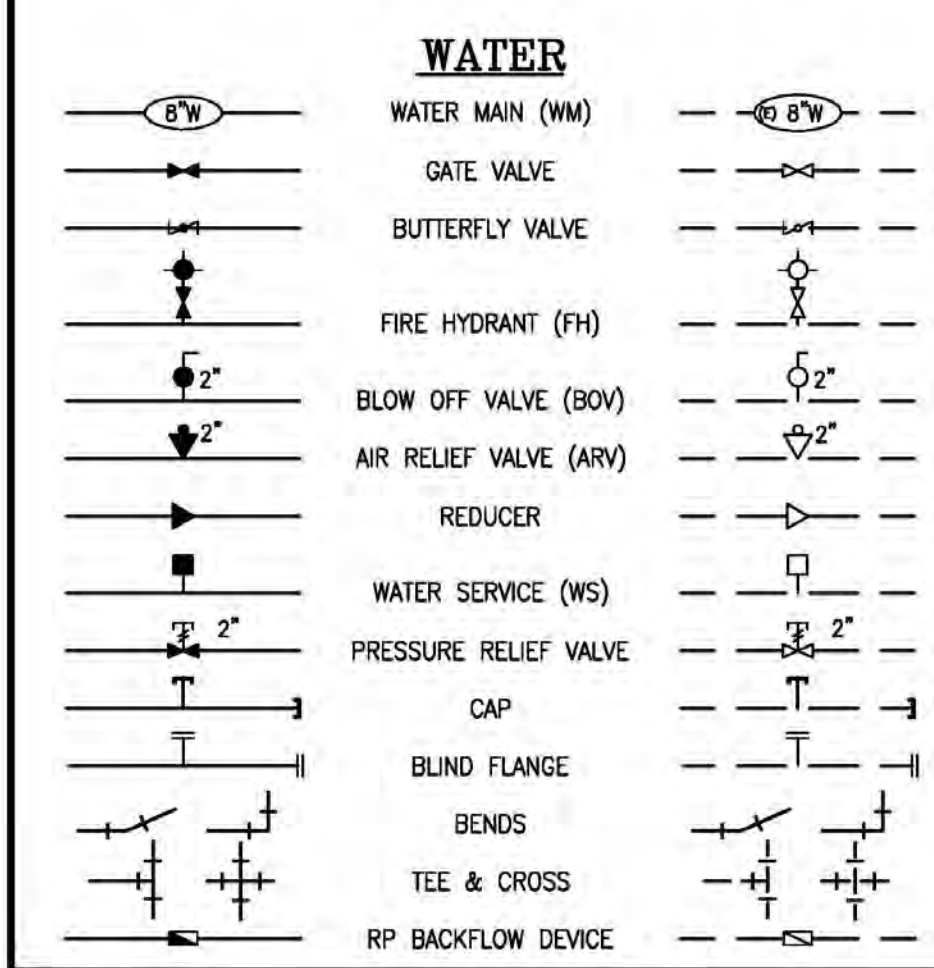
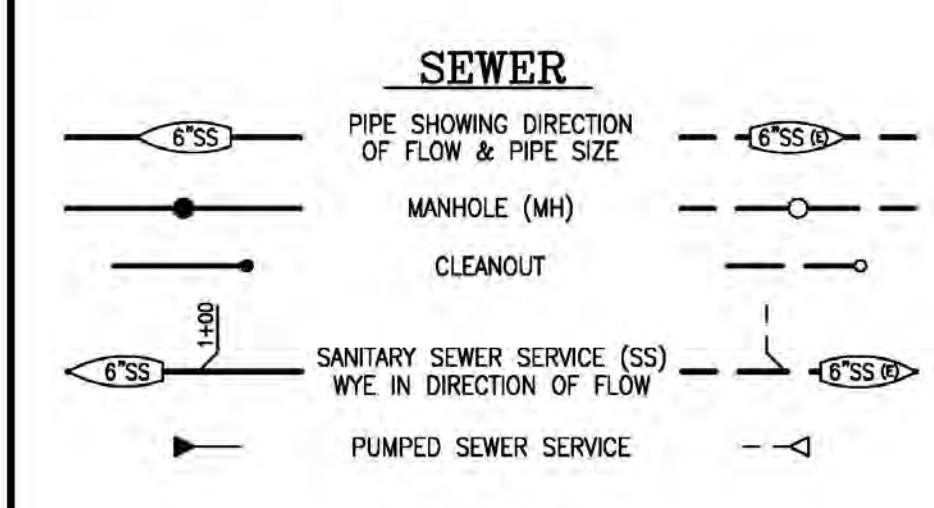
