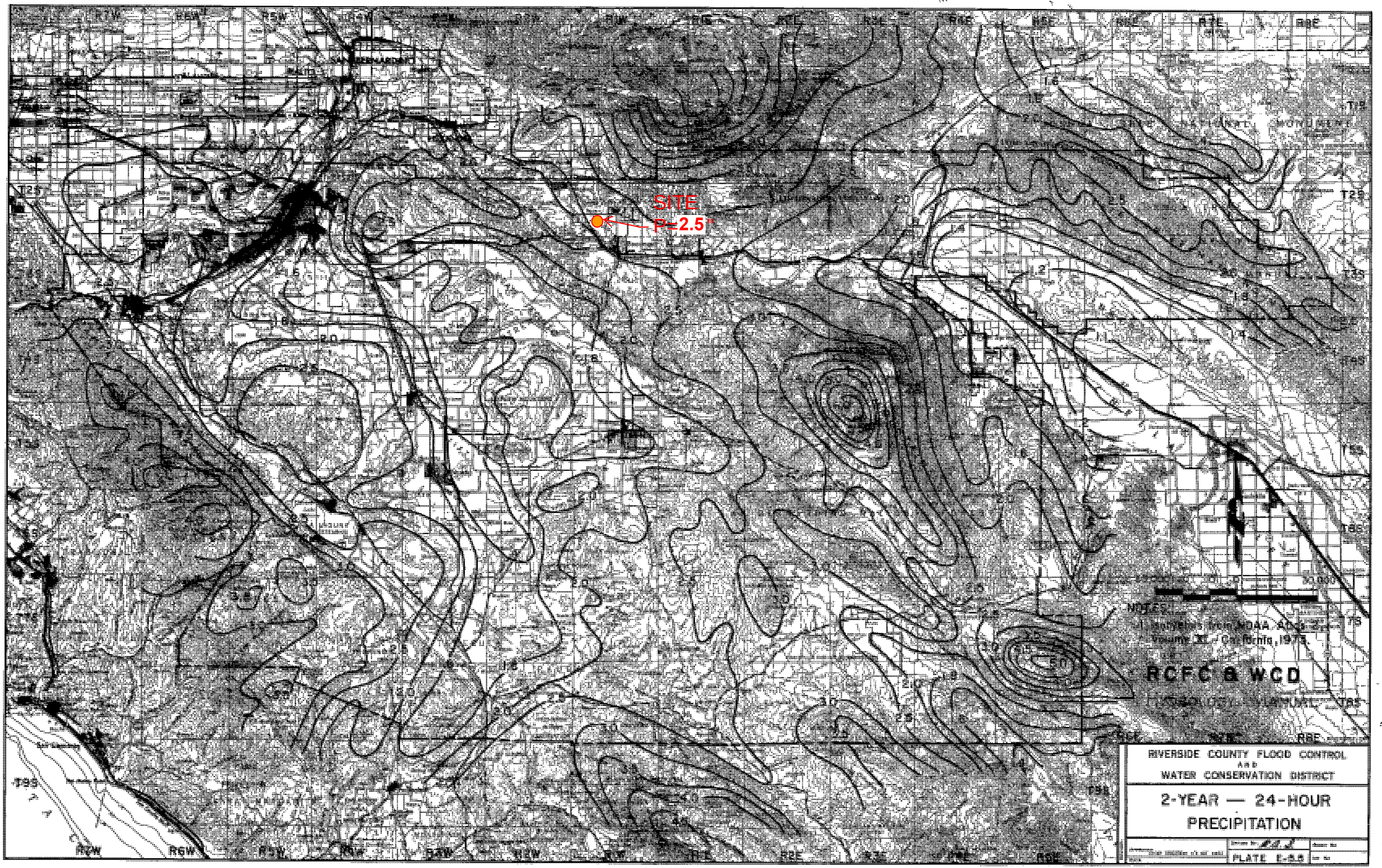
Supporting Detail Relating to Hydrologic Conditions of Concern



HCOC Applicability Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

Map 2


SITE
P=2.5"
RCFC & WCD
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
2-YEAR — 24-HOUR
PRECIPITATION
PLATE E-5.5

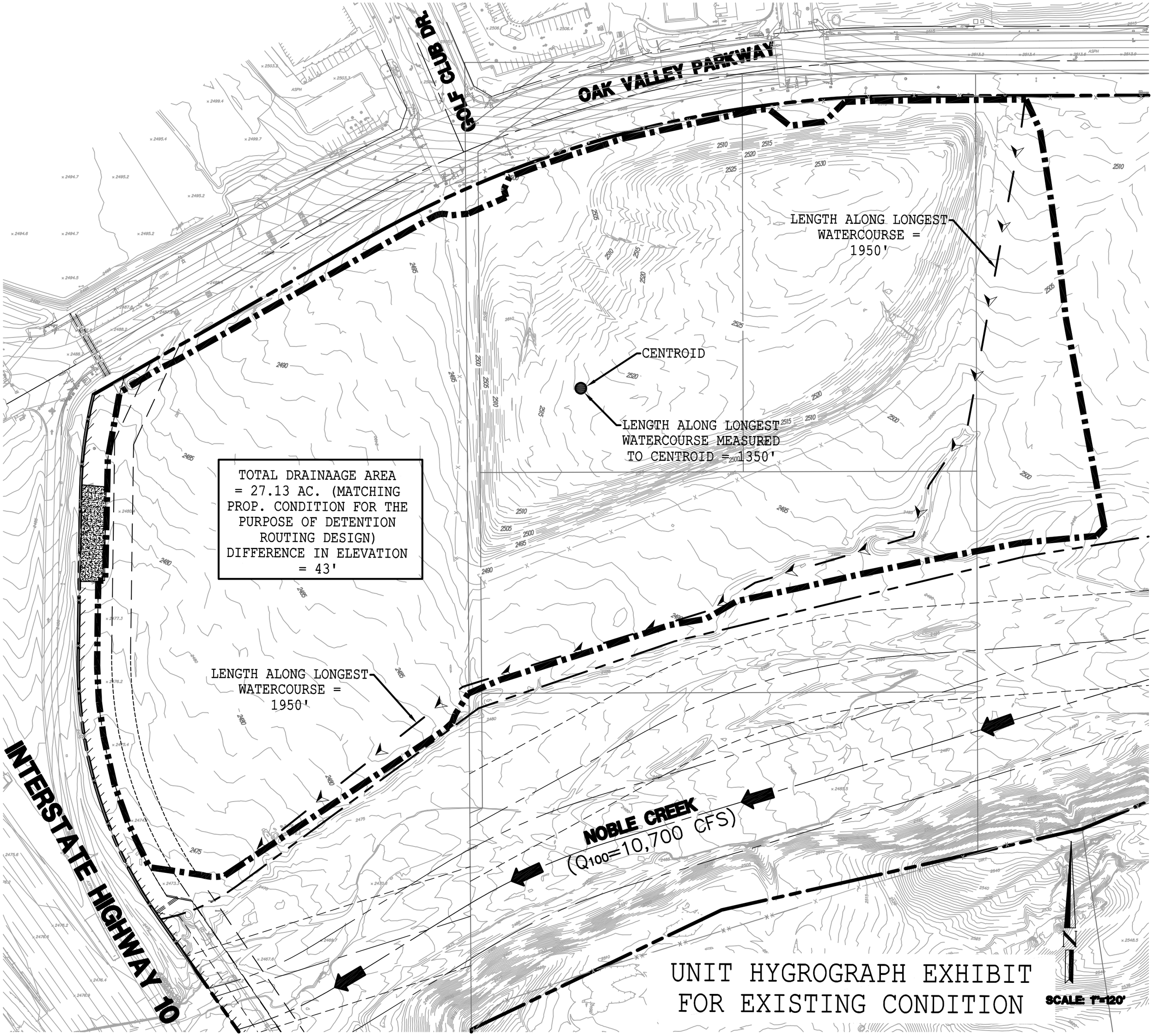
Hydromodification per WQMP requirement: The project shall also propose to meet HCOC criteria below: Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Compare Pre and Post Developed Conditions				
Basin	Pre-Development (2-Year 24-Hour), CFS	Maximum Outflow (cfs) = 110% * Pre-Development Flow Rate	Post-Development (2-Year 24-Hour), CFS	Outflow after `Routing (CFS)
A	1.85	2.02	6.50	2.02*

**Maximum 2-year 24-hour outflow is less than 110% of pre-development 2-year, 24-hour storm event.*

BASIN A

Unit Hydrograph
Existing Condition



UNIT HYGROGRAPH EXHIBIT FOR EXISTING CONDITION

SCALE: 1"=120'

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 05/01/25 File: 3385E2242.out

2-YEAR
24-HOUR

++

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

23-835 OAK VALLEY VILLAGE
EXISTING CONDITION
2-YEAR CONDITION

Drainage Area = 27.13(Ac.) = 0.042 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 27.13(Ac.) = 0.042 Sq. Mi.
Length along longest watercourse = 1950.00(Ft.)
Length along longest watercourse measured to centroid = 1350.00(Ft.)
Length along longest watercourse = 0.369 Mi.
Length along longest watercourse measured to centroid = 0.256 Mi.
Difference in elevation = 43.00(Ft.)
Slope along watercourse = 116.4308 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.099 Hr.
Lag time = 5.95 Min.
25% of lag time = 1.49 Min.
40% of lag time = 2.38 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
27.13	2.50	67.83

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
27.13	6.50	176.35

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
27.130	67.00	0.010

Total Area Entered = 27.13(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
67.0	47.4	0.597	0.010	0.592	1.000	0.592
					Sum (F) =	0.592

Area averaged mean soil loss (F) (In/Hr) = 0.592
Minimum soil loss rate ((In/Hr)) = 0.296
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.800

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period	(hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	84.078	14.453	3.952
2	0.167	168.156	45.691	12.493
3	0.250	252.234	18.816	5.145
4	0.333	336.312	7.984	2.183
5	0.417	420.390	4.756	1.300
6	0.500	504.468	2.962	0.810
7	0.583	588.546	2.126	0.581
8	0.667	672.624	1.425	0.390
9	0.750	756.702	0.934	0.255
10	0.833	840.780	0.853	0.233
			Sum = 100.000	Sum= 27.342

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.020	(1.050)	0.016	0.004
2	0.17	0.07	0.020	(1.046)	0.016	0.004
3	0.25	0.07	0.020	(1.042)	0.016	0.004
4	0.33	0.10	0.030	(1.037)	0.024	0.006
5	0.42	0.10	0.030	(1.033)	0.024	0.006
6	0.50	0.10	0.030	(1.029)	0.024	0.006
7	0.58	0.10	0.030	(1.025)	0.024	0.006
8	0.67	0.10	0.030	(1.021)	0.024	0.006
9	0.75	0.10	0.030	(1.017)	0.024	0.006
10	0.83	0.13	0.040	(1.013)	0.032	0.008
11	0.92	0.13	0.040	(1.009)	0.032	0.008
12	1.00	0.13	0.040	(1.005)	0.032	0.008
13	1.08	0.10	0.030	(1.001)	0.024	0.006
14	1.17	0.10	0.030	(0.997)	0.024	0.006
15	1.25	0.10	0.030	(0.994)	0.024	0.006
16	1.33	0.10	0.030	(0.990)	0.024	0.006
17	1.42	0.10	0.030	(0.986)	0.024	0.006
18	1.50	0.10	0.030	(0.982)	0.024	0.006
19	1.58	0.10	0.030	(0.978)	0.024	0.006
20	1.67	0.10	0.030	(0.974)	0.024	0.006
21	1.75	0.10	0.030	(0.970)	0.024	0.006
22	1.83	0.13	0.040	(0.966)	0.032	0.008
23	1.92	0.13	0.040	(0.962)	0.032	0.008
24	2.00	0.13	0.040	(0.958)	0.032	0.008
25	2.08	0.13	0.040	(0.954)	0.032	0.008
26	2.17	0.13	0.040	(0.951)	0.032	0.008
27	2.25	0.13	0.040	(0.947)	0.032	0.008
28	2.33	0.13	0.040	(0.943)	0.032	0.008
29	2.42	0.13	0.040	(0.939)	0.032	0.008
30	2.50	0.13	0.040	(0.935)	0.032	0.008
31	2.58	0.17	0.050	(0.931)	0.040	0.010
32	2.67	0.17	0.050	(0.927)	0.040	0.010
33	2.75	0.17	0.050	(0.924)	0.040	0.010
34	2.83	0.17	0.050	(0.920)	0.040	0.010
35	2.92	0.17	0.050	(0.916)	0.040	0.010
36	3.00	0.17	0.050	(0.912)	0.040	0.010
37	3.08	0.17	0.050	(0.909)	0.040	0.010
38	3.17	0.17	0.050	(0.905)	0.040	0.010
39	3.25	0.17	0.050	(0.901)	0.040	0.010
40	3.33	0.17	0.050	(0.897)	0.040	0.010
41	3.42	0.17	0.050	(0.893)	0.040	0.010
42	3.50	0.17	0.050	(0.890)	0.040	0.010
43	3.58	0.17	0.050	(0.886)	0.040	0.010
44	3.67	0.17	0.050	(0.882)	0.040	0.010
45	3.75	0.17	0.050	(0.879)	0.040	0.010
46	3.83	0.20	0.060	(0.875)	0.048	0.012
47	3.92	0.20	0.060	(0.871)	0.048	0.012
48	4.00	0.20	0.060	(0.867)	0.048	0.012
49	4.08	0.20	0.060	(0.864)	0.048	0.012
50	4.17	0.20	0.060	(0.860)	0.048	0.012
51	4.25	0.20	0.060	(0.856)	0.048	0.012
52	4.33	0.23	0.070	(0.853)	0.056	0.014

53	4.42	0.23	0.070	(0.849)	0.056	0.014
54	4.50	0.23	0.070	(0.846)	0.056	0.014
55	4.58	0.23	0.070	(0.842)	0.056	0.014
56	4.67	0.23	0.070	(0.838)	0.056	0.014
57	4.75	0.23	0.070	(0.835)	0.056	0.014
58	4.83	0.27	0.080	(0.831)	0.064	0.016
59	4.92	0.27	0.080	(0.827)	0.064	0.016
60	5.00	0.27	0.080	(0.824)	0.064	0.016
61	5.08	0.20	0.060	(0.820)	0.048	0.012
62	5.17	0.20	0.060	(0.817)	0.048	0.012
63	5.25	0.20	0.060	(0.813)	0.048	0.012
64	5.33	0.23	0.070	(0.810)	0.056	0.014
65	5.42	0.23	0.070	(0.806)	0.056	0.014
66	5.50	0.23	0.070	(0.803)	0.056	0.014
67	5.58	0.27	0.080	(0.799)	0.064	0.016
68	5.67	0.27	0.080	(0.796)	0.064	0.016
69	5.75	0.27	0.080	(0.792)	0.064	0.016
70	5.83	0.27	0.080	(0.789)	0.064	0.016
71	5.92	0.27	0.080	(0.785)	0.064	0.016
72	6.00	0.27	0.080	(0.782)	0.064	0.016
73	6.08	0.30	0.090	(0.778)	0.072	0.018
74	6.17	0.30	0.090	(0.775)	0.072	0.018
75	6.25	0.30	0.090	(0.771)	0.072	0.018
76	6.33	0.30	0.090	(0.768)	0.072	0.018
77	6.42	0.30	0.090	(0.764)	0.072	0.018
78	6.50	0.30	0.090	(0.761)	0.072	0.018
79	6.58	0.33	0.100	(0.757)	0.080	0.020
80	6.67	0.33	0.100	(0.754)	0.080	0.020
81	6.75	0.33	0.100	(0.751)	0.080	0.020
82	6.83	0.33	0.100	(0.747)	0.080	0.020
83	6.92	0.33	0.100	(0.744)	0.080	0.020
84	7.00	0.33	0.100	(0.740)	0.080	0.020
85	7.08	0.33	0.100	(0.737)	0.080	0.020
86	7.17	0.33	0.100	(0.734)	0.080	0.020
87	7.25	0.33	0.100	(0.730)	0.080	0.020
88	7.33	0.37	0.110	(0.727)	0.088	0.022
89	7.42	0.37	0.110	(0.724)	0.088	0.022
90	7.50	0.37	0.110	(0.720)	0.088	0.022
91	7.58	0.40	0.120	(0.717)	0.096	0.024
92	7.67	0.40	0.120	(0.714)	0.096	0.024
93	7.75	0.40	0.120	(0.711)	0.096	0.024
94	7.83	0.43	0.130	(0.707)	0.104	0.026
95	7.92	0.43	0.130	(0.704)	0.104	0.026
96	8.00	0.43	0.130	(0.701)	0.104	0.026
97	8.08	0.50	0.150	(0.697)	0.120	0.030
98	8.17	0.50	0.150	(0.694)	0.120	0.030
99	8.25	0.50	0.150	(0.691)	0.120	0.030
100	8.33	0.50	0.150	(0.688)	0.120	0.030
101	8.42	0.50	0.150	(0.685)	0.120	0.030
102	8.50	0.50	0.150	(0.681)	0.120	0.030
103	8.58	0.53	0.160	(0.678)	0.128	0.032
104	8.67	0.53	0.160	(0.675)	0.128	0.032
105	8.75	0.53	0.160	(0.672)	0.128	0.032
106	8.83	0.57	0.170	(0.669)	0.136	0.034
107	8.92	0.57	0.170	(0.665)	0.136	0.034
108	9.00	0.57	0.170	(0.662)	0.136	0.034
109	9.08	0.63	0.190	(0.659)	0.152	0.038
110	9.17	0.63	0.190	(0.656)	0.152	0.038
111	9.25	0.63	0.190	(0.653)	0.152	0.038
112	9.33	0.67	0.200	(0.650)	0.160	0.040
113	9.42	0.67	0.200	(0.647)	0.160	0.040
114	9.50	0.67	0.200	(0.644)	0.160	0.040
115	9.58	0.70	0.210	(0.641)	0.168	0.042
116	9.67	0.70	0.210	(0.637)	0.168	0.042
117	9.75	0.70	0.210	(0.634)	0.168	0.042
118	9.83	0.73	0.220	(0.631)	0.176	0.044
119	9.92	0.73	0.220	(0.628)	0.176	0.044
120	10.00	0.73	0.220	(0.625)	0.176	0.044
121	10.08	0.50	0.150	(0.622)	0.120	0.030
122	10.17	0.50	0.150	(0.619)	0.120	0.030
123	10.25	0.50	0.150	(0.616)	0.120	0.030
124	10.33	0.50	0.150	(0.613)	0.120	0.030
125	10.42	0.50	0.150	(0.610)	0.120	0.030
126	10.50	0.50	0.150	(0.607)	0.120	0.030
127	10.58	0.67	0.200	(0.604)	0.160	0.040
128	10.67	0.67	0.200	(0.601)	0.160	0.040
129	10.75	0.67	0.200	(0.598)	0.160	0.040
130	10.83	0.67	0.200	(0.595)	0.160	0.040
131	10.92	0.67	0.200	(0.593)	0.160	0.040

132	11.00	0.67	0.200	(0.590)	0.160	0.040
133	11.08	0.63	0.190	(0.587)	0.152	0.038
134	11.17	0.63	0.190	(0.584)	0.152	0.038
135	11.25	0.63	0.190	(0.581)	0.152	0.038
136	11.33	0.63	0.190	(0.578)	0.152	0.038
137	11.42	0.63	0.190	(0.575)	0.152	0.038
138	11.50	0.63	0.190	(0.572)	0.152	0.038
139	11.58	0.57	0.170	(0.570)	0.136	0.034
140	11.67	0.57	0.170	(0.567)	0.136	0.034
141	11.75	0.57	0.170	(0.564)	0.136	0.034
142	11.83	0.60	0.180	(0.561)	0.144	0.036
143	11.92	0.60	0.180	(0.558)	0.144	0.036
144	12.00	0.60	0.180	(0.555)	0.144	0.036
145	12.08	0.83	0.250	(0.553)	0.200	0.050
146	12.17	0.83	0.250	(0.550)	0.200	0.050
147	12.25	0.83	0.250	(0.547)	0.200	0.050
148	12.33	0.87	0.260	(0.544)	0.208	0.052
149	12.42	0.87	0.260	(0.542)	0.208	0.052
150	12.50	0.87	0.260	(0.539)	0.208	0.052
151	12.58	0.93	0.280	(0.536)	0.224	0.056
152	12.67	0.93	0.280	(0.534)	0.224	0.056
153	12.75	0.93	0.280	(0.531)	0.224	0.056
154	12.83	0.97	0.290	(0.528)	0.232	0.058
155	12.92	0.97	0.290	(0.526)	0.232	0.058
156	13.00	0.97	0.290	(0.523)	0.232	0.058
157	13.08	1.13	0.340	(0.520)	0.272	0.068
158	13.17	1.13	0.340	(0.518)	0.272	0.068
159	13.25	1.13	0.340	(0.515)	0.272	0.068
160	13.33	1.13	0.340	(0.512)	0.272	0.068
161	13.42	1.13	0.340	(0.510)	0.272	0.068
162	13.50	1.13	0.340	(0.507)	0.272	0.068
163	13.58	0.77	0.230	(0.505)	0.184	0.046
164	13.67	0.77	0.230	(0.502)	0.184	0.046
165	13.75	0.77	0.230	(0.499)	0.184	0.046
166	13.83	0.77	0.230	(0.497)	0.184	0.046
167	13.92	0.77	0.230	(0.494)	0.184	0.046
168	14.00	0.77	0.230	(0.492)	0.184	0.046
169	14.08	0.90	0.270	(0.489)	0.216	0.054
170	14.17	0.90	0.270	(0.487)	0.216	0.054
171	14.25	0.90	0.270	(0.484)	0.216	0.054
172	14.33	0.87	0.260	(0.482)	0.208	0.052
173	14.42	0.87	0.260	(0.479)	0.208	0.052
174	14.50	0.87	0.260	(0.477)	0.208	0.052
175	14.58	0.87	0.260	(0.474)	0.208	0.052
176	14.67	0.87	0.260	(0.472)	0.208	0.052
177	14.75	0.87	0.260	(0.470)	0.208	0.052
178	14.83	0.83	0.250	(0.467)	0.200	0.050
179	14.92	0.83	0.250	(0.465)	0.200	0.050
180	15.00	0.83	0.250	(0.462)	0.200	0.050
181	15.08	0.80	0.240	(0.460)	0.192	0.048
182	15.17	0.80	0.240	(0.458)	0.192	0.048
183	15.25	0.80	0.240	(0.455)	0.192	0.048
184	15.33	0.77	0.230	(0.453)	0.184	0.046
185	15.42	0.77	0.230	(0.451)	0.184	0.046
186	15.50	0.77	0.230	(0.448)	0.184	0.046
187	15.58	0.63	0.190	(0.446)	0.152	0.038
188	15.67	0.63	0.190	(0.444)	0.152	0.038
189	15.75	0.63	0.190	(0.442)	0.152	0.038
190	15.83	0.63	0.190	(0.439)	0.152	0.038
191	15.92	0.63	0.190	(0.437)	0.152	0.038
192	16.00	0.63	0.190	(0.435)	0.152	0.038
193	16.08	0.13	0.040	(0.433)	0.032	0.008
194	16.17	0.13	0.040	(0.430)	0.032	0.008
195	16.25	0.13	0.040	(0.428)	0.032	0.008
196	16.33	0.13	0.040	(0.426)	0.032	0.008
197	16.42	0.13	0.040	(0.424)	0.032	0.008
198	16.50	0.13	0.040	(0.422)	0.032	0.008
199	16.58	0.10	0.030	(0.420)	0.024	0.006
200	16.67	0.10	0.030	(0.417)	0.024	0.006
201	16.75	0.10	0.030	(0.415)	0.024	0.006
202	16.83	0.10	0.030	(0.413)	0.024	0.006
203	16.92	0.10	0.030	(0.411)	0.024	0.006
204	17.00	0.10	0.030	(0.409)	0.024	0.006
205	17.08	0.17	0.050	(0.407)	0.040	0.010
206	17.17	0.17	0.050	(0.405)	0.040	0.010
207	17.25	0.17	0.050	(0.403)	0.040	0.010
208	17.33	0.17	0.050	(0.401)	0.040	0.010
209	17.42	0.17	0.050	(0.399)	0.040	0.010
210	17.50	0.17	0.050	(0.397)	0.040	0.010

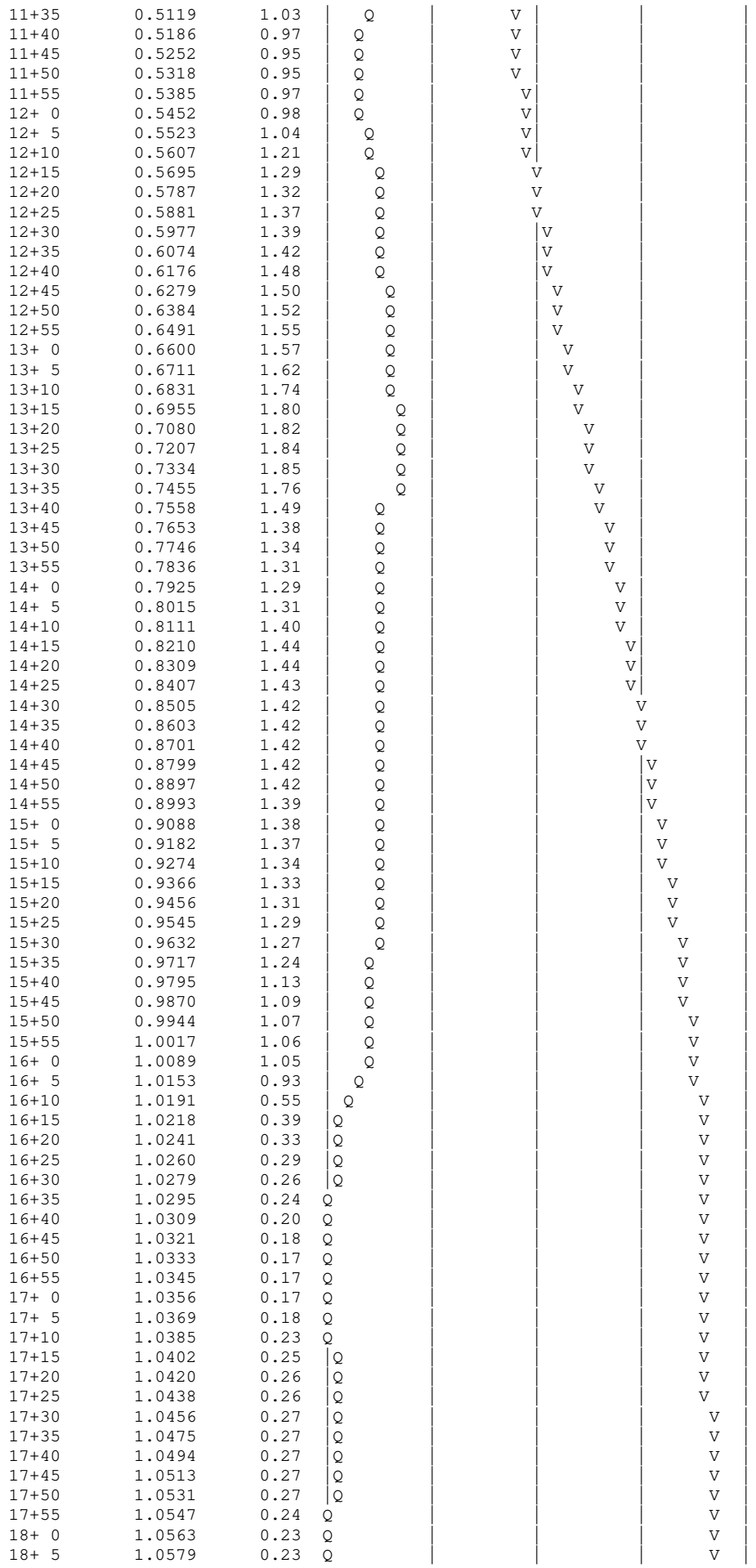
211	17.58	0.17	0.050	(0.395)	0.040	0.010
212	17.67	0.17	0.050	(0.393)	0.040	0.010
213	17.75	0.17	0.050	(0.391)	0.040	0.010
214	17.83	0.13	0.040	(0.389)	0.032	0.008
215	17.92	0.13	0.040	(0.387)	0.032	0.008
216	18.00	0.13	0.040	(0.385)	0.032	0.008
217	18.08	0.13	0.040	(0.383)	0.032	0.008
218	18.17	0.13	0.040	(0.381)	0.032	0.008
219	18.25	0.13	0.040	(0.379)	0.032	0.008
220	18.33	0.13	0.040	(0.378)	0.032	0.008
221	18.42	0.13	0.040	(0.376)	0.032	0.008
222	18.50	0.13	0.040	(0.374)	0.032	0.008
223	18.58	0.10	0.030	(0.372)	0.024	0.006
224	18.67	0.10	0.030	(0.370)	0.024	0.006
225	18.75	0.10	0.030	(0.369)	0.024	0.006
226	18.83	0.07	0.020	(0.367)	0.016	0.004
227	18.92	0.07	0.020	(0.365)	0.016	0.004
228	19.00	0.07	0.020	(0.363)	0.016	0.004
229	19.08	0.10	0.030	(0.362)	0.024	0.006
230	19.17	0.10	0.030	(0.360)	0.024	0.006
231	19.25	0.10	0.030	(0.358)	0.024	0.006
232	19.33	0.13	0.040	(0.357)	0.032	0.008
233	19.42	0.13	0.040	(0.355)	0.032	0.008
234	19.50	0.13	0.040	(0.353)	0.032	0.008
235	19.58	0.10	0.030	(0.352)	0.024	0.006
236	19.67	0.10	0.030	(0.350)	0.024	0.006
237	19.75	0.10	0.030	(0.348)	0.024	0.006
238	19.83	0.07	0.020	(0.347)	0.016	0.004
239	19.92	0.07	0.020	(0.345)	0.016	0.004
240	20.00	0.07	0.020	(0.344)	0.016	0.004
241	20.08	0.10	0.030	(0.342)	0.024	0.006
242	20.17	0.10	0.030	(0.341)	0.024	0.006
243	20.25	0.10	0.030	(0.339)	0.024	0.006
244	20.33	0.10	0.030	(0.338)	0.024	0.006
245	20.42	0.10	0.030	(0.336)	0.024	0.006
246	20.50	0.10	0.030	(0.335)	0.024	0.006
247	20.58	0.10	0.030	(0.334)	0.024	0.006
248	20.67	0.10	0.030	(0.332)	0.024	0.006
249	20.75	0.10	0.030	(0.331)	0.024	0.006
250	20.83	0.07	0.020	(0.329)	0.016	0.004
251	20.92	0.07	0.020	(0.328)	0.016	0.004
252	21.00	0.07	0.020	(0.327)	0.016	0.004
253	21.08	0.10	0.030	(0.326)	0.024	0.006
254	21.17	0.10	0.030	(0.324)	0.024	0.006
255	21.25	0.10	0.030	(0.323)	0.024	0.006
256	21.33	0.07	0.020	(0.322)	0.016	0.004
257	21.42	0.07	0.020	(0.321)	0.016	0.004
258	21.50	0.07	0.020	(0.319)	0.016	0.004
259	21.58	0.10	0.030	(0.318)	0.024	0.006
260	21.67	0.10	0.030	(0.317)	0.024	0.006
261	21.75	0.10	0.030	(0.316)	0.024	0.006
262	21.83	0.07	0.020	(0.315)	0.016	0.004
263	21.92	0.07	0.020	(0.314)	0.016	0.004
264	22.00	0.07	0.020	(0.313)	0.016	0.004
265	22.08	0.10	0.030	(0.312)	0.024	0.006
266	22.17	0.10	0.030	(0.311)	0.024	0.006
267	22.25	0.10	0.030	(0.310)	0.024	0.006
268	22.33	0.07	0.020	(0.309)	0.016	0.004
269	22.42	0.07	0.020	(0.308)	0.016	0.004
270	22.50	0.07	0.020	(0.307)	0.016	0.004
271	22.58	0.07	0.020	(0.306)	0.016	0.004
272	22.67	0.07	0.020	(0.305)	0.016	0.004
273	22.75	0.07	0.020	(0.304)	0.016	0.004
274	22.83	0.07	0.020	(0.303)	0.016	0.004
275	22.92	0.07	0.020	(0.303)	0.016	0.004
276	23.00	0.07	0.020	(0.302)	0.016	0.004
277	23.08	0.07	0.020	(0.301)	0.016	0.004
278	23.17	0.07	0.020	(0.301)	0.016	0.004
279	23.25	0.07	0.020	(0.300)	0.016	0.004
280	23.33	0.07	0.020	(0.299)	0.016	0.004
281	23.42	0.07	0.020	(0.299)	0.016	0.004
282	23.50	0.07	0.020	(0.298)	0.016	0.004
283	23.58	0.07	0.020	(0.298)	0.016	0.004
284	23.67	0.07	0.020	(0.297)	0.016	0.004
285	23.75	0.07	0.020	(0.297)	0.016	0.004
286	23.83	0.07	0.020	(0.297)	0.016	0.004
287	23.92	0.07	0.020	(0.296)	0.016	0.004
288	24.00	0.07	0.020	(0.296)	0.016	0.004

(Loss Rate Not Used)

```
 Sum =     100.0                                    Sum =     6.0
    Flood volume = Effective rainfall      0.50(In)
     times area      27.1(Ac.)/[(In)/(Ft.)] =       1.1(Ac.Ft)
    Total soil loss =      2.00(In)
    Total soil loss =     4.521(Ac.Ft)
    Total rainfall =      2.50(In)
    Flood volume =       49238.3 Cubic Feet
    Total soil loss =      196953.4 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      1.845(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        24 - H O U R    S T O R M
                    R u n o f f      H y d r o g r a p h
    ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ---------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
-------------------------------------------------------------------------
  0+ 5       0.0001      0.02  Q          |         |         |         |
  0+10       0.0006      0.07  Q          |         |         |         |
  0+15       0.0012      0.09  Q          |         |         |         |
  0+20       0.0019      0.10  Q          |         |         |         |
  0+25       0.0028      0.13  Q          |         |         |         |
  0+30       0.0038      0.15  Q          |         |         |         |
  0+35       0.0049      0.15  Q          |         |         |         |
  0+40       0.0059      0.16  Q          |         |         |         |
  0+45       0.0070      0.16  Q          |         |         |         |
  0+50       0.0082      0.17  Q          |         |         |         |
  0+55       0.0096      0.20  Q          |         |         |         |
  1+ 0       0.0110      0.21  Q          |         |         |         |
  1+ 5       0.0124      0.20  Q          |         |         |         |
  1+10       0.0136      0.18  Q          |         |         |         |
  1+15       0.0148      0.17  Q          |         |         |         |
  1+20       0.0160      0.17  Q          |         |         |         |
  1+25       0.0172      0.17  Q          |         |         |         |
  1+30       0.0183      0.17  Q          |         |         |         |
  1+35       0.0194      0.17  Q          |         |         |         |
  1+40       0.0206      0.17  Q          |         |         |         |
  1+45       0.0217      0.16  Q          |         |         |         |
  1+50       0.0229      0.17  Q          |         |         |         |
  1+55       0.0243      0.20  Q          |         |         |         |
  2+ 0       0.0257      0.21  Q          |         |         |         |
  2+ 5       0.0271      0.21  Q          |         |         |         |
  2+10       0.0286      0.21  QV         |         |         |         |
  2+15       0.0301      0.22  QV         |         |         |         |
  2+20       0.0316      0.22  QV         |         |         |         |
  2+25       0.0331      0.22  QV         |         |         |         |
  2+30       0.0346      0.22  QV         |         |         |         |
  2+35       0.0362      0.23  QV         |         |         |         |
  2+40       0.0379      0.25   |Q         |         |         |         |
  2+45       0.0397      0.26   |Q         |         |         |         |
  2+50       0.0415      0.27   |Q         |         |         |         |
  2+55       0.0434      0.27   |Q         |         |         |         |
  3+ 0       0.0453      0.27   |Q         |         |         |         |
  3+ 5       0.0471      0.27   |Q         |         |         |         |
  3+10       0.0490      0.27   |Q         |         |         |         |
  3+15       0.0509      0.27   |Q         |         |         |         |
  3+20       0.0528      0.27   |Q         |         |         |         |
  3+25       0.0547      0.27   |Q         |         |         |         |
  3+30       0.0565      0.27   |QV        |         |         |         |
  3+35       0.0584      0.27   |QV        |         |         |         |
  3+40       0.0603      0.27   |QV        |         |         |         |
  3+45       0.0622      0.27   |QV        |         |         |         |
  3+50       0.0641      0.28   |QV        |         |         |         |
  3+55       0.0662      0.31   |QV        |         |         |         |
  4+ 0       0.0684      0.32   |QV        |         |         |         |
  4+ 5       0.0706      0.32   |QV        |         |         |         |
  4+10       0.0729      0.32   |QV        |         |         |         |
  4+15       0.0751      0.33   |QV        |         |         |         |
  4+20       0.0774      0.33   |QV        |         |         |         |
  4+25       0.0799      0.36   |QV        |         |         |         |
  4+30       0.0824      0.37   |QV        |         |         |         |
  4+35       0.0850      0.38   |Q V       |         |         |         |
  4+40       0.0876      0.38   |Q V       |         |         |         |
  4+45       0.0903      0.38   |Q V       |         |         |         |
  4+50       0.0929      0.39   |Q V       |         |         |         |
  4+55       0.0958      0.41   |Q V       |         |         |         |
```

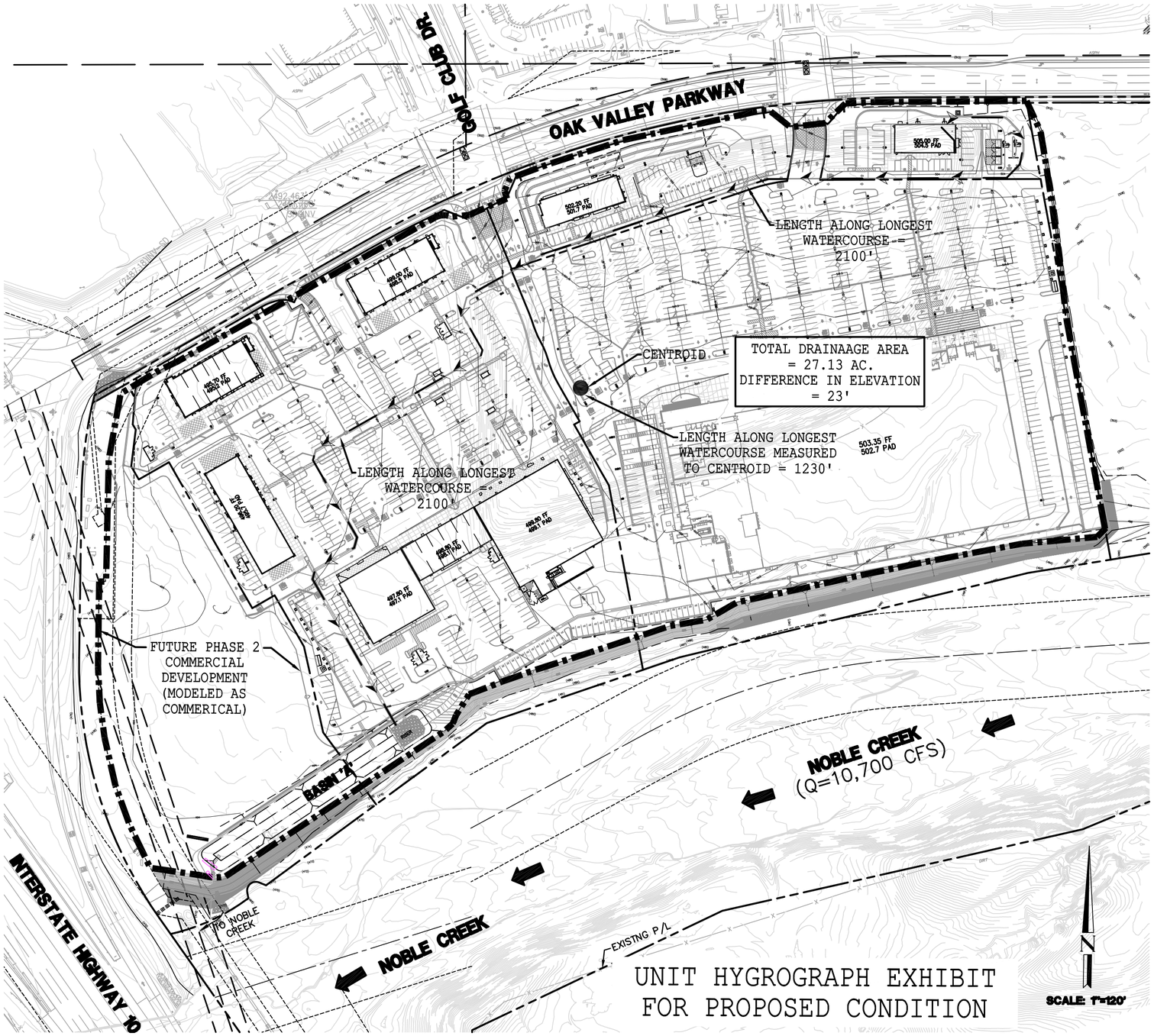
5+ 0	0.0987	0.43	Q V				
5+ 5	0.1016	0.41	Q V				
5+10	0.1041	0.37	Q V				
5+15	0.1065	0.35	Q V				
5+20	0.1089	0.35	Q V				
5+25	0.1114	0.37	Q V				
5+30	0.1140	0.38	Q V				
5+35	0.1167	0.39	Q V				
5+40	0.1196	0.41	Q V				
5+45	0.1225	0.42	Q V				
5+50	0.1254	0.43	Q V				
5+55	0.1284	0.43	Q V				
6+ 0	0.1314	0.43	Q V				
6+ 5	0.1345	0.44	Q V				
6+10	0.1377	0.47	Q V				
6+15	0.1410	0.48	Q V				
6+20	0.1443	0.49	Q V				
6+25	0.1477	0.49	Q V				
6+30	0.1511	0.49	Q V				
6+35	0.1545	0.50	Q V				
6+40	0.1581	0.52	Q V				
6+45	0.1618	0.54	Q V				
6+50	0.1655	0.54	Q V				
6+55	0.1693	0.54	Q V				
7+ 0	0.1730	0.54	Q V				
7+ 5	0.1768	0.55	Q V				
7+10	0.1805	0.55	Q V				
7+15	0.1843	0.55	Q V				
7+20	0.1881	0.55	Q V				
7+25	0.1921	0.58	Q V				
7+30	0.1962	0.59	Q V				
7+35	0.2003	0.60	Q V				
7+40	0.2047	0.63	Q V				
7+45	0.2091	0.64	Q V				
7+50	0.2136	0.66	Q V				
7+55	0.2183	0.68	Q V				
8+ 0	0.2231	0.70	Q V				
8+ 5	0.2280	0.72	Q V				
8+10	0.2334	0.77	Q V				
8+15	0.2388	0.79	Q V				
8+20	0.2444	0.80	Q V				
8+25	0.2500	0.81	Q V				
8+30	0.2556	0.81	Q V				
8+35	0.2612	0.83	Q V				
8+40	0.2671	0.85	Q V				
8+45	0.2731	0.86	Q V				
8+50	0.2791	0.88	Q V				
8+55	0.2853	0.90	Q V				
9+ 0	0.2916	0.92	Q V				
9+ 5	0.2981	0.94	Q V				
9+10	0.3049	0.99	Q V				
9+15	0.3119	1.01	Q V				
9+20	0.3190	1.03	Q V				
9+25	0.3263	1.06	Q V				
9+30	0.3337	1.08	Q V				
9+35	0.3412	1.09	Q V				
9+40	0.3489	1.12	Q V				
9+45	0.3567	1.13	Q V				
9+50	0.3646	1.15	Q V				
9+55	0.3727	1.18	Q V				
10+ 0	0.3809	1.19	Q V				
10+ 5	0.3888	1.14	Q V				
10+10	0.3954	0.97	Q V				
10+15	0.4016	0.90	Q V				
10+20	0.4076	0.87	Q V				
10+25	0.4135	0.85	Q V				
10+30	0.4193	0.84	Q V				
10+35	0.4253	0.87	Q V				
10+40	0.4321	0.99	Q V				
10+45	0.4393	1.04	Q V				
10+50	0.4466	1.06	Q V				
10+55	0.4539	1.07	Q V				
11+ 0	0.4614	1.08	Q V				
11+ 5	0.4688	1.08	Q V				
11+10	0.4761	1.06	Q V				
11+15	0.4833	1.05	Q V				
11+20	0.4905	1.05	Q V				
11+25	0.4977	1.04	Q V				
11+30	0.5049	1.04	Q V				