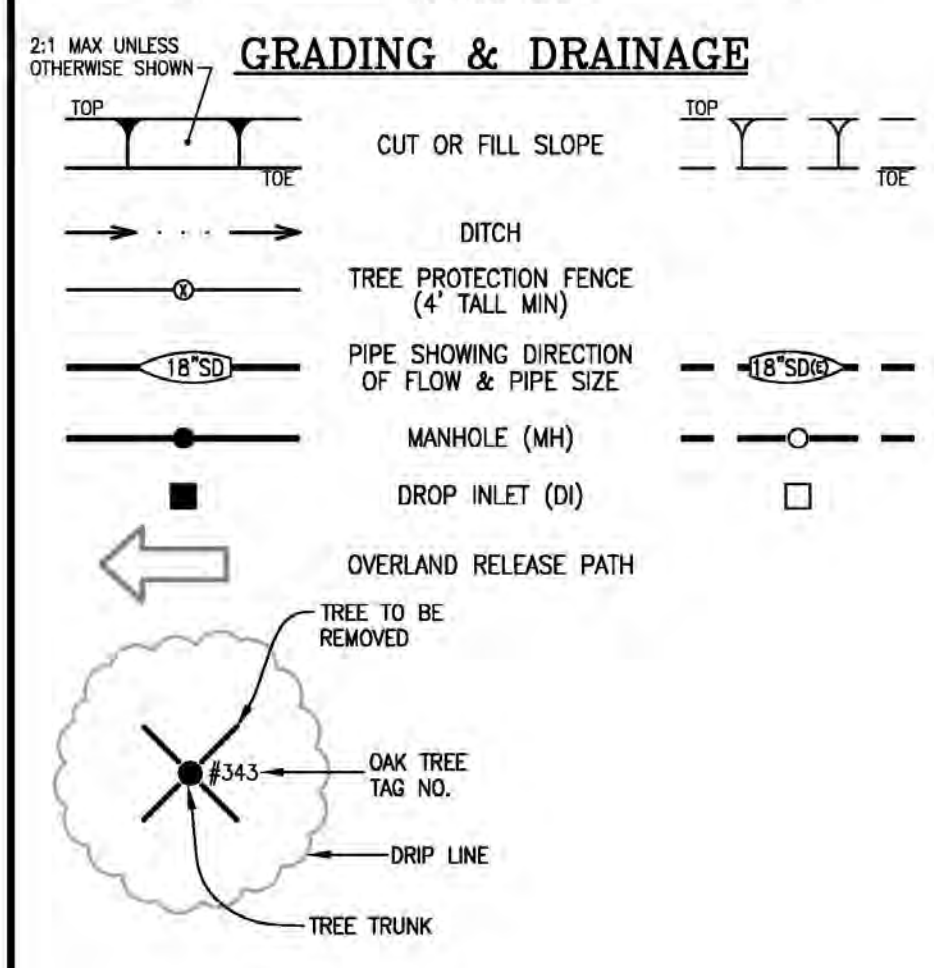