18+10	1.0594	0.22	Q	|	|	|	V |
18+15	1.0609	0.22	Q	|	|	|	V |
18+20	1.0625	0.22	Q	|	|	|	V |
18+25	1.0640	0.22	Q	|	|	|	V |
18+30	1.0655	0.22	Q	|	|	|	V |
18+35	1.0669	0.21	Q	|	|	|	V |
18+40	1.0682	0.19	Q	|	|	|	V |
18+45	1.0694	0.18	Q	|	|	|	V |
18+50	1.0706	0.16	Q	|	|	|	V |
18+55	1.0715	0.14	Q	|	|	|	V |
19+ 0	1.0723	0.12	Q	|	|	|	V |
19+ 5	1.0732	0.13	Q	|	|	|	V |
19+10	1.0742	0.15	Q	|	|	|	V |
19+15	1.0753	0.16	Q	|	|	|	V |
19+20	1.0765	0.17	Q	|	|	|	V |
19+25	1.0778	0.19	Q	|	|	|	V |
19+30	1.0792	0.20	Q	|	|	|	V |
19+35	1.0806	0.20	Q	|	|	|	V |
19+40	1.0818	0.18	Q	|	|	|	V |
19+45	1.0830	0.17	Q	|	|	|	V |
19+50	1.0841	0.16	Q	|	|	|	V |
19+55	1.0851	0.13	Q	|	|	|	V |
20+ 0	1.0859	0.12	Q	|	|	|	V |
20+ 5	1.0868	0.13	Q	|	|	|	V |
20+10	1.0878	0.15	Q	|	|	|	V |
20+15	1.0889	0.16	Q	|	|	|	V |
20+20	1.0900	0.16	Q	|	|	|	V |
20+25	1.0911	0.16	Q	|	|	|	V |
20+30	1.0922	0.16	Q	|	|	|	V |
20+35	1.0933	0.16	Q	|	|	|	V |
20+40	1.0944	0.16	Q	|	|	|	V |
20+45	1.0956	0.16	Q	|	|	|	V |
20+50	1.0966	0.16	Q	|	|	|	V |
20+55	1.0975	0.13	Q	|	|	|	V |
21+ 0	1.0984	0.12	Q	|	|	|	V |
21+ 5	1.0992	0.12	Q	|	|	|	V |
21+10	1.1002	0.15	Q	|	|	|	V |
21+15	1.1013	0.16	Q	|	|	|	V |
21+20	1.1023	0.15	Q	|	|	|	V|
21+25	1.1032	0.13	Q	|	|	|	V|
21+30	1.1040	0.12	Q	|	|	|	V|
21+35	1.1049	0.12	Q	|	|	|	V|
21+40	1.1059	0.15	Q	|	|	|	V|
21+45	1.1070	0.16	Q	|	|	|	V|
21+50	1.1080	0.15	Q	|	|	|	V|
21+55	1.1089	0.13	Q	|	|	|	V|
22+ 0	1.1097	0.12	Q	|	|	|	V|
22+ 5	1.1105	0.12	Q	|	|	|	V|
22+10	1.1115	0.15	Q	|	|	|	V|
22+15	1.1126	0.16	Q	|	|	|	V|
22+20	1.1136	0.15	Q	|	|	|	V|
22+25	1.1145	0.13	Q	|	|	|	V|
22+30	1.1153	0.12	Q	|	|	|	V|
22+35	1.1161	0.11	Q	|	|	|	V|
22+40	1.1169	0.11	Q	|	|	|	V|
22+45	1.1177	0.11	Q	|	|	|	V|
22+50	1.1184	0.11	Q	|	|	|	V|
22+55	1.1192	0.11	Q	|	|	|	V|
23+ 0	1.1200	0.11	Q	|	|	|	V|
23+ 5	1.1207	0.11	Q	|	|	|	V|
23+10	1.1215	0.11	Q	|	|	|	V|
23+15	1.1222	0.11	Q	|	|	|	V|
23+20	1.1230	0.11	Q	|	|	|	V|
23+25	1.1237	0.11	Q	|	|	|	V|
23+30	1.1245	0.11	Q	|	|	|	V|
23+35	1.1252	0.11	Q	|	|	|	V|
23+40	1.1260	0.11	Q	|	|	|	V|
23+45	1.1267	0.11	Q	|	|	|	V|
23+50	1.1275	0.11	Q	|	|	|	V|
23+55	1.1283	0.11	Q	|	|	|	V|
24+ 0	1.1290	0.11	Q	|	|	|	V|
24+ 5	1.1297	0.09	Q	|	|	|	V|
24+10	1.1300	0.04	Q	|	|	|	V|
24+15	1.1301	0.02	Q	|	|	|	V|
24+20	1.1302	0.01	Q	|	|	|	V|
24+25	1.1303	0.01	Q	|	|	|	V|
24+30	1.1303	0.01	Q	|	|	|	V|
24+35	1.1303	0.00	Q	|	|	|	V|
24+40	1.1304	0.00	Q	|	|	|	V|

24+45	1.1304	0.00	Q			V

Unit Hydrograph
Proposed Condition


GOLF CLUB DR.
OAK VALLEY PARKWAY
LENGTH ALONG LONGEST WATERCOURSE = 2100'
CENTROID
TOTAL DRAINAAGE AREA = 27.13 AC.
DIFFERENCE IN ELEVATION = 23'
LENGTH ALONG LONGEST WATERCOURSE MEASURED TO CENTROID = 1230'
LENGTH ALONG LONGEST WATERCOURSE = 2100'
FUTURE PHASE 2 COMMERCIAL DEVELOPMENT (MODELED AS COMMERICAL)
BASIN "A"
TO NOBLE CREEK
NOBLE CREEK
NOBLE CREEK (Q=10,700 CFS)
EXISTNG P/L
INTERSTATE HIGHWAY 10
UNIT HYGROGRAPH EXHIBIT FOR PROPOSED CONDITION
N
SCALE: 1"=120'

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 05/01/25 File: 3385P2242.out

2-YEAR
24-HOUR

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

23-835 OAK VALLEY VILLAGE
PROPOSED CONDITION
2-YEAR CONDITION

Drainage Area = 27.13(Ac.) = 0.042 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 27.13(Ac.) = 0.042 Sq. Mi.
Length along longest watercourse = 2100.00(Ft.)
Length along longest watercourse measured to centroid = 1230.00(Ft.)
Length along longest watercourse = 0.398 Mi.
Length along longest watercourse measured to centroid = 0.233 Mi.
Difference in elevation = 23.00(Ft.)
Slope along watercourse = 57.8286 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.067 Hr.
Lag time = 4.05 Min.
25% of lag time = 1.01 Min.
40% of lag time = 1.62 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
27.13	2.50	67.83

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
27.13	6.50	176.35

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
27.130	32.00	0.850

Total Area Entered = 27.13(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
32.0	16.2	0.870	0.850	0.205	1.000	0.205
					Sum (F) =	0.205

Area averaged mean soil loss (F) (In/Hr) = 0.205
Minimum soil loss rate ((In/Hr)) = 0.102
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.300

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	123.571	26.224	7.170
2	0.167	247.143	48.592	13.286
3	0.250	370.714	13.005	3.556
4	0.333	494.285	5.861	1.602
5	0.417	617.857	3.270	0.894
6	0.500	741.428	1.827	0.500
7	0.583	865.000	1.220	0.334
			Sum = 100.000	Sum= 27.342

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.020	(0.363)	0.006	0.014
2	0.17	0.07	0.020	(0.361)	0.006	0.014
3	0.25	0.07	0.020	(0.360)	0.006	0.014
4	0.33	0.10	0.030	(0.358)	0.009	0.021
5	0.42	0.10	0.030	(0.357)	0.009	0.021
6	0.50	0.10	0.030	(0.356)	0.009	0.021
7	0.58	0.10	0.030	(0.354)	0.009	0.021
8	0.67	0.10	0.030	(0.353)	0.009	0.021
9	0.75	0.10	0.030	(0.351)	0.009	0.021
10	0.83	0.13	0.040	(0.350)	0.012	0.028
11	0.92	0.13	0.040	(0.349)	0.012	0.028
12	1.00	0.13	0.040	(0.347)	0.012	0.028
13	1.08	0.10	0.030	(0.346)	0.009	0.021
14	1.17	0.10	0.030	(0.345)	0.009	0.021
15	1.25	0.10	0.030	(0.343)	0.009	0.021
16	1.33	0.10	0.030	(0.342)	0.009	0.021
17	1.42	0.10	0.030	(0.340)	0.009	0.021
18	1.50	0.10	0.030	(0.339)	0.009	0.021
19	1.58	0.10	0.030	(0.338)	0.009	0.021
20	1.67	0.10	0.030	(0.336)	0.009	0.021
21	1.75	0.10	0.030	(0.335)	0.009	0.021
22	1.83	0.13	0.040	(0.334)	0.012	0.028
23	1.92	0.13	0.040	(0.332)	0.012	0.028
24	2.00	0.13	0.040	(0.331)	0.012	0.028
25	2.08	0.13	0.040	(0.330)	0.012	0.028
26	2.17	0.13	0.040	(0.328)	0.012	0.028
27	2.25	0.13	0.040	(0.327)	0.012	0.028
28	2.33	0.13	0.040	(0.326)	0.012	0.028
29	2.42	0.13	0.040	(0.324)	0.012	0.028
30	2.50	0.13	0.040	(0.323)	0.012	0.028
31	2.58	0.17	0.050	(0.322)	0.015	0.035
32	2.67	0.17	0.050	(0.320)	0.015	0.035
33	2.75	0.17	0.050	(0.319)	0.015	0.035
34	2.83	0.17	0.050	(0.318)	0.015	0.035
35	2.92	0.17	0.050	(0.316)	0.015	0.035
36	3.00	0.17	0.050	(0.315)	0.015	0.035
37	3.08	0.17	0.050	(0.314)	0.015	0.035
38	3.17	0.17	0.050	(0.313)	0.015	0.035
39	3.25	0.17	0.050	(0.311)	0.015	0.035
40	3.33	0.17	0.050	(0.310)	0.015	0.035
41	3.42	0.17	0.050	(0.309)	0.015	0.035
42	3.50	0.17	0.050	(0.307)	0.015	0.035
43	3.58	0.17	0.050	(0.306)	0.015	0.035
44	3.67	0.17	0.050	(0.305)	0.015	0.035
45	3.75	0.17	0.050	(0.304)	0.015	0.035
46	3.83	0.20	0.060	(0.302)	0.018	0.042
47	3.92	0.20	0.060	(0.301)	0.018	0.042
48	4.00	0.20	0.060	(0.300)	0.018	0.042
49	4.08	0.20	0.060	(0.298)	0.018	0.042
50	4.17	0.20	0.060	(0.297)	0.018	0.042
51	4.25	0.20	0.060	(0.296)	0.018	0.042
52	4.33	0.23	0.070	(0.295)	0.021	0.049
53	4.42	0.23	0.070	(0.293)	0.021	0.049
54	4.50	0.23	0.070	(0.292)	0.021	0.049

55	4.58	0.23	0.070	(0.291)	0.021	0.049
56	4.67	0.23	0.070	(0.290)	0.021	0.049
57	4.75	0.23	0.070	(0.288)	0.021	0.049
58	4.83	0.27	0.080	(0.287)	0.024	0.056
59	4.92	0.27	0.080	(0.286)	0.024	0.056
60	5.00	0.27	0.080	(0.285)	0.024	0.056
61	5.08	0.20	0.060	(0.283)	0.018	0.042
62	5.17	0.20	0.060	(0.282)	0.018	0.042
63	5.25	0.20	0.060	(0.281)	0.018	0.042
64	5.33	0.23	0.070	(0.280)	0.021	0.049
65	5.42	0.23	0.070	(0.278)	0.021	0.049
66	5.50	0.23	0.070	(0.277)	0.021	0.049
67	5.58	0.27	0.080	(0.276)	0.024	0.056
68	5.67	0.27	0.080	(0.275)	0.024	0.056
69	5.75	0.27	0.080	(0.274)	0.024	0.056
70	5.83	0.27	0.080	(0.272)	0.024	0.056
71	5.92	0.27	0.080	(0.271)	0.024	0.056
72	6.00	0.27	0.080	(0.270)	0.024	0.056
73	6.08	0.30	0.090	(0.269)	0.027	0.063
74	6.17	0.30	0.090	(0.268)	0.027	0.063
75	6.25	0.30	0.090	(0.266)	0.027	0.063
76	6.33	0.30	0.090	(0.265)	0.027	0.063
77	6.42	0.30	0.090	(0.264)	0.027	0.063
78	6.50	0.30	0.090	(0.263)	0.027	0.063
79	6.58	0.33	0.100	(0.262)	0.030	0.070
80	6.67	0.33	0.100	(0.260)	0.030	0.070
81	6.75	0.33	0.100	(0.259)	0.030	0.070
82	6.83	0.33	0.100	(0.258)	0.030	0.070
83	6.92	0.33	0.100	(0.257)	0.030	0.070
84	7.00	0.33	0.100	(0.256)	0.030	0.070
85	7.08	0.33	0.100	(0.255)	0.030	0.070
86	7.17	0.33	0.100	(0.253)	0.030	0.070
87	7.25	0.33	0.100	(0.252)	0.030	0.070
88	7.33	0.37	0.110	(0.251)	0.033	0.077
89	7.42	0.37	0.110	(0.250)	0.033	0.077
90	7.50	0.37	0.110	(0.249)	0.033	0.077
91	7.58	0.40	0.120	(0.248)	0.036	0.084
92	7.67	0.40	0.120	(0.247)	0.036	0.084
93	7.75	0.40	0.120	(0.245)	0.036	0.084
94	7.83	0.43	0.130	(0.244)	0.039	0.091
95	7.92	0.43	0.130	(0.243)	0.039	0.091
96	8.00	0.43	0.130	(0.242)	0.039	0.091
97	8.08	0.50	0.150	(0.241)	0.045	0.105
98	8.17	0.50	0.150	(0.240)	0.045	0.105
99	8.25	0.50	0.150	(0.239)	0.045	0.105
100	8.33	0.50	0.150	(0.238)	0.045	0.105
101	8.42	0.50	0.150	(0.236)	0.045	0.105
102	8.50	0.50	0.150	(0.235)	0.045	0.105
103	8.58	0.53	0.160	(0.234)	0.048	0.112
104	8.67	0.53	0.160	(0.233)	0.048	0.112
105	8.75	0.53	0.160	(0.232)	0.048	0.112
106	8.83	0.57	0.170	(0.231)	0.051	0.119
107	8.92	0.57	0.170	(0.230)	0.051	0.119
108	9.00	0.57	0.170	(0.229)	0.051	0.119
109	9.08	0.63	0.190	(0.228)	0.057	0.133
110	9.17	0.63	0.190	(0.227)	0.057	0.133
111	9.25	0.63	0.190	(0.226)	0.057	0.133
112	9.33	0.67	0.200	(0.224)	0.060	0.140
113	9.42	0.67	0.200	(0.223)	0.060	0.140
114	9.50	0.67	0.200	(0.222)	0.060	0.140
115	9.58	0.70	0.210	(0.221)	0.063	0.147
116	9.67	0.70	0.210	(0.220)	0.063	0.147
117	9.75	0.70	0.210	(0.219)	0.063	0.147
118	9.83	0.73	0.220	(0.218)	0.066	0.154
119	9.92	0.73	0.220	(0.217)	0.066	0.154
120	10.00	0.73	0.220	(0.216)	0.066	0.154
121	10.08	0.50	0.150	(0.215)	0.045	0.105
122	10.17	0.50	0.150	(0.214)	0.045	0.105
123	10.25	0.50	0.150	(0.213)	0.045	0.105
124	10.33	0.50	0.150	(0.212)	0.045	0.105
125	10.42	0.50	0.150	(0.211)	0.045	0.105
126	10.50	0.50	0.150	(0.210)	0.045	0.105
127	10.58	0.67	0.200	(0.209)	0.060	0.140
128	10.67	0.67	0.200	(0.208)	0.060	0.140
129	10.75	0.67	0.200	(0.207)	0.060	0.140
130	10.83	0.67	0.200	(0.206)	0.060	0.140
131	10.92	0.67	0.200	(0.205)	0.060	0.140
132	11.00	0.67	0.200	(0.204)	0.060	0.140
133	11.08	0.63	0.190	(0.203)	0.057	0.133

134	11.17	0.63	0.190	(0.202)	0.057	0.133
135	11.25	0.63	0.190	(0.201)	0.057	0.133
136	11.33	0.63	0.190	(0.200)	0.057	0.133
137	11.42	0.63	0.190	(0.199)	0.057	0.133
138	11.50	0.63	0.190	(0.198)	0.057	0.133
139	11.58	0.57	0.170	(0.197)	0.051	0.119
140	11.67	0.57	0.170	(0.196)	0.051	0.119
141	11.75	0.57	0.170	(0.195)	0.051	0.119
142	11.83	0.60	0.180	(0.194)	0.054	0.126
143	11.92	0.60	0.180	(0.193)	0.054	0.126
144	12.00	0.60	0.180	(0.192)	0.054	0.126
145	12.08	0.83	0.250	(0.191)	0.075	0.175
146	12.17	0.83	0.250	(0.190)	0.075	0.175
147	12.25	0.83	0.250	(0.189)	0.075	0.175
148	12.33	0.87	0.260	(0.188)	0.078	0.182
149	12.42	0.87	0.260	(0.187)	0.078	0.182
150	12.50	0.87	0.260	(0.186)	0.078	0.182
151	12.58	0.93	0.280	(0.185)	0.084	0.196
152	12.67	0.93	0.280	(0.184)	0.084	0.196
153	12.75	0.93	0.280	(0.183)	0.084	0.196
154	12.83	0.97	0.290	(0.182)	0.087	0.203
155	12.92	0.97	0.290	(0.182)	0.087	0.203
156	13.00	0.97	0.290	(0.181)	0.087	0.203
157	13.08	1.13	0.340	(0.180)	0.102	0.238
158	13.17	1.13	0.340	(0.179)	0.102	0.238
159	13.25	1.13	0.340	(0.178)	0.102	0.238
160	13.33	1.13	0.340	(0.177)	0.102	0.238
161	13.42	1.13	0.340	(0.176)	0.102	0.238
162	13.50	1.13	0.340	(0.175)	0.102	0.238
163	13.58	0.77	0.230	(0.174)	0.069	0.161
164	13.67	0.77	0.230	(0.173)	0.069	0.161
165	13.75	0.77	0.230	(0.173)	0.069	0.161
166	13.83	0.77	0.230	(0.172)	0.069	0.161
167	13.92	0.77	0.230	(0.171)	0.069	0.161
168	14.00	0.77	0.230	(0.170)	0.069	0.161
169	14.08	0.90	0.270	(0.169)	0.081	0.189
170	14.17	0.90	0.270	(0.168)	0.081	0.189
171	14.25	0.90	0.270	(0.167)	0.081	0.189
172	14.33	0.87	0.260	(0.166)	0.078	0.182
173	14.42	0.87	0.260	(0.166)	0.078	0.182
174	14.50	0.87	0.260	(0.165)	0.078	0.182
175	14.58	0.87	0.260	(0.164)	0.078	0.182
176	14.67	0.87	0.260	(0.163)	0.078	0.182
177	14.75	0.87	0.260	(0.162)	0.078	0.182
178	14.83	0.83	0.250	(0.161)	0.075	0.175
179	14.92	0.83	0.250	(0.161)	0.075	0.175
180	15.00	0.83	0.250	(0.160)	0.075	0.175
181	15.08	0.80	0.240	(0.159)	0.072	0.168
182	15.17	0.80	0.240	(0.158)	0.072	0.168
183	15.25	0.80	0.240	(0.157)	0.072	0.168
184	15.33	0.77	0.230	(0.157)	0.069	0.161
185	15.42	0.77	0.230	(0.156)	0.069	0.161
186	15.50	0.77	0.230	(0.155)	0.069	0.161
187	15.58	0.63	0.190	(0.154)	0.057	0.133
188	15.67	0.63	0.190	(0.153)	0.057	0.133
189	15.75	0.63	0.190	(0.153)	0.057	0.133
190	15.83	0.63	0.190	(0.152)	0.057	0.133
191	15.92	0.63	0.190	(0.151)	0.057	0.133
192	16.00	0.63	0.190	(0.150)	0.057	0.133
193	16.08	0.13	0.040	(0.149)	0.012	0.028
194	16.17	0.13	0.040	(0.149)	0.012	0.028
195	16.25	0.13	0.040	(0.148)	0.012	0.028
196	16.33	0.13	0.040	(0.147)	0.012	0.028
197	16.42	0.13	0.040	(0.146)	0.012	0.028
198	16.50	0.13	0.040	(0.146)	0.012	0.028
199	16.58	0.10	0.030	(0.145)	0.009	0.021
200	16.67	0.10	0.030	(0.144)	0.009	0.021
201	16.75	0.10	0.030	(0.143)	0.009	0.021
202	16.83	0.10	0.030	(0.143)	0.009	0.021
203	16.92	0.10	0.030	(0.142)	0.009	0.021
204	17.00	0.10	0.030	(0.141)	0.009	0.021
205	17.08	0.17	0.050	(0.141)	0.015	0.035
206	17.17	0.17	0.050	(0.140)	0.015	0.035
207	17.25	0.17	0.050	(0.139)	0.015	0.035
208	17.33	0.17	0.050	(0.138)	0.015	0.035
209	17.42	0.17	0.050	(0.138)	0.015	0.035
210	17.50	0.17	0.050	(0.137)	0.015	0.035
211	17.58	0.17	0.050	(0.136)	0.015	0.035
212	17.67	0.17	0.050	(0.136)	0.015	0.035

213	17.75	0.17	0.050	(0.135)	0.015	0.035
214	17.83	0.13	0.040	(0.134)	0.012	0.028
215	17.92	0.13	0.040	(0.134)	0.012	0.028
216	18.00	0.13	0.040	(0.133)	0.012	0.028
217	18.08	0.13	0.040	(0.132)	0.012	0.028
218	18.17	0.13	0.040	(0.132)	0.012	0.028
219	18.25	0.13	0.040	(0.131)	0.012	0.028
220	18.33	0.13	0.040	(0.130)	0.012	0.028
221	18.42	0.13	0.040	(0.130)	0.012	0.028
222	18.50	0.13	0.040	(0.129)	0.012	0.028
223	18.58	0.10	0.030	(0.129)	0.009	0.021
224	18.67	0.10	0.030	(0.128)	0.009	0.021
225	18.75	0.10	0.030	(0.127)	0.009	0.021
226	18.83	0.07	0.020	(0.127)	0.006	0.014
227	18.92	0.07	0.020	(0.126)	0.006	0.014
228	19.00	0.07	0.020	(0.126)	0.006	0.014
229	19.08	0.10	0.030	(0.125)	0.009	0.021
230	19.17	0.10	0.030	(0.124)	0.009	0.021
231	19.25	0.10	0.030	(0.124)	0.009	0.021
232	19.33	0.13	0.040	(0.123)	0.012	0.028
233	19.42	0.13	0.040	(0.123)	0.012	0.028
234	19.50	0.13	0.040	(0.122)	0.012	0.028
235	19.58	0.10	0.030	(0.121)	0.009	0.021
236	19.67	0.10	0.030	(0.121)	0.009	0.021
237	19.75	0.10	0.030	(0.120)	0.009	0.021
238	19.83	0.07	0.020	(0.120)	0.006	0.014
239	19.92	0.07	0.020	(0.119)	0.006	0.014
240	20.00	0.07	0.020	(0.119)	0.006	0.014
241	20.08	0.10	0.030	(0.118)	0.009	0.021
242	20.17	0.10	0.030	(0.118)	0.009	0.021
243	20.25	0.10	0.030	(0.117)	0.009	0.021
244	20.33	0.10	0.030	(0.117)	0.009	0.021
245	20.42	0.10	0.030	(0.116)	0.009	0.021
246	20.50	0.10	0.030	(0.116)	0.009	0.021
247	20.58	0.10	0.030	(0.115)	0.009	0.021
248	20.67	0.10	0.030	(0.115)	0.009	0.021
249	20.75	0.10	0.030	(0.114)	0.009	0.021
250	20.83	0.07	0.020	(0.114)	0.006	0.014
251	20.92	0.07	0.020	(0.113)	0.006	0.014
252	21.00	0.07	0.020	(0.113)	0.006	0.014
253	21.08	0.10	0.030	(0.112)	0.009	0.021
254	21.17	0.10	0.030	(0.112)	0.009	0.021
255	21.25	0.10	0.030	(0.112)	0.009	0.021
256	21.33	0.07	0.020	(0.111)	0.006	0.014
257	21.42	0.07	0.020	(0.111)	0.006	0.014
258	21.50	0.07	0.020	(0.110)	0.006	0.014
259	21.58	0.10	0.030	(0.110)	0.009	0.021
260	21.67	0.10	0.030	(0.110)	0.009	0.021
261	21.75	0.10	0.030	(0.109)	0.009	0.021
262	21.83	0.07	0.020	(0.109)	0.006	0.014
263	21.92	0.07	0.020	(0.108)	0.006	0.014
264	22.00	0.07	0.020	(0.108)	0.006	0.014
265	22.08	0.10	0.030	(0.108)	0.009	0.021
266	22.17	0.10	0.030	(0.107)	0.009	0.021
267	22.25	0.10	0.030	(0.107)	0.009	0.021
268	22.33	0.07	0.020	(0.107)	0.006	0.014
269	22.42	0.07	0.020	(0.106)	0.006	0.014
270	22.50	0.07	0.020	(0.106)	0.006	0.014
271	22.58	0.07	0.020	(0.106)	0.006	0.014
272	22.67	0.07	0.020	(0.105)	0.006	0.014
273	22.75	0.07	0.020	(0.105)	0.006	0.014
274	22.83	0.07	0.020	(0.105)	0.006	0.014
275	22.92	0.07	0.020	(0.105)	0.006	0.014
276	23.00	0.07	0.020	(0.104)	0.006	0.014
277	23.08	0.07	0.020	(0.104)	0.006	0.014
278	23.17	0.07	0.020	(0.104)	0.006	0.014
279	23.25	0.07	0.020	(0.104)	0.006	0.014
280	23.33	0.07	0.020	(0.103)	0.006	0.014
281	23.42	0.07	0.020	(0.103)	0.006	0.014
282	23.50	0.07	0.020	(0.103)	0.006	0.014
283	23.58	0.07	0.020	(0.103)	0.006	0.014
284	23.67	0.07	0.020	(0.103)	0.006	0.014
285	23.75	0.07	0.020	(0.103)	0.006	0.014
286	23.83	0.07	0.020	(0.102)	0.006	0.014
287	23.92	0.07	0.020	(0.102)	0.006	0.014
288	24.00	0.07	0.020	(0.102)	0.006	0.014
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	21.0

Flood volume = Effective rainfall 1.75(In)

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 times area      27.1(Ac.)/[(In)/(Ft.)] =       4.0(Ac.Ft)
Total soil loss =      0.75(In)
Total soil loss =     1.696(Ac.Ft)
Total rainfall =      2.50(In)
Flood volume =      172334.2 Cubic Feet
Total soil loss =       73857.5 Cubic Feet
------------------------------------------------------------------------
 Peak flow rate of this hydrograph =      6.499(CFS)
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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                    24 - H O U R    S T O R M
                R u n o f f      H y d r o g r a p h
------------------------------------------------------------------------
             Hydrograph in   5   Minute intervals ((CFS))

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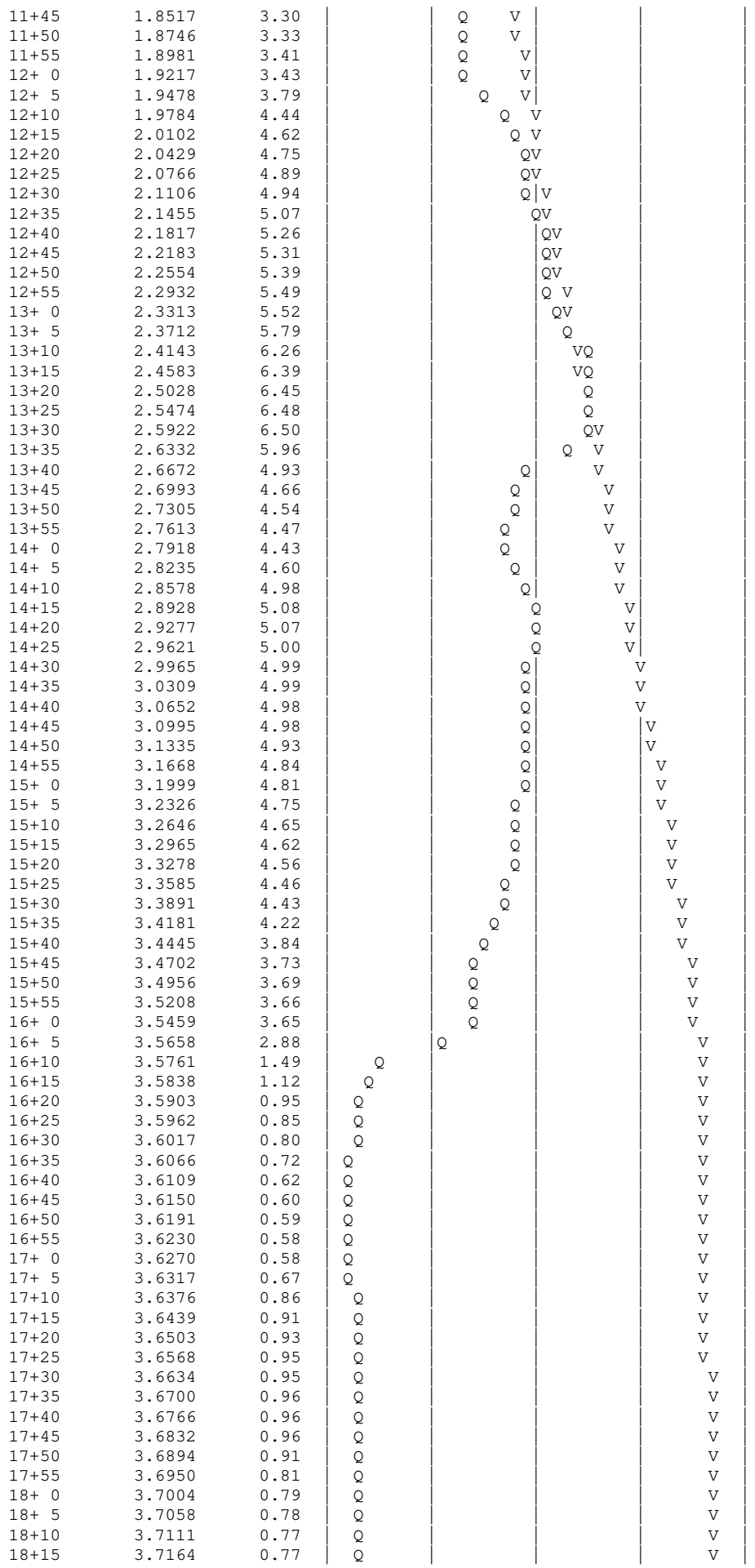
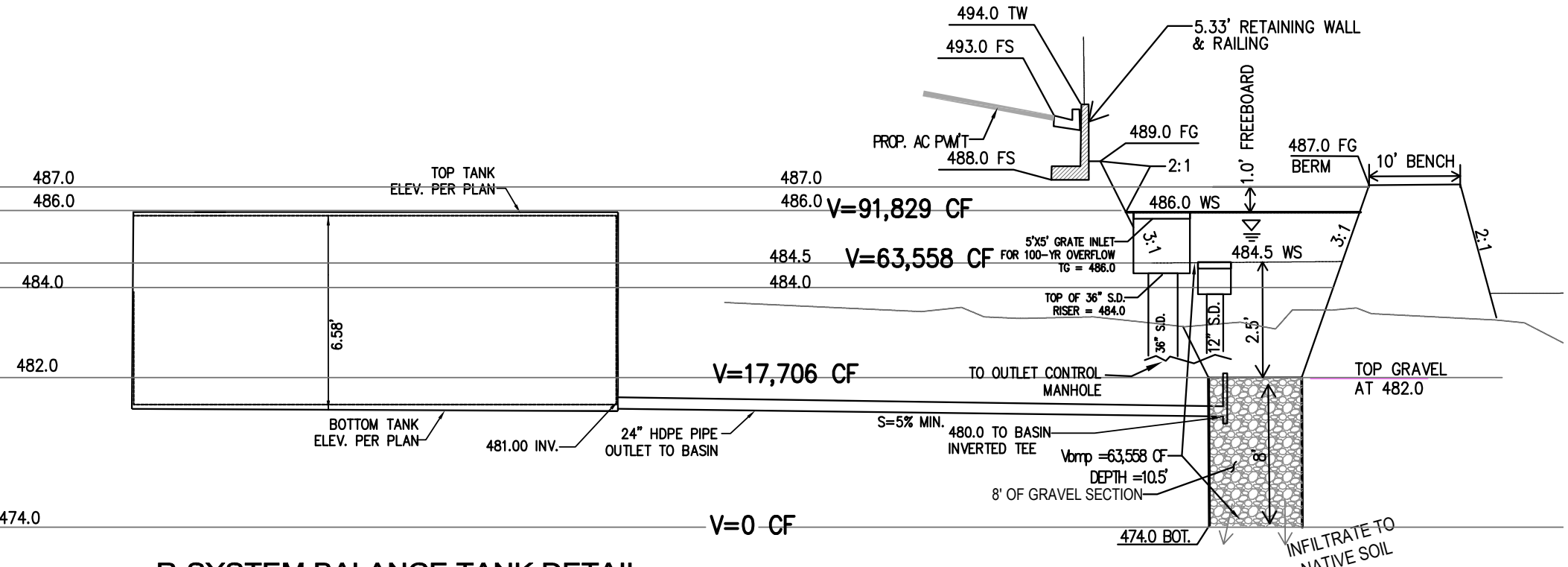
Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0007	0.10	Q				
0+10	0.0027	0.29	VQ				
0+15	0.0050	0.34	VQ				
0+20	0.0078	0.41	VQ				
0+25	0.0113	0.51	V Q				
0+30	0.0151	0.55	V Q				
0+35	0.0190	0.56	V Q				
0+40	0.0229	0.57	V Q				
0+45	0.0268	0.57	V Q				
0+50	0.0311	0.62	V Q				
0+55	0.0361	0.72	V Q				
1+ 0	0.0412	0.74	V Q				
1+ 5	0.0460	0.70	V Q				
1+10	0.0503	0.62	V Q				
1+15	0.0544	0.60	V Q				
1+20	0.0584	0.59	V Q				
1+25	0.0624	0.58	V Q				
1+30	0.0664	0.58	V Q				
1+35	0.0704	0.57	V Q				
1+40	0.0743	0.57	V Q				
1+45	0.0783	0.57	V Q				
1+50	0.0826	0.62	V Q				
1+55	0.0875	0.72	V Q				
2+ 0	0.0926	0.74	V Q				
2+ 5	0.0978	0.75	V Q				
2+10	0.1031	0.76	|V Q				
2+15	0.1083	0.76	|V Q				
2+20	0.1136	0.77	|V Q				
2+25	0.1189	0.77	|V Q				
2+30	0.1241	0.77	|V Q				
2+35	0.1298	0.82	|V Q				
2+40	0.1360	0.91	|V Q				
2+45	0.1425	0.93	|V Q				
2+50	0.1490	0.95	|V Q				
2+55	0.1555	0.95	|V Q				
3+ 0	0.1621	0.96	|V Q				
3+ 5	0.1687	0.96	|V Q				
3+10	0.1753	0.96	|V Q				
3+15	0.1819	0.96	|V Q				
3+20	0.1885	0.96	|V Q				
3+25	0.1951	0.96	|V Q				
3+30	0.2017	0.96	| VQ				
3+35	0.2082	0.96	| VQ				
3+40	0.2148	0.96	| VQ				
3+45	0.2214	0.96	| VQ				
3+50	0.2284	1.01	| V Q				
3+55	0.2360	1.10	| V Q				
4+ 0	0.2437	1.13	| V Q				
4+ 5	0.2515	1.14	| V Q				
4+10	0.2594	1.14	| V Q				
4+15	0.2673	1.15	| V Q				
4+20	0.2756	1.20	| V Q				
4+25	0.2845	1.29	| V Q				
4+30	0.2935	1.32	| V Q				
4+35	0.3027	1.33	| V Q				
4+40	0.3119	1.33	| V Q				
4+45	0.3211	1.34	| V Q				
4+50	0.3307	1.39	| V Q				
4+55	0.3409	1.48	| V Q				
5+ 0	0.3513	1.51	| V Q				
5+ 5	0.3610	1.42	| V Q				

5+10	0.3696	1.24	VQ				
5+15	0.3778	1.19	VQ				
5+20	0.3862	1.22	VQ				
5+25	0.3952	1.30	V Q				
5+30	0.4043	1.32	VQ				
5+35	0.4138	1.38	VQ				
5+40	0.4240	1.48	VQ				
5+45	0.4344	1.51	V Q				
5+50	0.4448	1.52	V Q				
5+55	0.4553	1.53	V Q				
6+ 0	0.4659	1.53	V Q				
6+ 5	0.4768	1.58	V Q				
6+10	0.4883	1.68	V Q				
6+15	0.5000	1.70	VQ				
6+20	0.5118	1.71	VQ				
6+25	0.5236	1.72	VQ				
6+30	0.5355	1.72	VQ				
6+35	0.5477	1.77	V Q				
6+40	0.5605	1.87	V Q				
6+45	0.5736	1.89	V Q				
6+50	0.5867	1.90	V Q				
6+55	0.5998	1.91	VQ				
7+ 0	0.6130	1.91	VQ				
7+ 5	0.6262	1.91	VQ				
7+10	0.6394	1.91	VQ				
7+15	0.6526	1.91	VQ				
7+20	0.6661	1.97	VQ				
7+25	0.6803	2.06	V Q				
7+30	0.6946	2.08	VQ				
7+35	0.7094	2.14	VQ				
7+40	0.7248	2.24	VQ				
7+45	0.7405	2.27	V Q				
7+50	0.7566	2.34	V Q				
7+55	0.7733	2.44	V Q				
8+ 0	0.7903	2.46	V Q				
8+ 5	0.8081	2.58	V Q				
8+10	0.8271	2.77	V |Q				
8+15	0.8466	2.82	V |Q				
8+20	0.8662	2.85	V |Q				
8+25	0.8859	2.86	V |Q				
8+30	0.9056	2.87	V|Q				
8+35	0.9258	2.92	V|Q				
8+40	0.9465	3.02	V| Q				
8+45	0.9675	3.04	V| Q				
8+50	0.9888	3.10	V| Q				
8+55	1.0109	3.20	V Q				
9+ 0	1.0331	3.23	V Q				
9+ 5	1.0562	3.34	V Q				
9+10	1.0805	3.54	V Q				
9+15	1.1052	3.59	|V Q				
9+20	1.1305	3.66	|V Q				
9+25	1.1564	3.77	|V Q				
9+30	1.1826	3.80	|V Q				
9+35	1.2092	3.87	| V Q				
9+40	1.2366	3.97	| V Q				
9+45	1.2641	4.00	| V Q				
9+50	1.2920	4.06	| V Q				
9+55	1.3207	4.16	| V Q				
10+ 0	1.3495	4.19	| V Q				
10+ 5	1.3760	3.85	| V Q				
10+10	1.3981	3.20	| Q V				
10+15	1.4190	3.03	| Q V				
10+20	1.4393	2.96	|Q V				
10+25	1.4594	2.91	|Q V				
10+30	1.4793	2.89	|Q V				
10+35	1.5008	3.12	| Q V				
10+40	1.5255	3.59	| QV				
10+45	1.5511	3.71	| QV				
10+50	1.5771	3.77	| Q				
10+55	1.6032	3.80	| QV				
11+ 0	1.6295	3.82	| QV				
11+ 5	1.6555	3.78	| QV				
11+10	1.6809	3.69	| Q V				
11+15	1.7062	3.66	| Q V				
11+20	1.7313	3.65	| Q V				
11+25	1.7564	3.64	| Q V				
11+30	1.7815	3.64	| Q V				
11+35	1.8058	3.54	| Q V				
11+40	1.8289	3.35	| Q V				



18+20	3.7217	0.77	Q			V
18+25	3.7270	0.77	Q			V
18+30	3.7322	0.77	Q			V
18+35	3.7372	0.72	Q			V
18+40	3.7415	0.62	Q			V
18+45	3.7456	0.60	Q			V
18+50	3.7493	0.54	Q			V
18+55	3.7523	0.44	Q			V
19+ 0	3.7551	0.41	Q			V
19+ 5	3.7582	0.45	Q			V
19+10	3.7618	0.53	Q			V
19+15	3.7656	0.55	Q			V
19+20	3.7698	0.61	Q			V
19+25	3.7748	0.71	Q			V
19+30	3.7798	0.74	Q			V
19+35	3.7847	0.70	Q			V
19+40	3.7889	0.62	Q			V
19+45	3.7930	0.60	Q			V
19+50	3.7967	0.54	Q			V
19+55	3.7997	0.44	Q			V
20+ 0	3.8026	0.41	Q			V
20+ 5	3.8056	0.45	Q			V
20+10	3.8093	0.53	Q			V
20+15	3.8131	0.55	Q			V
20+20	3.8170	0.56	Q			V
20+25	3.8209	0.57	Q			V
20+30	3.8248	0.57	Q			V
20+35	3.8288	0.57	Q			V
20+40	3.8327	0.57	Q			V
20+45	3.8367	0.57	Q			V
20+50	3.8403	0.52	Q			V
20+55	3.8433	0.43	Q			V
21+ 0	3.8461	0.41	Q			V
21+ 5	3.8491	0.45	Q			V
21+10	3.8528	0.53	Q			V
21+15	3.8566	0.55	Q			V
21+20	3.8601	0.51	Q			V
21+25	3.8631	0.43	Q			V
21+30	3.8659	0.40	Q			V
21+35	3.8689	0.45	Q			V
21+40	3.8726	0.53	Q			V
21+45	3.8764	0.55	Q			V
21+50	3.8799	0.51	Q			V
21+55	3.8829	0.43	Q			V
22+ 0	3.8856	0.40	Q			V
22+ 5	3.8887	0.45	Q			V
22+10	3.8924	0.53	Q			V
22+15	3.8962	0.55	Q			V
22+20	3.8997	0.51	Q			V
22+25	3.9026	0.43	Q			V
22+30	3.9054	0.40	Q			V
22+35	3.9081	0.40	Q			V
22+40	3.9108	0.39	Q			V
22+45	3.9135	0.39	Q			V
22+50	3.9161	0.38	Q			V
22+55	3.9188	0.38	Q			V
23+ 0	3.9214	0.38	Q			V
23+ 5	3.9240	0.38	Q			V
23+10	3.9267	0.38	Q			V
23+15	3.9293	0.38	Q			V
23+20	3.9319	0.38	Q			V
23+25	3.9346	0.38	Q			V
23+30	3.9372	0.38	Q			V
23+35	3.9399	0.38	Q			V
23+40	3.9425	0.38	Q			V
23+45	3.9451	0.38	Q			V
23+50	3.9478	0.38	Q			V
23+55	3.9504	0.38	Q			V
24+ 0	3.9530	0.38	Q			V
24+ 5	3.9550	0.28	Q			V
24+10	3.9556	0.10	Q			V
24+15	3.9560	0.05	Q			V
24+20	3.9561	0.02	Q			V
24+25	3.9562	0.01	Q			V
24+30	3.9562	0.00	Q			V

Basin Routing Calculation

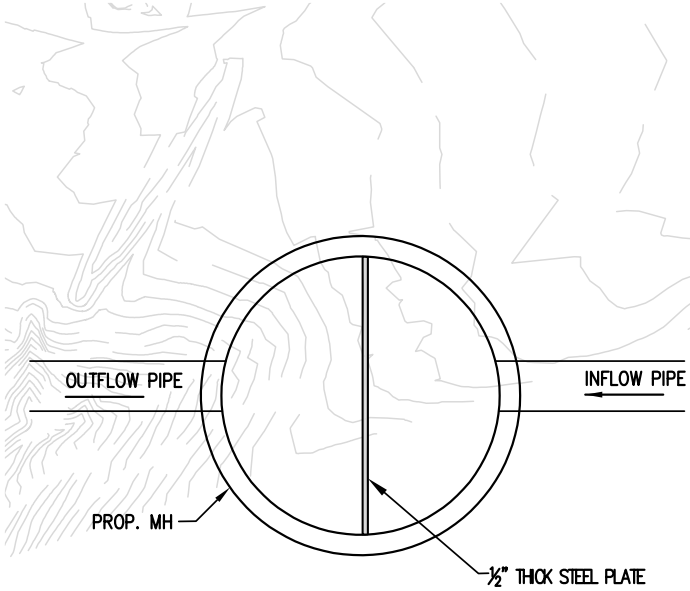


R-SYSTEM BALANCE TANK DETAIL

NOT TO SCALE

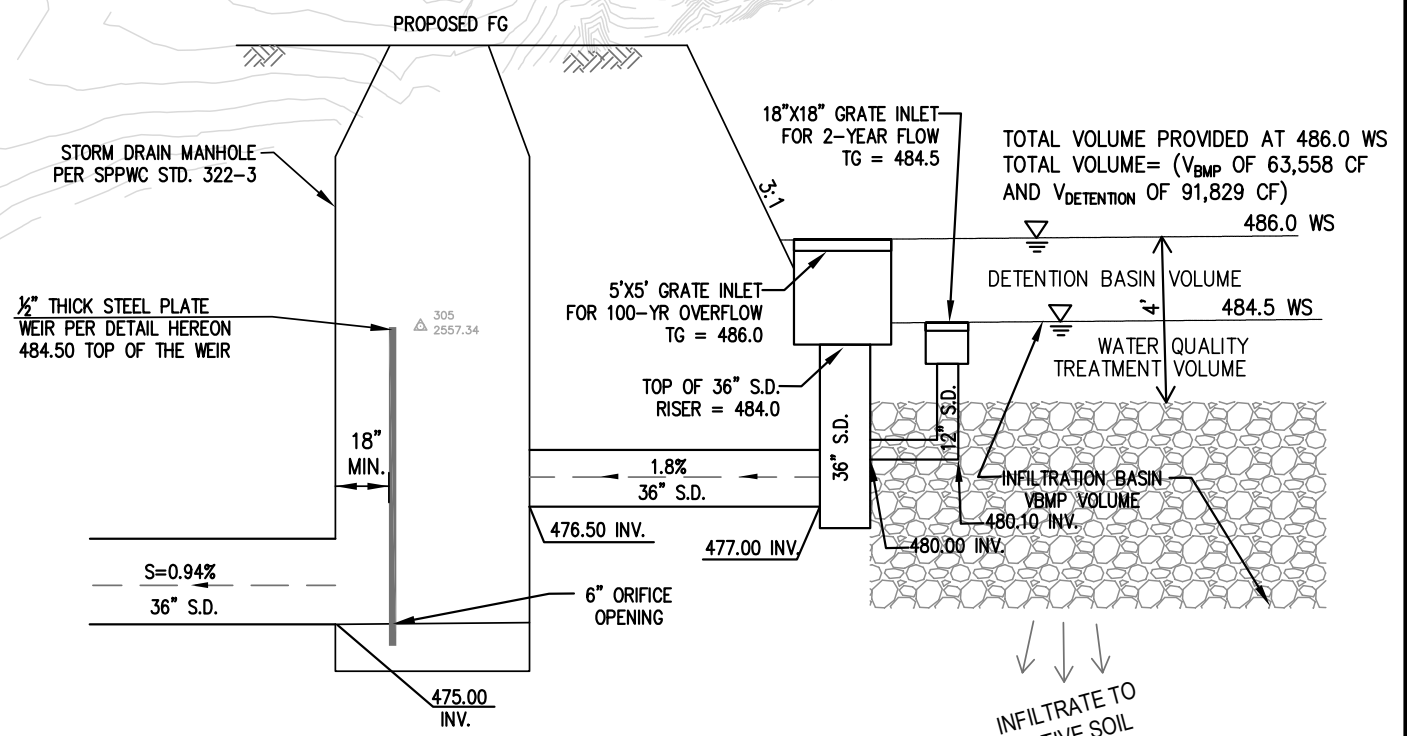
INFILTRATION BASIN DETAIL

NOT TO SCALE



DIVERSION WEIR DETAIL

N.T.S.



OUTLET CONTROL W/ ORIFICE PLATE DETAIL

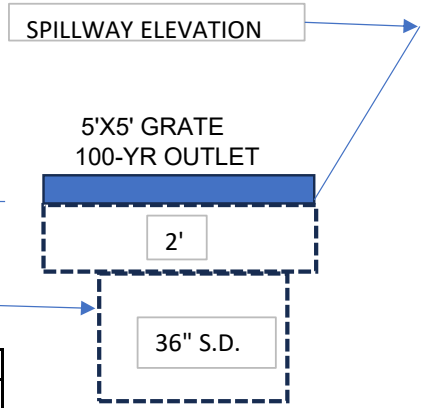
N.T.S.

PROJECT NAME: 23-835 OAK VALLEY PARKWAY

PROJECT LOCATION: BEAUMONT, CA

BASIN STORAGE and Outlet RESULTS

Stage (ft)	Gravel (cubic ft)	R-Tank (CF)	Forebay (CF)	Aboveground (CF)	Storage (Ac-ft)	Total Outflow (cfs)	
0.00	0	0	0	0	0.000	0.00	
0.50	1,107	0	0	0	0.025	0.00	
8.00	17,706	0.00	0	0	0.406	0.00	
10.50	17,706	21,120	5,244	19,488	1.459	0.00	FULL WQMP DCV
11.00	17,706	21,699	5,244	27,384	1.654	1.77	
11.50	17,706	24,986	5,244	35,279	1.910	1.89	
12.00	17,706	29,809	5,244	39,070	2.108	2.02	Top of Basin



OUTFLOW FROM THE DIVERSION MANHOLE WITH THE HEAD OVER THE 36" STORM DRAIN PIPE > THAN Q100 STORM EVENT, 1-HOUR DURATION. THEREFORE, 36" S.D. IS PROPERLY SIZED.

TOP = 484.0'

36" OUTLET STORM DRAIN

H	Q
0.00	0.00
2.00	48.13

23-835 OAK VALLEY PARKWAY , BEAUMONT, CA

ORIFICE OUTLET CONTROL

Use Orifice Equation: Q = CA(2gH)^(1/2)

C =	0.60		Constant
g =	32.2	ft/ft/s	Acceleration
Orifice	6.0	inch diameter	Circular Pipe Dia.
	0.50	feet diameter	Circular Pipe Dia.
A =	28.27	square inches	Area
	0.20	square feet	Area

Q = Discharge, CFS
H = Depth of Water, ft

6" Opening:

H	Q	
0.00	0.00	
2.50	1.49	Stage10.5
3.50	1.77	Stage 11.0
4.00	1.89	Stage 11.5
4.50	2.01	Stage 12.0

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/11/25

23-385 OAK VALLEY PARKWAY, BEAUMONT, CA
2-YEAR 24-HOUR BASIN ROUTING

Program License Serial Number 6310

********** HYDROGRAPH INFORMATION **********

From study/file name: 3385p2242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 98
Time interval = 15.0 (Min.)
Maximum/Peak flow rate = 6.500 (CFS)
Total volume = 3.956 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 98
Hydrograph time unit = 15.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)
0.000	0.000	0.000
0.500	0.025	0.005
8.000	0.406	0.010
10.50	1.459	0.011
11.00	1.654	1.770
11.50	1.910	1.890
12.00	2.108	2.020

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.6	3.24	4.86	6.48	Depth (Ft.)
0.250	0.24	0.07	0.002	OI	|	|	|	|	0.03
0.500	0.49	0.25	0.006	|OI	|	|	|	|	0.11
0.750	0.57	0.42	0.010	| O	|	|	|	|	0.18
1.000	0.69	0.55	0.013	| OI	|	|	|	|	0.23
1.250	0.64	0.62	0.015	| O	|	|	|	|	0.26
1.500	0.58	0.61	0.014	| IO	|	|	|	|	0.26
1.750	0.57	0.59	0.014	| O	|	|	|	|	0.25
2.000	0.69	0.62	0.014	| O	|	|	|	|	0.26
2.250	0.76	0.68	0.016	| O	|	|	|	|	0.29
2.500	0.77	0.73	0.017	| O	|	|	|	|	0.31
2.750	0.89	0.79	0.019	| OI	|	|	|	|	0.33
3.000	0.95	0.87	0.020	| O	|	|	|	|	0.36

3.250	0.96	0.92	0.022	O				0.39
3.500	0.96	0.94	0.022	O				0.39
3.750	0.96	0.95	0.022	O				0.40
4.000	1.08	0.99	0.023	OI				0.42
4.250	1.14	1.06	0.025	O				0.45
4.500	1.27	1.15	0.027	OI				0.48
4.750	1.33	1.20	0.030	OI				0.53
5.000	1.46	1.20	0.034	O I				0.59
5.250	1.28	1.20	0.037	OI				0.65
5.500	1.28	1.20	0.039	OI				0.68
5.750	1.45	1.20	0.043	O I				0.74
6.000	1.53	1.20	0.049	O I				0.84
6.250	1.65	1.20	0.057	O I				0.98
6.500	1.72	1.20	0.067	O I				1.14
6.750	1.84	1.20	0.079	O I				1.34
7.000	1.91	1.20	0.093	O I				1.57
7.250	1.91	1.20	0.108	O I				1.81
7.500	2.04	1.20	0.124	O I				2.07
7.750	2.22	1.20	0.144	O I				2.39
8.000	2.41	1.20	0.167	O I				2.76
8.250	2.72	1.20	0.195	O I				3.23
8.500	2.86	1.20	0.228	O I				3.77
8.750	2.99	1.20	0.264	O I				4.35
9.000	3.18	1.20	0.303	O I				4.99
9.250	3.49	1.20	0.347	O I				5.71
9.500	3.75	1.20	0.397	O I				6.06
9.750	3.94	1.20	0.452	O I				6.16
10.000	4.13	1.20	0.511	O I				6.27
10.250	3.36	1.20	0.563	O I				6.36
10.500	2.92	1.20	0.604	O I				6.44
10.750	3.47	1.20	0.645	O I				6.51
11.000	3.80	1.20	0.695	O I				6.60
11.250	3.71	1.20	0.748	O I				6.70
11.500	3.64	1.20	0.799	O I				6.80
11.750	3.40	1.20	0.848	O I				6.88
12.000	3.39	1.20	0.893	O I				6.97
12.250	4.28	1.20	0.948	O I				7.07
12.500	4.86	1.20	1.017	O I				7.19
12.750	5.21	1.20	1.097	O I				7.34
13.000	5.47	1.20	1.182	O I				7.50
13.250	6.15	1.20	1.278	O I				7.67
13.500	6.50P	1.20	1.383	O I				7.86
13.750	5.18	1.62	1.475	O I				8.14
14.000	4.48	1.66	1.541	O I				8.36
14.250	4.89	1.70	1.603	O I				8.57
14.500	5.02	1.74	1.670	O I				8.80
14.750	4.99	1.79	1.737	O I				9.02
15.000	4.86	1.84	1.801	O I				9.23
15.250	4.67	1.90	1.861	O I				9.42
15.500	4.48	1.95	1.915	O I				9.59
15.750	3.93	1.98	1.962	O I				9.99
16.000	3.67	2.01	1.999	O I				11.31
16.250	1.83	2.02	2.014	O				11.94
16.500	0.87	2.01	2.000	I O				11.33
16.750	0.65	1.99	1.975	I O				10.80
17.000	0.58	1.97	1.947	I O				9.86
17.250	0.82	1.95	1.920	I O				9.63
17.500	0.94	1.93	1.898	I O				9.54
17.750	0.96	1.91	1.878	I O				9.48
18.000	0.84	1.90	1.858	I O				9.41
18.250	0.77	1.88	1.835	I O				9.34
18.500	0.77	1.86	1.813	I O				9.26
18.750	0.65	1.83	1.789	I O				9.19
19.000	0.46	1.81	1.763	I O				9.11
19.250	0.51	1.79	1.736	I O				9.02
19.500	0.69	1.77	1.711	I O				8.94
19.750	0.64	1.75	1.689	I O				8.86
20.000	0.46	1.74	1.664	I O				8.78
20.250	0.51	1.72	1.638	I O				8.69
20.500	0.57	1.71	1.614	I O				8.61
20.750	0.57	1.69	1.591	I O				8.53
21.000	0.45	1.68	1.567	I O				8.45
21.250	0.51	1.66	1.542	I O				8.36
21.500	0.45	1.64	1.518	I O				8.28
21.750	0.51	1.63	1.494	I O				8.20
22.000	0.45	1.61	1.470	I O				8.12
22.250	0.51	1.20	1.451	I O				7.99
22.500	0.45	1.20	1.436	I O				7.96
22.750	0.39	1.20	1.420	I O				7.93

23.000	0.38	1.20	1.404	I	O			7.90
23.250	0.38	1.20	1.387	I	O			7.87
23.500	0.38	1.20	1.370	I	O			7.84
23.750	0.38	1.20	1.353	I	O			7.81
24.000	0.38	1.20	1.336	I	O			7.78
24.250	0.14	1.20	1.317	I	O			7.74
24.500	0.01	1.20	1.294	I	O			7.70
24.750	0.00	1.20	1.270	I	O			7.66
25.000	0.00	1.20	1.245	I	O			7.61
25.250	0.00	1.20	1.220	I	O			7.56
25.500	0.00	1.20	1.196	I	O			7.52
25.750	0.00	1.20	1.171	I	O			7.47
26.000	0.00	1.20	1.146	I	O			7.43
26.250	0.00	1.20	1.121	I	O			7.38
26.500	0.00	1.20	1.097	I	O			7.34
26.750	0.00	1.20	1.072	I	O			7.29
27.000	0.00	1.20	1.047	I	O			7.25
27.250	0.00	1.20	1.023	I	O			7.20
27.500	0.00	1.20	0.998	I	O			7.16
27.750	0.00	1.20	0.973	I	O			7.11
28.000	0.00	1.20	0.949	I	O			7.07
28.250	0.00	1.20	0.924	I	O			7.02
28.500	0.00	1.20	0.899	I	O			6.98
28.750	0.00	1.20	0.875	I	O			6.93
29.000	0.00	1.20	0.850	I	O			6.89
29.250	0.00	1.20	0.825	I	O			6.84
29.500	0.00	1.20	0.800	I	O			6.80
29.750	0.00	1.20	0.776	I	O			6.75
30.000	0.00	1.20	0.751	I	O			6.71
30.250	0.00	1.20	0.726	I	O			6.66
30.500	0.00	1.20	0.702	I	O			6.62
30.750	0.00	1.20	0.677	I	O			6.57
31.000	0.00	1.20	0.652	I	O			6.53
31.250	0.00	1.20	0.628	I	O			6.48
31.500	0.00	1.20	0.603	I	O			6.44
31.750	0.00	1.20	0.578	I	O			6.39
32.000	0.00	1.20	0.554	I	O			6.35
32.250	0.00	1.20	0.529	I	O			6.30
32.500	0.00	1.20	0.504	I	O			6.25
32.750	0.00	1.20	0.479	I	O			6.21
33.000	0.00	1.20	0.455	I	O			6.16
33.250	0.00	1.20	0.430	I	O			6.12
33.500	0.00	1.20	0.405	I	O			6.07
33.750	0.00	1.20	0.381	I	O			6.03
34.000	0.00	1.20	0.356	I	O			5.85
34.250	0.00	1.20	0.331	I	O			5.45
34.500	0.00	1.20	0.307	I	O			5.05
34.750	0.00	1.20	0.282	I	O			4.65
35.000	0.00	1.20	0.257	I	O			4.24
35.250	0.00	1.20	0.233	I	O			3.84
35.500	0.00	1.20	0.208	I	O			3.44
35.750	0.00	1.20	0.183	I	O			3.03
36.000	0.00	1.20	0.159	I	O			2.63
36.250	0.00	1.20	0.134	I	O			2.23
36.500	0.00	1.20	0.109	I	O			1.82
36.750	0.00	1.20	0.084	I	O			1.42
37.000	0.00	1.20	0.060	I	O			1.02
37.250	0.00	1.20	0.035	I	O			0.62
37.500	0.00	0.67	0.016	I	O			0.28
37.750	0.00	0.26	0.006	IO				0.11
38.000	0.00	0.10	0.002	O				0.04
38.250	0.00	0.04	0.001	O				0.02
38.500	0.00	0.02	0.000	O				0.01
38.750	0.00	0.01	0.000	O				0.00
39.000	0.00	0.00	0.000	O				0.00

**********HYDROGRAPH DATA**********

Number of intervals = 156
Time interval = 15.0 (Min.)
Maximum/Peak flow rate = 2.018 (CFS)
Total volume = 3.956 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
✓ A. **On-site storm drain inlets**	✓ **Locations of inlets.**	✓ **Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.**	✓ **Maintain and periodically repaint or replace inlet markings.** ✓ **Provide stormwater pollution prevention information to new site owners, lessees, or operators.** ✓ **See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com** ✓ **Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."**
✓ B. **Interior floor drains and elevator shaft sump pumps**		✓ **State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.**	✓ **Inspect and maintain drains to prevent blockages and overflow.**
☐ C. **Interior parking garages**		☐ **State that parking garage floor drains will be plumbed to the sanitary sewer.**	☐ **Inspect and maintain drains to prevent blockages and overflow.**

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls**— Shown on **WQMP Drawings**	3 **Permanent Controls**– Listed in WQMP **Table and Narrative**	4 **Operational BMPs**— Included in WQMP **Table and Narrative**
☐ **D1.** Need for future indoor & structural pest control		☐ Note building design features that discourage entry of pests.	☐ Provide Integrated Pest Management information to owners, lessees, and operators.
☑ **D2.** Landscape/ Outdoor Pesticide Use	☑ Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. ☑ Show self-retaining landscape areas, if any. ☑ Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)	State that final landscape plans will accomplish all of the following. ☑ Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. ☑ Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. ☑ Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. ☑ Consider using pest-resistant plants, especially adjacent to hardscape. ☑ To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	☑ Maintain landscaping using minimum or no pesticides. ☑ See applicable operational BMPs in "What you should know for…..Landscape and Gardening" at http://rcflood.org/stormwater/downloads/landscapegardenbrochure.pdf ☑ Provide IPM information to new owners, lessees and operators.

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
❑ E. **Pools, spas, ponds, decorative fountains, and other water features.**	❑ **Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. (Exception: Public pools must be plumbed according to County Department of Environmental Health Guidelines.)**	**If the Co-Permittee requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.**	❑ **See applicable operational BMPs in** "Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain" at http://rcflood.org/stormwater/
✓ F. **Food service**	✓ **For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment.** ✓ **On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.**	✓ **Describe the location and features of the designated cleaning area.** ✓ **Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.**	✓ **See the brochure, "**The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" at http://rcflood.org/stormwater/ **Provide this brochure to new site owners, lessees, and operators.**
✓ G. **Refuse areas**	✓ **Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas.** ❑ **If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area.** ❑ **Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.**	❑ **State how site refuse will be handled and provide supporting detail to what is shown on plans.** ❑ **State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.**	✓ **State how the following will be implemented:** **Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at** www.cabmphandbooks.com

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
❑ H. **Industrial processes.**	❑ **Show process area.** All processing areas are indoor.	❑ **If industrial processes are to be located on site, state: "All process activities to be performed indoors. No processes to drain to exterior or to storm drain system."**	❑ **See Fact Sheet SC-10, "Non-Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com** See the brochure "Industrial & Commercial Facilities Best Management Practices for: Industrial, Commercial Facilities" at http://rcflood.org/stormwater/

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
❑ I. **Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)**	❑ **Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area.** ❑ **Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults.** ❑ **Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.**	**Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains.** **Where appropriate, reference documentation of compliance with the requirements of Hazardous Materials Programs for:** ▪ **Hazardous Waste Generation** ▪ **Hazardous Materials Release Response and Inventory** ▪ **California Accidental Release (CalARP)** ▪ **Aboveground Storage Tank** ▪ **Uniform Fire Code Article 80 Section 103(b) & (c) 1991** ▪ **Underground Storage Tank** www.cchealth.org/groups.hazmat/	❑ **See the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC-33, "Outdoor Storage of Raw Materials " in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
❑ J. **Vehicle and Equipment Cleaning**	❑ **Show on drawings as appropriate:** **(1) Commercial/industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses.** **(2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use).** **(3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer.** **(4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.**	❑ **If a car wash area is not provided, describe any measures taken to discourage on-site car washing and explain how these will be enforced.**	**Describe operational measures to implement the following (if applicable):** ❑ **Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system.** Refer to "Outdoor Cleaning Activities and Professional Mobile Service Providers" for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/ ❑**Car dealerships and similar may rinse cars with water only.**

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
❑ K. **Vehicle/Equipment Repair and Maintenance**	❑ **Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater.** ❑ **Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas.** ❑ **Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.**	❑ **State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area.** ❑ **State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.** ❑ **State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.**	**In the Stormwater Control Plan, note that all of the following restrictions apply to use the site:** ❑ **No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains.** ❑ **No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately.** ❑ **No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.** Refer to "Automotive Maintenance & Car Care Best Management Practices for Auto Body Shops, Auto Repair Shops, Car Dealerships, Gas Stations and Fleet Service Operations". Brochure can be found at http://rcflood.org/stormwater/ Refer to Outdoor Cleaning Activities and Professional Mobile Service Providers for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
❑ L. **Fuel Dispensing Areas**	❑ **Fueling areas[6] shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable.** ❑ **Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area[1].] The canopy [or cover] shall not drain onto the fueling area.**		❑ **The property owner shall dry sweep the fueling area routinely.** ❑ **See the Fact Sheet SD-30 , "Fueling Areas" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

[6] **The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.**

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
✓ M. **Loading Docks**	❑ **Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer.** ❑ **Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation.** ❑ **Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.**		✓ **Move loaded and unloaded items indoors as soon as possible.** ✓ **See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls**— Shown on **WQMP Drawings**	3 **Permanent Controls**– Listed in WQMP **Table and Narrative**	4 **Operational BMPs**– Included in WQMP **Table and Narrative**
✓ **N.** Fire Sprinkler Test Water		✓ Provide a means to drain fire sprinkler test water to the sanitary sewer.	✓ See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
O. Miscellaneous Drain or Wash Water or Other Sources ☐ Boiler drain lines ✓ Condensate drain lines ✓ Rooftop equipment ☐ Drainage sumps ✓ Roofing, gutters, and trim. ☐ Other sources		☐ Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. ✓ Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. ✓ Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. ☐ Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. ✓ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. ☐ Include controls for other sources as specified by local reviewer.	

1 Potential Sources of Runoff Pollutants	2 Permanent Controls— **Shown on** WQMP Drawings	3 Permanent Controls– **Listed in WQMP** Table and Narrative	4 Operational BMPs— **Included in WQMP** Table and Narrative
P. **Plazas, sidewalks, and parking lots.**			**Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.**

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms

Recording requested by and mail to:

City Clerk
City of Beaumont
550 E. Sixth Street
Beaumont, CA 92223

SPACE ABOVE THIS LINE FOR RECORDER'S USE
EXEMPT FROM RECORDER'S FEES PURSUANT TO GOVERNMENT CODE SECTION 6103 AND 27383

APN(s): 414080005, 414080003, 414070007, 400561012, 400520005, 400520003, 400530007, 414080001, 414090019, 400561022, 400520009, 400530005, 414070008, 400561016, 400561015, 400561013, 414080004, 400561014, 400530004, 400561019, 400561055, 414080002, 400561021

STORM WATER MANAGEMENT WQMP/BMP FACILITIES
COVENANT AND AGREEMENT NO.
City of Beaumont, Riverside County, California

THIS COVENANT AND AGREEMENT is made and entered into as of this ____ day of _____, 2025 (this "Agreement"), by and between _____
_____ ("Project Owner"), on the one hand (collectively, "Owner"), and the City of Beaumont, California, on the other hand ("City").

The Owner hereby certifies I am (we are) the sole owner of or tenant at, as applicable, certain real property located in the City of Beaumont, County of Riverside, State of California, more specifically described in **Exhibit "A"** ("Property").

The Owner is executing this Agreement in order to satisfy the requirements of the plot plans conditions of approval, condition no. 83, for its battery energy storage project on the Property (the "Project").

The Owner covenants and agrees to comply with the Project Water Quality Management Plan ("WQMP"), attached hereto as **Exhibit "B"**, providing for storm water quality treatment within the confines of the Property.

The Owner covenants and agrees that the health, safety and welfare of the residents of the City of Beaumont, require that the Best Management Practice ("BMP") facilities, more specifically described in the WQMP (for example bio- swales, catch basins, roof drains and appurtenances) be constructed and maintained to minimize pollutants in urban runoff by the Owner.

The Owner further covenants and agrees as follows:

1. The on-site storm water management/BMP facilities mentioned above shall be constructed by the Owner at its sole cost and expense, in accordance with the plans and specifications identified in the WQMP approved by City.

2. The Owner shall adequately maintain the storm water management/BMP facilities in a manner assuring peak performance at all times, including source control BMPs at all times as its sole responsibility, at its sole cost and expense. This includes all pipes and channels built to convey storm water on the Property, including catch basin inserts, underground detention ponds, swales and vegetation provided to control the quantity and quality of the storm water. Adequate maintenance is herein defined as good working condition so that these facilities are performing in accordance with their design functions continuously at all times.

3. The Owner shall annually inspect the storm water management/BMP facilities mentioned above and submit an inspection report annually to the Public Works Department by the anniversary of the date of this Agreement of each year. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the storm water management BMPs listed in the WQMP such as bioswales, catch basins and related filter units, etc. Deficiencies shall be noted in the inspection report and corrected by Owner promptly.

4. The Owner hereby grants permission to City, its authorized agents and employees, to enter upon the Property and to inspect the storm water management/BMP facilities, take samples and perform testing whenever the City deems necessary and as required by the City's most current National Pollutant Discharge Elimination System (NPDES) Permit. The purpose of the inspection, testing and sampling is to follow up on apparent and reported deficiencies and/or to respond to citizen complaints and meet the requirements of the City's NPDES Permit issued by the State Water Resources Control Board – Santa Ana River Region. The City shall provide the Owner with advanced notice of entering upon the Property, except in the event of an emergency, as determined by the City. The City shall provide the Owner copies of the inspection findings and a directive to commence with the repairs if necessary. Owner or Owner's successors or assigns shall pay City for all costs incurred by City in the inspection, sampling, testing of the BMPs within thirty (30) calendar days of City invoice.

5. In the event the Owner fails to maintain the storm water management/BMP facilities in good working condition acceptable to the City, upon five (5) days advanced written notice, the City may enter upon the Property and take whatever steps necessary to correct deficiencies identified in any inspection report and to charge the costs of such repairs to the Owner the cost of which shall constitute a lien against the Property. In the event of an emergency, as determined by City, advanced notice as aforesaid, shall not be required. Notwithstanding the forgoing, it is expressly understood and agreed that the City is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation to the City.

6. The Owner will perform the work necessary to keep these facilities in good working order as appropriate. The maintenance schedule for the storm water management BMP

facilities (including sediment removal) is outlined in the approved WQMP and the schedule must be followed at all times. In the future, City of Beaumont may adopt an annual Stormwater Inspection Fee that would be assessed to the Owner.

7. In the event the City, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials and the like, the Owner, its successors and assigns shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City hereunder.

8. This Agreement imposes no liability of any kind whatsoever on the City. Owner agrees to indemnify, defend (with counsel reasonably approved by the City) and hold harmless the City and its authorized officers, employees, agents and volunteers (collectively, "City Parties") from any and all claims, actions, losses, damages, and/or liability (collectively, "Liabilities") arising out of this Agreement from any cause whatsoever, including the acts, errors or omissions of any person and for any costs or expenses incurred by the City on account of any claim except where such indemnification is prohibited by law. This indemnification provision shall apply regardless of the existence or degree of fault of indemnitees. The Owner's obligation under this Section 8 applies to the City's "active" as well as "passive" negligence but, notwithstanding anything to the contrary herein, does not apply to any City Party's "sole negligence" or "willful misconduct" within the meaning of Civil Code Section 2782, or to any Liabilities, to the extent caused by the acts or omissions of any City Parties or any third party contractors undertaking any work (other than field inspections) or other maintenance on the Property on behalf of the City under this Agreement.

9. This Agreement shall be recorded with the County Recorder for the County of Riverside and shall constitute a covenant running with the land, equitable servitude and lien against the Property, and shall be binding on the Owner, its successors, assigns, transferees, administrators, executors, heirs, encumbrancers and any other successors in interests, including any homeowner's association. This Agreement shall (and does hereby) terminate upon the Project's removal from the Property and the restoration of the surface of the Property to allow for water flow similar to conditions existing as of the date of this Agreement prior to the construction of the Project, and as provided in the Decommissioning Plan, Beaumont Energy Storage Project, July 2022 revised October 2022, prepared for Project Owner by Dudek. Project Owner's obligations under this Agreement shall continue as long as it is a tenant or in possession of the Property and shall run with and be binding upon any successor tenant on the Property.

10. In addition to any remedy available to City under this Agreement, if Owner violates any term of this Agreement and does not cure the violation within the time already provided in this Agreement, or, if not provided, within thirty (30) calendar days, or within such time authorized by the City if said cure reasonably requires more than the subject time, the City may bring an action at law or in equity in a court of competent jurisdiction to enforce compliance by the Owner with the terms of this Agreement. In such action, the City may recover any damages to which the City may be entitled for the violation, enjoin the violation by temporary or permanent injunction without the necessity of proving actual damages or the inadequacy of otherwise available legal remedies, or obtain other

equitable relief, including, but not limited to, the restoration of the Property and/or the BMPs identified in the WQMP to the condition in which it/they existed prior to any such violation or injury.

11. Owner shall provide printed educational materials with any sale of the Property which provide information on what storm water management facilities are present, the types and locations of maintenance signs that are required and how the necessary maintenance can be maintained.

12. Owner shall provide actual notice of this Agreement and its terms to any respective buyers or successor(s) in interest.

13. In order to be valid, amendment or change to this Agreement including the WQMP and BMPs requires an amendment executed by the City and Owner which is recorded with the Riverside County Recorder.

14. This Agreement may be executed in any number of counterparts, and all such counterpart signature pages combined to create one and the same instrument.

[Remainder of Page Intentionally Left Blank – Signature Page Follows]

WITNESS the following signatures:

OWNER:

_____

_____

By:_____ By:_____

Name:_____ Name:_____

Title:_____ Title:_____

City:

CITY OF BEAUMONT

a Municipal Corporation

Signature:_____
City Manager

ATTEST:

_____
City Manager

APPROVED AS TO FORM:

_____
John A. Pinkney, City Attorney

APPROVED AS TO CONTENT:

_____
Jeff Hart, Director of Engineering/Public Works

EXHIBIT "A"

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

LOTS 38, 39, 40, 41, 43, 44, AND 45 INCLUSIVE, OF BEAUMONT HEIGHTS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN PER MAP ON FILE IN BOOK 8, PAGE 53 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, TOGETHER WITH THAT PORTION OF THE UNNAMED STREET AS SHOWN BY MAP OF THE ABOVE MENTIONED BEAUMONT HEIGHTS, LYING WITHIN THE NORTH HALF OF SECTION 4, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN, ADJOINING LOTS 43, 44, AND 45 OF THE WEST, AS VACATED BY RESOLUTION RECORDED AUGUST 14, 1968 AS INSTRUMENT NO. 78782 OF OFFICIAL RECORDS, RIVERSIDE COUNTY.

EXCEPTING *THOSE PORTIONS CONVEYED TO THE COUNTY OF RIVERSIDE BY DEED RECORDED OCTOBER 17, 1967 AS INSTRUMENT NO. 91449 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.*

ALSO ***EXCEPTING*** *ALL MINERAL AND OIL RIGHTS AS RESERVED BY HANNAH M. HOUGHTELIN IN DEED RECORDED IN DEED RECORDED JULY 24, 1936 IN BOOK 287, PAGE 520 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.*

PARCEL 2:

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING EASTERLY OF THE EASTERLY LINE, OF THE LAND DESCRIBED IN PARCELS 8F AND 8G OF THE FINAL ORDER OF CONDEMNATION IN CASE NO. 77829 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, A CERTIFIED COPY OF WHICH WAS RECORDED MARCH 31, 1964 AS INSTRUMENT NO. 39647 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, AND LYING EASTERLY OF THE EASTERLY LINE OF THE LAND DESCRIBED IN PARCEL NO. 1 OF THE FINAL ORDER OF CONDEMNATION IN CASE NO. 32726 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, A CERTIFIED COPY OF WHICH WAS RECORDED AUGUST 03, 1943 IN BOOK 587, PAGE 380 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, AND LYING SOUTHEASTERLY OF THE SOUTHEASTERLY LINE OF THAT CERTAIN PARCEL OF LAND CONVEYED TO THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BY DEED RECORDED OCTOBER 17, 1967 AS INSTRUMENT NO. 91452 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM *THAT PORTION, IF ANY, IN JACKSON ROAD.*

ALSO ***EXCEPTING THEREFROM*** *ONE-HALF OF ALL OIL, GAS, AND MINERAL RIGHTS, AS RESERVED IN DEED FROM R. J. STRUTHERS AND MARGARET E. STRUTHERS, RECORDED AUGUST 28, 1946 IN BOOK 768, PAGE 240 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.*

EXHIBIT "B"

WQMP

See Project Specific Water Quality Management Plan

Project Title: OAK VALLEY VILLAGE

Development No.: PP2024-0059

Design Review/Case No.: PW2025-0151

Revision Date: 5/28/25

(copy of which is on file with the City of Beaumont)

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information

Drainage System Maintenance SC-44

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff and stormwater that may contain certain pollutants. The protocols in this fact sheet are intended to reduce pollutants reaching receiving waters through proper conveyance system operation and maintenance.

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	
Bacteria	✓
Oil and Grease	
Organics	

Approach

Pollution Prevention

Maintain catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Suggested Protocols

Catch Basins/Inlet Structures

- Staff should regularly inspect facilities to ensure compliance with the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC34 Waste Handling and Disposal).

CASQA California Stormwater Quality Association

Waste Handling & Disposal SC-34

Description

Improper storage and handling of solid wastes can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff. The discharge of pollutants to stormwater from waste handling and disposal can be prevented and reduced by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, reuse, and recycling; and preventing run-on and runoff.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- ☐ Accomplish reduction in the amount of waste generated using the following source controls:
  - ✓ Production planning and sequencing;
  - ✓ Process or equipment modification;
  - ✓ Raw material substitution or elimination;
  - ✓ Loss prevention and housekeeping;
  - ✓ Waste segregation and separation; and
  - ✓ Close loop recycling.
- ☐ Establish a material tracking system to increase awareness about material usage. This may reduce spills and minimize contamination, thus reducing the amount of waste produced.
- ☐ Recycle materials whenever possible.

Objectives
■ *Cover*
■ *Contain*
■ *Educate*
■ *Reduce/Minimize*
■ *Product Substitution*

Targeted Constituents	
Sediment	
Nutrients	
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered	
Good Housekeeping	✓
Preventative Maintenance	✓
Spill and Leak Prevention and Response	✓
Material Handling & Waste Management	✓
Erosion and Sediment Controls	
Employee Training Program	✓
Quality Assurance Record Keeping	✓

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CALIFORNIA STORMWATER QUALITY ASSOCIATION®

- Use the entire product before disposing of the container.
- To the extent possible, store wastes under cover or indoors after ensuring all safety concerns such as fire hazard and ventilation are addressed.
- Provide containers for each waste stream at each work station. Allow time after shift to clean area.

Good Housekeeping

- Cover storage containers with leak proof lids or some other means. If waste is not in containers, cover all waste piles (plastic tarps are acceptable coverage) and prevent stormwater run-on and runoff with a berm. The waste containers or piles must be covered except when in use.
- Use drip pans or absorbent materials whenever grease containers are emptied by vacuum trucks or other means. Grease cannot be left on the ground. Collected grease must be properly disposed of as garbage.
- Dispose of rinse and wash water from cleaning waste containers into a sanitary sewer if allowed by the local sewer authority. Do not discharge wash water to the street or storm drain. Clean in a designated wash area that drains to a clarifier.
- Transfer waste from damaged containers into safe containers.
- Take special care when loading or unloading wastes to minimize losses. Loading systems can be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.
- Keep the waste management area clean at all times by sweeping and cleaning up spills immediately.
- Use dry methods when possible (e.g., sweeping, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Stencil or demarcate storm drains on the facility's property with prohibitive message regarding waste disposal.
- Cover waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropylene or hypalon.
- If possible, move the activity indoor after ensuring all safety concerns such as fire hazard and ventilation are addressed.

Preventative Maintenance

- Prevent stormwater run-on from entering the waste management area by enclosing the area or building a berm around the area.
- Prevent waste materials from directly contacting rain.

- Cover waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropylene or hypalon.
- Cover the area with a permanent roof if feasible.
- Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.
- Check waste containers weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating.
- Sweep and clean the waste management area regularly. Use dry methods when possible (e.g., sweeping, vacuuming, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Inspect and replace faulty pumps or hoses regularly to minimize the potential of releases and spills.
- Repair leaking equipment including valves, lines, seals, or pumps promptly.

Spill Response and Prevention Procedures

- Keep your spill prevention and plan up-to-date.
- Have an emergency plan, equipment and trained personnel ready at all times to deal immediately with major spills.
- Collect all spilled liquids and properly dispose of them.
- Store and maintain appropriate spill cleanup materials in a location known to all near the designated wash area.
- Ensure that vehicles transporting waste have spill prevention equipment that can prevent spills during transport. Spill prevention equipment includes:
  - ✓ Vehicles equipped with baffles for liquid waste; and
  - ✓ Trucks with sealed gates and spill guards for solid waste.

Material Handling and Waste Management

Litter Control

- Post "No Littering" signs and enforce anti-litter laws.
- Provide a sufficient number of litter receptacles for the facility.
- Clean out and cover litter receptacles frequently to prevent spillage.

Waste Collection

- Keep waste collection areas clean.

- Inspect solid waste containers for structural damage regularly. Repair or replace damaged containers as necessary.
- Secure solid waste containers; containers must be closed tightly when not in use.
- Do not fill waste containers with washout water or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc., may not be disposed of in solid waste containers (see chemical/ hazardous waste collection section below).
- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal. Affix labels to all waste containers.

Chemical/Hazardous Wastes

- Select designated hazardous waste collection areas on-site.
- Store hazardous materials and wastes in covered containers and protect them from vandalism.
- Place hazardous waste containers in secondary containment.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- Hazardous waste cannot be reused or recycled; it must be disposed of by a licensed hazardous waste hauler.

Employee Training Program

- Educate employees about pollution prevention measures and goals.
- Train employees how to properly handle and dispose of waste using the source control BMPs described above.
- Train employees and subcontractors in proper hazardous waste management.
- Use a training log or similar method to document training.
- Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.

Quality Assurance and Record Keeping

- Keep accurate maintenance logs that document minimum BMP activities performed for waste handling and disposal, types and quantities of waste disposed of, and any improvement actions.
- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.

- Establish procedures to complete logs and file them in the central office.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Capital costs will vary substantially depending on the size of the facility and the types of waste handled. Significant capital costs may be associated with reducing wastes by modifying processes or implementing closed-loop recycling.
- Many facilities will already have indoor covered areas where waste materials will be stored and will require no additional capital expenditures for providing cover.
- If outdoor storage of wastes is required, construction of berms or other means to prevent stormwater run-on and runoff may require appropriate constructed systems for containment.
- Capital investments will likely be required at some sites if adequate cover and containment facilities do not exist and can vary significantly depending upon site conditions.

Maintenance

- Check waste containers weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating.
- Sweep and clean the waste management area regularly. Use dry methods when possible (e.g., sweeping, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Inspect and replace faulty pumps or hoses regularly to minimize the potential of releases and spills.
- Repair leaking equipment including valves, lines, seals, or pumps promptly.

References and Resources

Minnesota Pollution Control Agency, *Industrial Stormwater Best Management Practices Guidebook*. Available online at: http://www.pca.state.mn.us/index.php/view-document.html?gid=10557.

New Jersey Department of Environmental Protection, 2013. *Basic Industrial Stormwater General Permit Guidance Document NJPDES General Permit No NJ0088315,* Revised. Available online at: http://www.nj.gov/dep/dwq/pdf/5G2_guidance_color.pdf.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at: http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities

Oregon Department of Environmental Quality, 2013. *Industrial Stormwater Best Management Practices Manual- BMP 26 Fueling and Liquid Loading/Unloading Operations*. Available online at: http://www.deq.state.or.us/wq/wqpermit/docs/IndBMP021413.pdf.

Sacramento Stormwater Management Program. *Best Management Practices for Industrial Storm Water Pollution Control*. Available online at: http://www.msa.saccounty.net/sactostormwater/documents/guides/industrial-BMP-manual.pdf.

Sacramento County Environmental Management Stormwater Program: Best Management Practices. Available online at: http://www.emd.saccounty.net/EnvHealth/Stormwater/Stormwater-BMPs.html.

Santa Clara Valley Urban Runoff Pollution Prevention Program. http://www.scvurppp-w2k.com/

US EPA. National Pollutant Discharge Elimination System – Industrial Fact Sheet Series for Activities Covered by EPA's Multi Sector General Permit. Available online at: http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm.

- Clean catch basins, storm drain inlets, and other conveyance structures before the wet season to remove sediments and debris accumulated during the summer.
- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes if necessary with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed. Do not dewater near a storm drain or stream.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect and pump flushed effluent to the sanitary sewer for treatment whenever possible.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge to reach the storm drain system when cleaning a storm drain pump station or other facility.
- Conduct routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.

Open Channel

- Modify storm channel characteristics to improve channel hydraulics, increase pollutant removals, and enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a Steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies (SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS.

Illicit Connections and Discharges

- Look for evidence of illegal discharges or illicit connections during routine maintenance of conveyance system and drainage structures:
  - Is there evidence of spills such as paints, discoloring, etc?

- Are there any odors associated with the drainage system?
- Record locations of apparent illegal discharges/illicit connections?
- Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of upgradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
- Eliminate the discharge once the origin of flow is established.

- Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Inspect and clean up hot spots and other storm drainage areas regularly where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Allow only properly trained individuals to handle hazardous materials/wastes.
- Have staff involved in detection and removal of illicit connections trained in the following:
  - OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).

- OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and Federal OSHA 29 CFR 1910.146).

- Procedural training (field screening, sampling, smoke/dye testing, TV inspection).

Spill Response and Prevention

- Investigate all reports of spills, leaks, and/or illegal dumping promptly.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags) or dig up, remove, and properly dispose of contaminated soil.
- Refer to fact sheet SC-11 Spill Prevention, Control, and Cleanup.

Other Considerations (Limitations and Regulations)

- Clean-up activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and prohibition against disposal of flushed effluent to sanitary sewer in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Local municipal codes may include sections prohibiting discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget.
- The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal. The primary cost is for staff time. Cost depends on how aggressively a program is implemented. Other cost considerations for an illegal dumping program include:

  - Purchase and installation of signs.

  - Rental of vehicle(s) to haul illegally-disposed items and material to landfills.

  - Rental of heavy equipment to remove larger items (e.g., car bodies) from channels.

  - Purchase of landfill space to dispose of illegally-dumped items and material.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.
- Teams of at least two people plus administrative personnel are required to identify illicit discharges, depending on the complexity of the storm sewer system.
- Arrangements must be made for proper disposal of collected wastes.
- Technical staff are required to detect and investigate illegal dumping violations.

Supplemental Information

Further Detail of the BMP

Storm Drain Flushing

Flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in storm drainage systems. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as an open channel, another point where flushing will be initiated, or the sanitary sewer and the treatment facilities, thus preventing resuspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. Deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, thereby releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce impacts of stormwater pollution, a second inflatable device placed well downstream may be used to recollect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to recollect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75% for organics and 55-65% for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm sewer flushing.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

Ferguson, B.K. 1991. Urban Stream Reclamation, p. 324-322, Journal of Soil and Water Conservation.

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line:
http://www.epa.gov/npdes/menuofbmps/poll_16.htm

Landscaping and garden maintenance activities can be major contributors to water pollution. Soils, yard wastes, over-watering and garden chemicals become part of the urban runoff mix that winds its way through streets, gutters and storm drains before entering lakes, rivers, streams, etc. Urban runoff pollution contaminates water and harms aquatic life!

In Riverside County, report illegal discharges into the storm drain, call
1-800-506-2555
"Only Rain Down the Storm Drain"

Important Links:

Riverside County Household Hazardous Waste Collection Information
1-800-304-2226 or www.rivcowm.org

Riverside County Backyard Composting Program
1-800-366-SAVE

Integrated Pest Management (IPM) Solutions
www.ipm.ucdavis.edu

California Master Gardener Programs
www.mastergardeners.org
www.camastergardeners.ucdavis.edu

California Native Plant Society
www.cnps.org

The Riverside County "Only Rain Down the Storm Drain" Pollution Prevention Program gratefully acknowledges Orange County's Storm Water Program for their contribution to this brochure.

...Only Rain Down ...the Storm Drain

What you should know for... Landscape and Gardening

Best Management tips for:

- Professionals
- Novices
- Landscapers
- Gardeners
- Cultivators

Tips for Landscape & Gardening

This brochure will help you to get the most of your lawn and gardening efforts and keep our waterways clean. Clean waterways provide recreation, establish thriving fish habitats, secure safe sanctuaries for wildlife, and add beauty to our communities. NEVER allow gardening products or waste water to enter the street, gutter or storm drain.

General Landscaping Tips

- Protect stockpiles and materials from wind and rain by storing them under tarps or secured plastic sheeting.
- Prevent erosion of slopes by planting fast-growing, dense ground covering plants. These will shield and bind the soil.

- Plant native vegetation to reduce the amount of water, fertilizers and pesticides applied to the landscape.
- Never apply pesticides or fertilizers when rain is predicted within the next 48 hours.

Garden & Lawn Maintenance

- Do not overwater. Use irrigation practices such as drip irrigation, soaker hoses or micro-spray systems. Periodically inspect and fix leaks and misdirected sprinklers.
- Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain. Instead, dispose of green waste by composting, hauling it to a permitted landfill, or recycling it through your city's program.

- Consider recycling your green waste and adding "nature's own fertilizer" to your lawn or garden.
- Read labels and use only as directed. Do not over-apply pesticides or fertilizers. Apply to spots as needed, rather than blanketing an entire area.
- Store pesticides, fertilizers and other chemicals in a dry covered area to prevent exposure that may result in the deterioration of containers and packaging.
- Rinse empty pesticide containers and re-use rinse water as you would use the product. Do not dump rinse water down storm drains or sewers. Dispose of empty containers in the trash.
- When available, use non-toxic alternatives to traditional pesticides, and use pesticides specifically designed to control the pest you are targeting.
- Try natural long-term common sense solutions first. Integrated Pest Management (IPM) can provide landscaping guidance and solutions, such as:
  - **Physical Controls** - Try hand picking, barriers, traps or caulking holes to control weeds and pests.
  - **Biological Controls** - Use predatory insects to control harmful pests.
  - **Chemical Controls** - Check out www.ipm.ucdavis.edu before using chemicals. Remember, all chemicals should be used cautiously and in moderation.
- If fertilizer is spilled, sweep up the spill before irrigating. If the spill is liquid, apply an absorbent material such as cat litter, and then sweep it up and dispose of it in the trash.
- Take unwanted pesticides to a Household Waste Collection Center to be recycled.
- *Dumping toxics into the street, gutter or storm drain is illegal!*

www.bewaterwise.com Great water conservation tips and drought tolerant garden designs.

www.ourwaterourworld.com Learn how to safely manage home and garden pests.

Additional information can also be found on the back of this brochure.

Waste Handling & Disposal SC-34

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Improper storage and handling of solid wastes can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff. The discharge of pollutants to stormwater from waste handling and disposal can be prevented and reduced by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, re-use, and recycling; and preventing runon and runoff.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

Pollution Prevention

- Reduction in the amount of waste generated can be accomplished using the following source controls such as:
  - Production planning and sequencing
  - Process or equipment modification
  - Raw material substitution or elimination
  - Loss prevention and housekeeping
  - Waste segregation and separation
  - Close loop recycling
- Establish a material tracking system to increase awareness about material usage. This may reduce spills and minimize contamination, thus reducing the amount of waste produced.
- Recycle materials whenever possible.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Suggested Protocols

General

- Cover storage containers with leak proof lids or some other means. If waste is not in containers, cover all waste piles (plastic tarps are acceptable coverage) and prevent stormwater runon and runoff with a berm. The waste containers or piles must be covered except when in use.
- Use drip pans or absorbent materials whenever grease containers are emptied by vacuum trucks or other means. Grease cannot be left on the ground. Collected grease must be properly disposed of as garbage.
- Check storage containers weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating.
- Sweep and clean the storage area regularly. If it is paved, do not hose down the area to a storm drain.
- Dispose of rinse and wash water from cleaning waste containers into a sanitary sewer if allowed by the local sewer authority. Do not discharge wash water to the street or storm drain.
- Transfer waste from damaged containers into safe containers.
- Take special care when loading or unloading wastes to minimize losses. Loading systems can be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide a sufficient number of litter receptacles for the facility.
- Clean out and cover litter receptacles frequently to prevent spillage.

Waste Collection

- Keep waste collection areas clean.
- Inspect solid waste containers for structural damage or leaks regularly. Repair or replace damaged containers as necessary.
- Secure solid waste containers; containers must be closed tightly when not in use.
- Place waste containers under cover if possible.
- Do not fill waste containers with washout water or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc. may not be

disposed of in solid waste containers (see chemical/ hazardous waste collection section below).

- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal.

Good Housekeeping

- Use all of the product before disposing of the container.
- Keep the waste management area clean at all times by sweeping and cleaning up spills immediately.
- Use dry methods when possible (e.g. sweeping, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Stencil storm drains on the facility's property with prohibitive message regarding waste disposal.

Chemical/Hazardous Wastes

- Select designated hazardous waste collection areas on-site.
- Store hazardous materials and wastes in covered containers protected from vandalism, and in compliance with fire and hazardous waste codes.
- Place hazardous waste containers in secondary containment.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.

Runon/Runoff Prevention

- Prevent stormwater runon from entering the waste management area by enclosing the area or building a berm around the area.
- Prevent the waste materials from directly contacting rain.
- Cover waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropyleneor hypalon.
- Cover the area with a permanent roof if feasible.
- Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.
- Move the activity indoor after ensuring all safety concerns such as fire hazard and ventilation are addressed.

Inspection

- Inspect and replace faulty pumps or hoses regularly to minimize the potential of releases and spills.
- Check waste management areas for leaking containers or spills.
- Repair leaking equipment including valves, lines, seals, or pumps promptly.

Training

- Train staff pollution prevention measures and proper disposal methods.
- Train employees and contractors proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.
- Train employees and subcontractors in proper hazardous waste management.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.
- Vehicles transporting waste should have spill prevention equipment that can prevent spills during transport. The spill prevention equipment includes:
  - Vehicles equipped with baffles for liquid waste
  - Trucks with sealed gates and spill guards for solid waste

Other Considerations

- Hazardous waste cannot be re-used or recycled; it must be disposed of by a licensed hazardous waste hauler.

Requirements

Costs

- Capital and operation and maintenance costs will vary substantially depending on the size of the facility and the types of waste handled. Costs should be low if there is an inventory program in place.

Maintenance

- None except for maintaining equipment for material tracking program.

Supplemental Information

Further Detail of the BMP

Land Treatment System

- Minimize the runoff of polluted stormwater from land application of municipal waste on-site by:
  - Choosing a site where slopes are under 6%, the soil is permeable, there is a low water table, it is located away from wetlands or marshes, there is a closed drainage system.
  - Avoiding application of waste to the site when it is raining or when the ground is saturated with water.
  - Growing vegetation on land disposal areas to stabilize soils and reduce the volume of surface water runoff from the site.
  - Maintaining adequate barriers between the land application site and the receiving waters. Planted strips are particularly good.
  - Using erosion control techniques such as mulching and matting, filter fences, straw bales, diversion terracing, and sediment basins.
  - Performing routine maintenance to ensure the erosion control or site stabilization measures are working.

References and Resources

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Associations (BASMAA). On-line: http://www.basmaa.org

Helpful telephone numbers and links:

Riverside County Stormwater Protection Partners

Flood Control District	(951) 955-1200
County of Riverside	(951) 955-1000
City of Banning	(951) 922-3105
City of Beaumont	(951) 769-8520
City of Calimesa	(909) 795-9801
City of Canyon Lake	(951) 244-2955
Cathedral City	(760) 770-0327
City of Coachella	(760) 398-4978
City of Corona	(951) 736-2447
City of Desert Hot Springs	(760) 329-6411
City of Eastvale	(951) 361-0900
City of Hemet	(951) 765-2300
City of Indian Wells	(760) 346-2489
City of Indio	(760) 391-4000
City of Lake Elsinore	(951) 674-3124
City of La Quinta	(760) 777-7000
City of Menifee	(951) 672-6777
City of Moreno Valley	(951) 413-3000
City of Murrieta	(951) 304-2489
City of Norco	(951) 270-5607
City of Palm Desert	(760) 346-0611
City of Palm Springs	(760) 323-8299
City of Perris	(951) 943-6100
City of Rancho Mirage	(760) 324-4511
City of Riverside	(951) 361-0900
City of San Jacinto	(951) 654-7337
City of Temecula	(951) 694-6444
City of Wildomar	(951) 677-7751

REPORT ILLEGAL STORM DRAIN DISPOSAL
1-800-506-2555 or e-mail us at
fcnpdes@rcflood.org

- Riverside County Flood Control and Water Conservation District
  www.rcflood.org

Online resources include:

- California Storm Water Quality Association
  www.casqa.org
- State Water Resources Control Board
  www.waterboards.ca.gov
- Power Washers of North America
  www.thepwna.org

Stormwater Pollution

What you should know for...

Outdoor Cleaning Activities and Professional Mobile Service Providers

Storm drain pollution prevention information for:

- Car Washing / Mobile Detailers
- Window and Carpet Cleaners
- Power Washers
- Waterproofers / Street Sweepers
- Equipment cleaners or degreasers and all mobile service providers

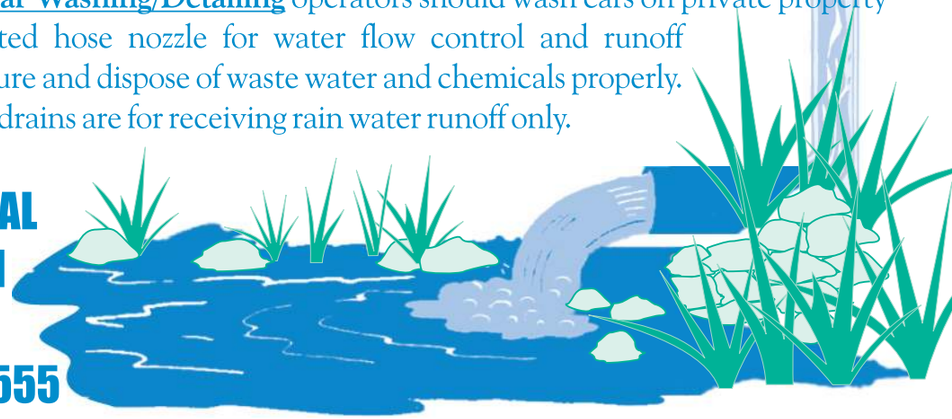
Do you know where street flows actually go?

Storm drains are NOT connected to sanitary sewer systems and treatment plants!

The primary purpose of storm drains is to carry *rain* water away from developed areas to prevent flooding. Pollutants discharged to storm drains are transported directly into rivers, lakes and streams. Soaps, degreasers, automotive fluids, litter and a host of materials are washed off buildings, sidewalks, plazas and parking areas. Vehicles and equipment must be properly managed to prevent the pollution of local waterways.

Unintentional spills by mobile service operators can flow into storm drains and pollute our waterways. **Avoid mishaps.** *Always* have a **Spill Response Kit** on hand to clean up unintentional spills. Only emergency **Mechanical** repairs should be done in City streets, using drip pans for spills. **Plumbing** should be done on private property. Always store chemicals in a leak-proof container and keep covered when not in use. **Window/Power Washing** waste water shouldn't be released into the streets, but should be disposed of in a sanitary sewer, landscaped area or in the soil. Soiled **Carpet Cleaning** wash water should be filtered before being discharged into the sanitary sewer. Dispose of all filter debris properly. **Car Washing/Detailing** operators should wash cars on private property and use a regulated hose nozzle for water flow control and runoff prevention. Capture and dispose of waste water and chemicals properly. Remember, storm drains are for receiving rain water runoff only.

REPORT ILLEGAL STORM DRAIN DISPOSAL
1-800-506-2555



Help Protect Our Waterways!

Use these guidelines for Outdoor Cleaning Activities and Wash Water Disposal

Did you know that disposing of pollutants into the street, gutter, storm drain or body of water is *PROHIBITED* by law and can result in stiff penalties?

Best Management Practices

Waste wash water from Mechanics, Plumbers, Window/Power Washers, Carpet Cleaners, Car Washing and Mobile Detailing activities may contain significant quantities of motor oil, grease, chemicals, dirt, detergents, brake pad dust, litter and other materials.

Best Management Practices, or BMPs as they are known, are guides to prevent pollutants from entering the storm drains. ***Each of us*** can do our part to keep stormwater clean by using the suggested BMPs below:

Simple solutions for both light and heavy duty jobs:

Do...consider dry cleaning methods first such as a mop, broom, rag or wire brush. Always keep a spill response kit on site.

Do...prepare the work area before power cleaning by using sand bags, rubber mats, vacuum booms, containment pads or temporary berms to keep wash water away from the gutters and storm drains.

Do...use vacuums or other machines to remove and collect loose debris or litter before applying water.

Do...obtain the property owner's permission to dispose of ***small amounts*** of power washing waste water on to landscaped, gravel or unpaved surfaces.

Do...check your local sanitary sewer agency's policies on wash water disposal regulations before disposing of wash water into the sewer. (See list on reverse side)

Do...be aware that if discharging to landscape areas, soapy wash water may damage landscaping. Residual wash water may remain on paved surfaces to evaporate. Sweep up solid residuals and dispose of properly. Vacuum booms are another option for capturing and collecting wash water.

Do...check to see if local ordinances prevent certain activities.

Do not let...wash or waste water from sidewalk, plaza or building cleaning go into a street or storm drain.

Report illegal storm drain disposal
Call Toll Free
1-800-506-2555

Using Cleaning Agents

Try using biodegradable/phosphate-free products. They are easier on the environment, but don't confuse them with being toxic free. Soapy water entering the storm drain system can impact the delicate aquatic environment.

When cleaning surfaces with a ***high-pressure washer*** or ***steam cleaner***, additional precautions should be taken to prevent the discharge of pollutants into the storm drain system. These two methods of surface cleaning can loosen additional material that can contaminate local waterways.

Think Water Conservation

Minimize water use by using high pressure, low volume nozzles. Be sure to check all hoses for leaks. Water is a precious resource, don't let it flow freely and be sure to shut it off in between uses.

Screening Wash Water

Conduct thorough dry cleanup before washing exterior surfaces, such as buildings and decks ***with loose paint***, sidewalks or plaza areas. Keep debris from entering the storm drain after cleaning by first passing the wash water through a "20 mesh" or finer screen to catch the solid materials, then dispose of the mesh in a refuse container. Do not let the remaining wash water enter a street, gutter or storm drain.

Drain Inlet Protection & Collection of Wash Water

- Prior to any washing, block all storm drains with an impervious barrier such as sandbags or berms, or seal the storm drain with plugs or other appropriate materials.
- Create a containment area with berms and traps or take advantage of a low spot to keep wash water contained.
- Wash vehicles and equipment on grassy or gravel areas so that the wash water can seep into the ground.
- Pump or vacuum up all wash water in the contained area.

Concrete/Coring/Saw Cutting and Drilling Projects

Protect any down-gradient inlets by using dry activity techniques whenever possible. If water is used, minimize the amount of water used during the coring/drilling or saw cutting process. Place a barrier of sandbags and/or absorbent berms to protect the storm drain inlet or watercourse. Use a shovel or wet vacuum to remove the residue from the pavement. Do not wash residue or particulate matter into a storm drain inlet or watercourse.

Building & Grounds Maintenance SC-41

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, and abnormal pH. Utilizing the following protocols will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Pollution Prevention

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.
- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Suggested Protocols

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a waste water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash water runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in he catch basin to trap the particles in wash water runoff.
- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement. Ensure that this practice does not kill grass.

Landscaping Activities

- Do not apply any chemicals (insecticide, herbicide, or fertilizer) directly to surface waters, unless the application is approved and permitted by the state.
- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.
- Check irrigation schedules so pesticides will not be washed away and to minimize non-stormwater discharge.

Building Repair, Remodeling, and Construction

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paint brushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.

- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.
- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. In which case you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover with secondary containment during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water; do not put it in the storm drain, pour over landscaped areas.
- Use hand or mechanical weeding where practical.

Fertilizer and Pesticide Management

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Follow manufacturers' recommendations and label directions. Pesticides must never be applied if precipitation is occuring or predicted. Do not apply insecticides within 100 feet of surface waters such as lakes, ponds, wetlands, and streams.
- Use less toxic pesticides that will do the job, whenever possible. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques.

- Apply pesticides only when wind speeds are low.
- Work fertilizers into the soil rather than dumping or broadcasting them onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Dispose of empty pesticide containers according to the instructions on the container label.
- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.

Training

- Educate and train employees on use of pesticides and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the nature of the staff.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Alternative pest/weed controls may not be available, suitable, or effective in many cases.

Requirements

Costs

- Overall costs should be low in comparison to other BMPs.

Maintenance

- Sweep paved areas regularly to collect loose particles, and wipe up spills with rags and other absorbent material immediately, do not hose down the area to a storm drain.

Supplemental Information

Further Detail of the BMP

Fire Sprinkler Line Flushing

Building fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping but it is subject to rusting and results in lower quality water. Initially the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time, typically a year, between flushes and may accumulate iron, manganese, lead, copper, nickel and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

King County - ftp://dnr.metrokc.gov/wlr/dss/spcm/Chapter%203.PDF

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Mobile Cleaners Pilot Program: Final Report. 1997. Bay Area Stormwater Management Agencies Association (BASSMA) http://www.basmaa.org/

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA) http://www.basmaa.org/

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP) -
http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf

LANDSCAPE MAINTENANCE

DISCHARGE TO THE STORM DRAIN, ACCIDENTAL OR NOT, COULD LEAD TO ENFORCEMENT ACTIONS, WHICH COULD INCLUDE FINES.

Follow the best practices below to **prevent water pollution from landscaping activities.**

RECYCLE YARD WASTE

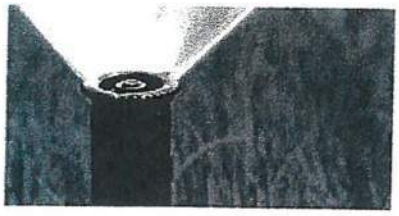
- Recycle leaves, grass clippings and other yard waste.
- Do not blow, sweep, rake or hose yard waste into the street or catch basin.
- **Try grasscycling:** the natural recycling of grass by leaving clippings on the lawn when mowing.

  For more information, please visit: **www.calrecycle.ca.gov/organics/grasscycling**

USE FERTILIZERS, HERBICIDES AND PESTICIDES SAFELY

- Fertilizers, herbicides and pesticides are often carried into the storm drain system by sprinkler runoff. Use natural and non-toxic alternatives as often as possible.
- If you must use chemical fertilizers, herbicides or pesticides:
  - Spot apply, rather than blanketing entire areas.
  - Avoid applying near curbs and driveways, and **never** before a rain.
  - Apply fertilizers as needed: when plants could best use it and when the potential runoff would be low.
  - Follow the manufacturer's instructions carefully—this will not only give the best results, but will save money.

USE WATER WISELY



- Control the amount of water and direction of sprinklers. Sprinklers should only be on long enough to allow water to soak into the ground, but not so long as to cause runoff.
- Periodically inspect, fix leaks and realign sprinkler heads.
- Plant native vegetation to reduce the need of water, fertilizers, herbicides and pesticides.

HOMEOWNERS

KEEP THESE TIPS IN MIND WHEN HIRING PROFESSIONAL LANDSCAPERS AND REMIND AS NECESSARY.

Leftover pesticides, fertilizers, and herbicides contaminate landfills and should be disposed of through a Hazardous Waste Facility.

For more information on proper disposal call,

(909) 382-5401 or 1-800-OILY CAT.

*FREE for San Bernardino County residents only. Businesses can call for cost inquiries and to schedule an appointment.

To report illegal dumping, call (877) WASTE18 or visit sbcountystormwater.org
To report toxic spills, call 1(800) 33 TOXIC
To dispose of hazardous waste, call 1(800) OILY CAT

sbcountystormwater.org

Big Bear • Chino • Chino Hills • Colton • Fontana • Grand Terrace • Highland • Loma Linda • Montclair • Ontario • Rancho Cucamonga
Redlands • Rialto • San Bernardino • San Bernardino County • San Bernardino County Flood Control District • Upland • Yucaipa

WASH YOUR CAR THE ECO-FRIENDLY WAY!

When possible, wash in a professional car wash.

1. **Locate** the nearest storm drain and ensure that wash water does not flow into it.

2. **Wash** in a contained area or on grass*, gravel or other permeable surface. Dispose of excess soapy water into the sanitary sewer *(ie. sink or toilet)* or onto grass.

3. **Use** eco-friendly cleaning products (*non-toxic, phosphate free or biodegradable*). Use as little soap as possible and wipe brake dust off tires with a rag before washing.

4. **Conserve** water by using a high pressure hose and turn off the water when not in use.

**Some local ordinances may not allow a car to be parked on the front lawn. Check with your City's Building and Code department if you are unsure.*

How Does Eco Car Washing Help Local Waterways?

When excess wash water travels through the street it has the potential to pick up oil, grease and other chemicals along the way before it ends up in the curb, gutter and the storm drain system. **This contaminated water then travels to our creeks and the Santa Ana River making it unsafe for people and wildlife.**

To report illegal dumping, call **(877) WASTE18** or visit **sbcountystormwater.org**
To find a Hazardous Waste Facility, call **(800) OILY CAT**

Big Bear • Chino • Chino Hills • Colton • Fontana • Grand Terrace • Highland • Loma Linda • Montclair • Ontario • Rancho Cucamonga
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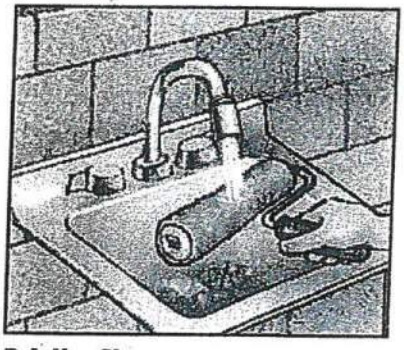
STORMWATER Pollution Prevention

PAINTING

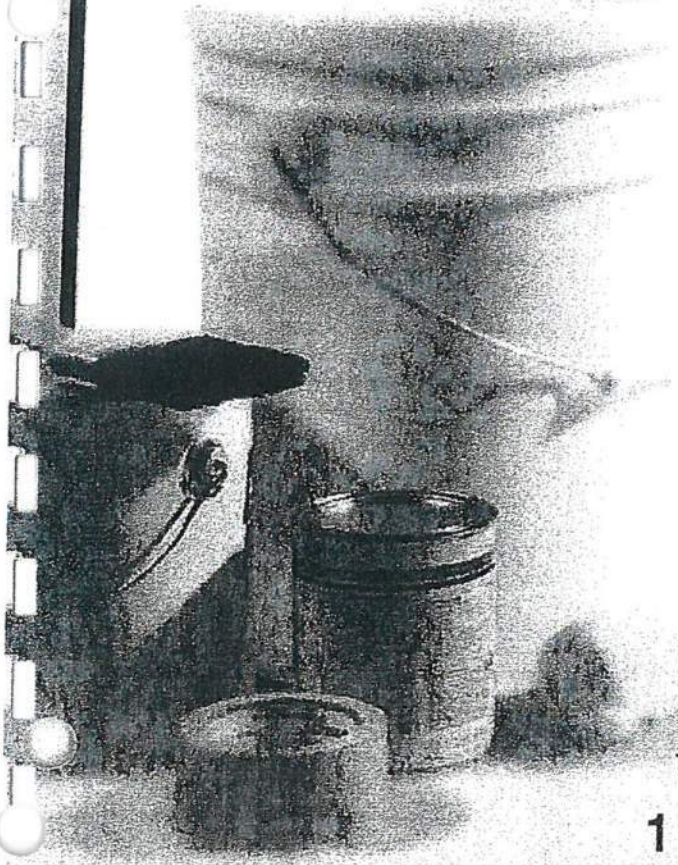
Paints, solvents, adhesives and other toxic chemicals used in painting often make their way into the San Bernardino County storm drain system and do not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these simple tips to prevent pollution and protect our health.

Water-Based Paints
Use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water."

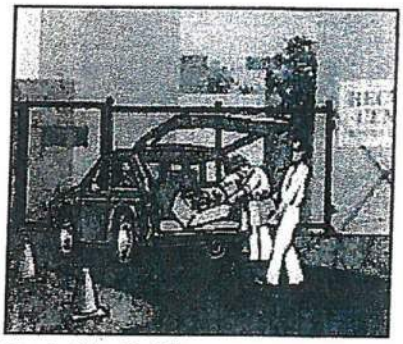
Paint Removal
Sweep up paint stripping residue, chips and dust instead of hosing into the street and dispose of them safely at a household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.



Painting Cleanup
Never clean brushes or rinse paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Clean oil-based paints with thinner, which can be reused by putting it in a jar to settle out the paint particles and then pouring off the clear liquid for future use. Wrap dried paint residue in newspaper and dispose of it in the trash.



Exterior Paint Removal
When stripping or cleaning building exteriors with high-pressure water, block nearby storm drains and divert washwater onto a designated dirt area. Ask your local wastewater treatment authority if you can collect building cleaning water and discharge it to the sewer.



Recycling Paint
Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, city or community organization.

To report illegal dumping or for more information on stormwater pollution prevention, call:

1 (800) CLEANUP

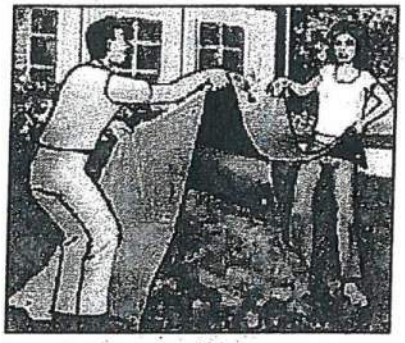
www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

STORMWATER Pollution Prevention

HOME REPAIR & REMODELING

Paints, solvents, adhesives and other toxic substances used in home repair and remodeling often make their way into the San Bernardino County storm drain system and do not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these simple tips to prevent pollution and protect your health.

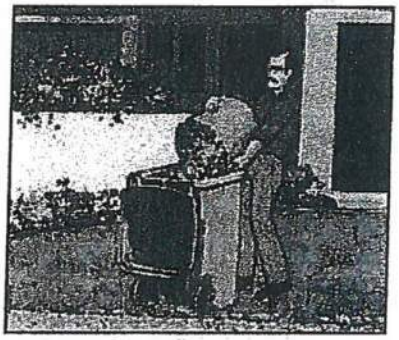


Construction Projects

Keep construction debris away from the street, gutter and storm drains. Schedule grading and excavation projects for dry weather. Cover excavated material and stockpiles of soil, sand or gravel, protected from rain, wind and runoff. Prevent erosion by planting fast-growing annual and perennial grass, which can shield and bind soil.

Recycle Household Hazardous Waste

Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

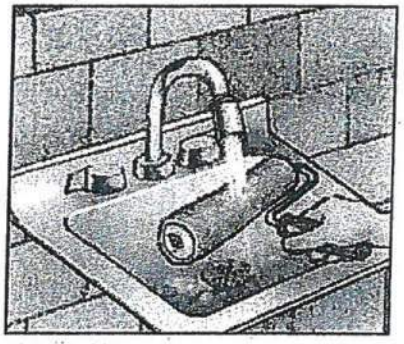


Landscaping & Gardening

Avoid applying fertilizers or pesticide near curbs and driveways, and store covered, protected from rain, wind and runoff. Try using organic or non-toxic alternatives. Reduce runoff and lower your water bill by using drip irrigation, soaker hoses or micro-spray systems. Recycle leaves instead of blowing, sweeping or raking them into the street, gutter or storm drain.

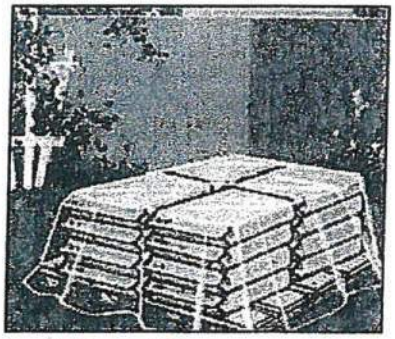
Paint Removal

Paint stripping residue, chips and dust from marine paints and paints containing lead or tributyl tin are hazardous wastes. Sweep them up instead of hosing into the street and dispose of them safely at a household hazardous waste collection facility.



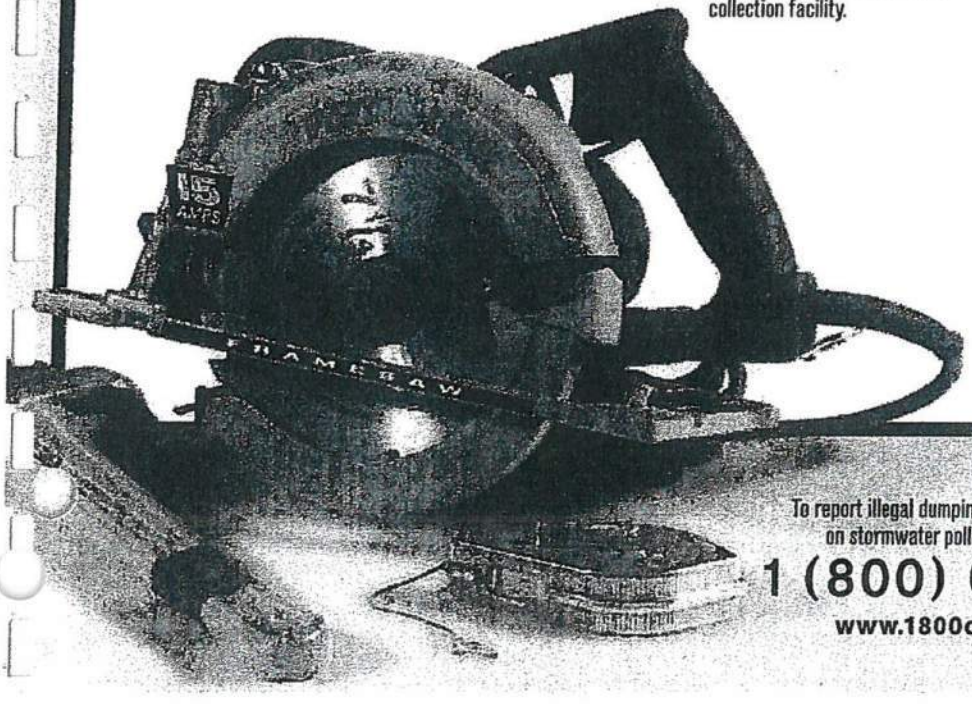
Painting Cleanup

Avoid cleaning brushes or rinsing paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Clean oil-based paints with thinner, which you can filter and reuse. Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, city or community organization.



Concrete and Masonry

Store bags of cement and plaster away from gutters and storm drains, and cover them to protect against rain, wind and runoff. Sweep or scoop up cement washout or concrete dust instead of hosing into driveways, streets, gutters or storm drains.



To report illegal dumping or for more information on stormwater pollution prevention, call:

1 (800) CLEANUP

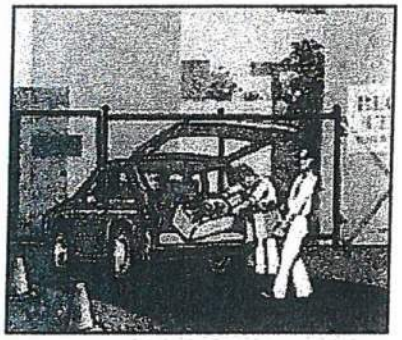
www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

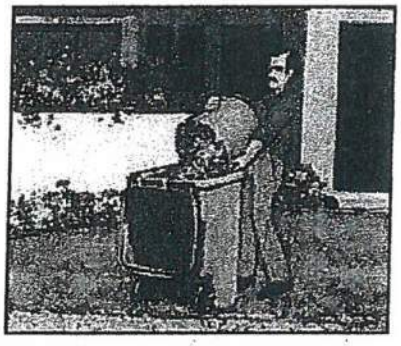
STORMWATER Pollution Prevention

HOME & GARDEN

Yard waste and household toxics like paints and pesticides often make their way into the San Bernardino County storm drain system and do not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these simple tips to prevent pollution and protect your health.



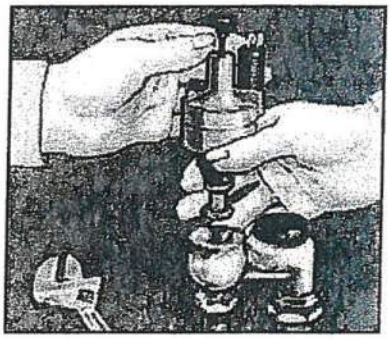
Recycle Household Hazardous Waste
Household products like paint, pesticides, solvents and cleaners are too dangerous to dump and too toxic to trash. Take them to be recycled at a convenient household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.



Disposing of Yard Waste
Recycle leaves, grass clippings and other yard waste, instead of blowing, sweeping or hosing into the street. Try grasscycling, leaving grass clippings on your lawn instead of using a grass catcher. The clippings act as a natural fertilizer, and because grass is mostly water, it also irrigates your lawn, conserving water.

Use Fertilizers & Pesticides Safely
Fertilizers and pesticides are often carried into the storm drain system by sprinkler runoff. Try using organic or non-toxic alternatives. If you use chemical fertilizers or pesticides, avoid applying near curbs and driveways and never apply before a rain.

Planting in the Yard
Produce less yard waste and save water by planting low maintenance, drought-tolerant trees and shrubs. Using drip irrigation, soaker hoses or micro-spray systems for flower beds and vegetation can also help reduce your water bill and prevent runoff.



Use Water Wisely
Cut your water costs and prevent runoff by controlling the amount of water and direction of sprinklers. The average lawn needs about an inch of water a week, including rainfall, or 10 to 20 minutes of watering. A half-inch per week is enough for fall and spring. Sprinklers should be on long enough to allow water to soak into the ground but not so long as to cause runoff.

To report illegal dumping or for more information on stormwater pollution prevention, call:

1 (800) CLEANUP

www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

FERGUSON WATERWORKS

STORMWATER STORAGE SYSTEM

OPERATIONS AND MAINTENANCE MANUAL

Green Stormwater Infrastructure Solutions

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DISCLAIMER

Read the following information before inspecting, cleaning, or performing maintenance on this Stormwater Treatment Device. This manual is intended to explain the specifics of the maintenance on R-Tank Stormwater Storage Systems.

It is the responsibility of all personnel to familiarize themselves with, understand and comply with all applicable local, state, and federal laws. All information in this manual is current at the time of printing but are subject to change based on the development of new processes and procedures. Ferguson Enterprises assumes no responsibility and is not accountable for any injuries, fines, penalties, or losses that occur involving any procedure in this manual or other actions taken. The R-Tank Stormwater Storage System performance is based on the procedures being followed in this manual. Non-Compliance with the outlined measures will be the responsibility of the owner.

GENERAL INFORMATION

Your R-Tank System has been designed to function in conjunction with the engineered drainage system on your site, the existing municipal infrastructure, and/or the existing soils and geography of the receiving watershed. Unless your site included certain unique and rare features, the operation of your R-Tank System will be driven by naturally occurring systems and will function autonomously. However, upholding a proper schedule of Inspection & Maintenance is critical to ensuring continued functionality and optimum performance of the system.

INSPECTION INFORMATION

During construction, the system shall be protected from sediment laden runoff and only activated once the site has been fully stabilized.

Both the R-Tank and all stormwater pre-treatment features incorporated into your site must be inspected regularly. Inspections should be done every six months for the first year of operation, and at least yearly thereafter. Inspections may be required more frequently for pre-treatment systems. You should refer to the manufacturer requirements for the proper inspection schedule.

With the right equipment most inspections and measurements can be accomplished from the surface without physically entering any confined spaces. If your inspection does require confined space entry, you must follow all local, regional, and OSHA requirements.

All maintenance features of your system can be accessed through a covering at the surface. With the lid removed, you can visually inspect each component to identify sediment, trash, and other contaminants within the structure. Check your construction plans to identify the maintenance features engineered into your R-Tank system, which may include:

Upstream Pipes, Inlets, and Manholes: Working from the structures adjacent the R-Tank toward those farther away, check for debris and sediment in both the structures and the pipes. Be sure to include all structures that contain pre- treatment systems. Some structures may include a sump.

Maintenance Ports / Inspection Ports: Maintenance/inspection ports are located near the inlet and outlet connections, treatment rows, and throughout the system. These should be used to check for sediment and typically allow access for backflushing and cleaning.

Treatment Row: On installations in 2018 or later, inlet pipes may connect to a row of modules with 12” diameter access holes running horizontally through the module that can be jet vacuumed. Check these rows for accumulation of sediment and debris.

All observations and measurements should be recorded on an Inspection Log kept on file. We have included a form you can use at the end of this guide.

INSPECTION CHECKLIST

Site Name:		Company:	
Location:		Contact:	
City and State:		Phone:	
System Owner:		Email:	

Inspection Description	Frequency	Observations / Notes	Initials
Pretreatment Systems	Quarterly		
Connections	Bi-Annually		
Inspection Ports	Bi-Annually		
Accumulation of Sediment or Debris	Bi-Annually		
Upslope Erosion	Quarterly		
Accidental or Illicit Spillage	Quarterly		

Maintenance Items	Required Maintenance Activities	Initials
Pretreatment Systems		
Connections		
Inspection Ports		
Accumulation of Sediment or Debris		
Upslope Erosion		
Accidental or Illicit Spillage		

SYSTEM MAINTENANCE

For modules taller than 40” the R-Tank Stormwater Storage Systems should be back-flushed once sediment accumulation has reached 6”. For modules less than 40” tall, perform maintenance when sediment depths are greater than 15% of the total system height. If your system includes a Treatment Row with linear access through the modules from the inlet pipe, backflush this area when sediment depths reach 6”.

BEFORE ANY MAINTENANCE IS PERFORMED ON YOUR SYSTEM - PLUG THE OUTLET PIPE TO PREVENT CONTAMINATION OF THE DOWNSTREAM SYSTEMS.

Maintenance During Construction

Installed R-Tank Stormwater Storage Systems should be properly protected post installation, but before the System is accepted by owners in the following manner:

- **Vehicular Traffic:** Protect system from heavy construction equipment loads by using smaller vehicles, low ground pressure tracked equipment when possible, or protective measures such as steel plates to spread the load experienced by the system.
- **Sediment and Debris:** Use proper erosion control Best Management Practices to prevent sediment and debris from reaching the system.
- **Remove Sediment and Debris, as Needed:** If upslope practices fail to prevent sediment laden runoff from entering the upstream inlets, pipes, and system, sediment removal should be performed using jet-vac equipment.

Maintenance After Construction

Site specific conditions (land use, climate, tree cover, slopes, construction activities, etc.) along with data from regular inspections will determine how frequently the system must be cleaned. At a minimum, vacuum cleaning should occur every 1 to 2 years. Routine maintenance, such as pre-treatment inlet cleanout should occur every 3 to 6 months.

- Begin by cleaning all upstream structures, pipes, and pre-treatment systems containing sediment and/ or debris. If your system includes a Treatment Row, this portion of the system should be cleaned with traditional jet-vac equipment. Add a centralizer to the jet for easiest access through the modules.
- Complete initial debris removal by vacuuming debris up the inspection port locations, while using the jetting water to push debris to the hose. For finer debris, back-flush the R-Tank system. To perform this, water is pumped into the system through the inspection ports as rapidly as possible. The turbulent action of the water moving through the R-Tank will suspend sediments which may then be pumped out. If your system includes an outlet structure, this will be the ideal location to pump contaminated water out of the system. However, removal of back-flush water may be accomplished through the inspection ports, as well.
- For systems with large footprints that would require extensive volumes of water to properly flush the system, you should consider performing your maintenance within 24 hours of a rain event. Stormwater entering the system will aid in the suspension of sediments and reduce the volume of water required to properly flush the system.

INSPECTION AND MAINTENANCE COST ESTIMATE WORKSHEET

Project Name:		Engineer:	
Location:		City / State:	
Owner:		Contact:	
Phone:		Email:	

Life Expectancy (Yrs.) =	

Inspection Description	**Frequency / Year**	**Total Services***	**Cost per Service**	**Total Cost****
Pretreatment Systems	4		$	$
Connections	2		$	$
Inspection Ports	2		$	$
Accumulation of Sediment or Debris	2		$	$
Upslope Erosion	4		$	$
Accidental or Illicit Spillage	4		$	$

Maintenance Items	**Frequency / Year**	**Total Services***	**Cost per Service**	**Total Cost****
Pretreatment Systems			$	$
Connections			$	$
Inspection Ports			$	$
Accumulation of Sediment or Debris			$	$
Upslope Erosion			$	$
Accidental or Illicit Spillage			$	$
System Vacuuming			$	$
Total Costs = Inspection Costs + Maintenance Costs =				$
Estimated Annual Operating Expenses = Total Costs / Years of Service =				$

** Total Services = Frequency of Services / Yr. multiplied by Life Expectancy*
*** Total Cost = Total Services multiplied by Cost per Service*