LEGEND

ROADS & MISCELLANEOUS

PROPOSED	EXISTING
--- PROJECT BOUNDARY	---
--- CENTERLINE	---
--- RIGHT OF WAY	---
--- EASEMENT	---
--- TYPE 1 C&G & SIDEWALK	---
--- TYPE 2 C&G	---
--- STREET SIGN	---
--- ROADSIDE SIGN	---



REVISIONS

NUMBER	DESCRIPTION	BY	DATE

STORM WATER QUALITY PRESERVATION

I ACKNOWLEDGE THAT THIS PROJECT IS SUBJECT TO THE STORM WATER QUALITY REQUIREMENTS OF APPLICABLE GOVERNING AGENCIES, INCLUDING THE COUNTY OF EL DORADO. IN-LIEU OF PROVIDING A SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLAN (ESCP), THE PROJECT WILL PREPARE AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). I AUTHORIZE THE COUNTY OF EL DORADO TO REVIEW AND REQUIRE REVISIONS TO THE SWPPP, AND TO INSPECT AND ENFORCE ALL TEMPORARY AND PERMANENT STORM WATER QUALITY AND EROSION AND SEDIMENT CONTROL MEASURES AT THE SITE DURING CONSTRUCTION, AT THE COUNTY'S DISCRETION.

ENGINEER: [Signature] DATE: 07/22/20

OWNER/DEVELOPER: _____ DATE: _____

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AP	ANGLE POINT
ARV	AIR RELIEF VALVE
BC	BEGIN CURVE
BN	BOUNDARY
BF	BLIND FLANGE
BOV	BLOW OFF VALVE
BY	BUTTERFLY VALVE
BW	BOTTOM OF WALL
CDS	COMMUNITY DEVELOPMENT SERVICES
C&G	C&G CURB & GUTTER
CL	CENTERLINE
CMF	CORRUGATED METAL PIPE
CONST	CONSTRUCT
CR	CURB RETURN
DWG	DRAIN INLET
DRWY	DRAWING DRIVEWAY
EC	EDGE CURB
EG	EXISTING GROUND
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EVA	EMERGENCY VEHICLE ACCESS
FES	FLARED END SECTION
FC	FACE OF CURB
FH	FIRE HYDRANT
FL	FLOW LINE
FG	FINISHED GRADE
GR	GRATE
GV	GATE VALVE
HDC	HIGH DEFLECTION COUPLING
HDP	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
INTX	INTERSECTION
IN	INVERT
LF	LINEAR FEET
LIP	LIP OF GUTTER
LP	LOW POINT
LTL	LAYOUT LINE
LDL	LOW DENSITY POLYETHYLENE
NTS	NOT TO SCALE
O	OPENING
PC	PROPOSED
PCC	POINT OF CURVATURE
PCU	POINT OF COMPOUND CURVATURE
PCC	PORTLAND CEMENT CONCRETE
PFE	PUBLIC FACILITIES EASEMENT
PG	PROPOSED GRADE
PL	PROPERTY LINE
PDC	POINT OF CONNECTION
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PSE	PUBLIC SERVICE EASEMENT
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RP	REDUCED PRESSURE OR RADIUS POINT
RW	RECYCLED WATER
R/W	RIGHT-OF-WAY
S/E	SLOPE EASEMENT
SD	SET BACK LINE
SDI	STORM DRAIN
SDE	STORM DRAIN EASEMENT
SDM	STORM DRAIN MANHOLE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSE	SANITARY SEWER EASEMENT
SSM	SANITARY SEWER MANHOLE
ST	STATION
STB	STANDARD
TBC	TOP BACK OF CURB
TW	TOP BACK OF WALK
TC	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TOE	TOE OF SLOPE
TS	TOP OF SLOPE
TW	TOP OF WALL
TYP	TYPICAL
W	WATER LINE
WLE	WATER LINE EASEMENT
WLF	WELDED WIRE FABRIC

EARTHWORK QUANTITIES

CUT: 7,365 CY
 ANTICIPATED BULKING: 735 CY
 FILL: 15,260 CY
 IMPORT: 7,160 CY

AREA OF DISTURBANCE

5.3 AC

WATER SERVICE CERTIFICATE

I HEREBY CERTIFY THAT THE WATER SYSTEM AS SHOWN ON DRAWING NUMBER SHEETS 1 THROUGH 25 HAS BEEN DESIGNED TO PROVIDE EACH LOT (OR FACILITY) OF THIS TRACT (PROJECT) WITH ADEQUATE WATER PRESSURE AND FIRE FLOW AS OF THE DATE SHOWN, BASED ON CRITERIA SUPPLIED BY EL DORADO IRRIGATION DISTRICT.

[Signature] C34520 07/22/20 REGISTERED CIVIL ENGINEER RCE NO. DATE

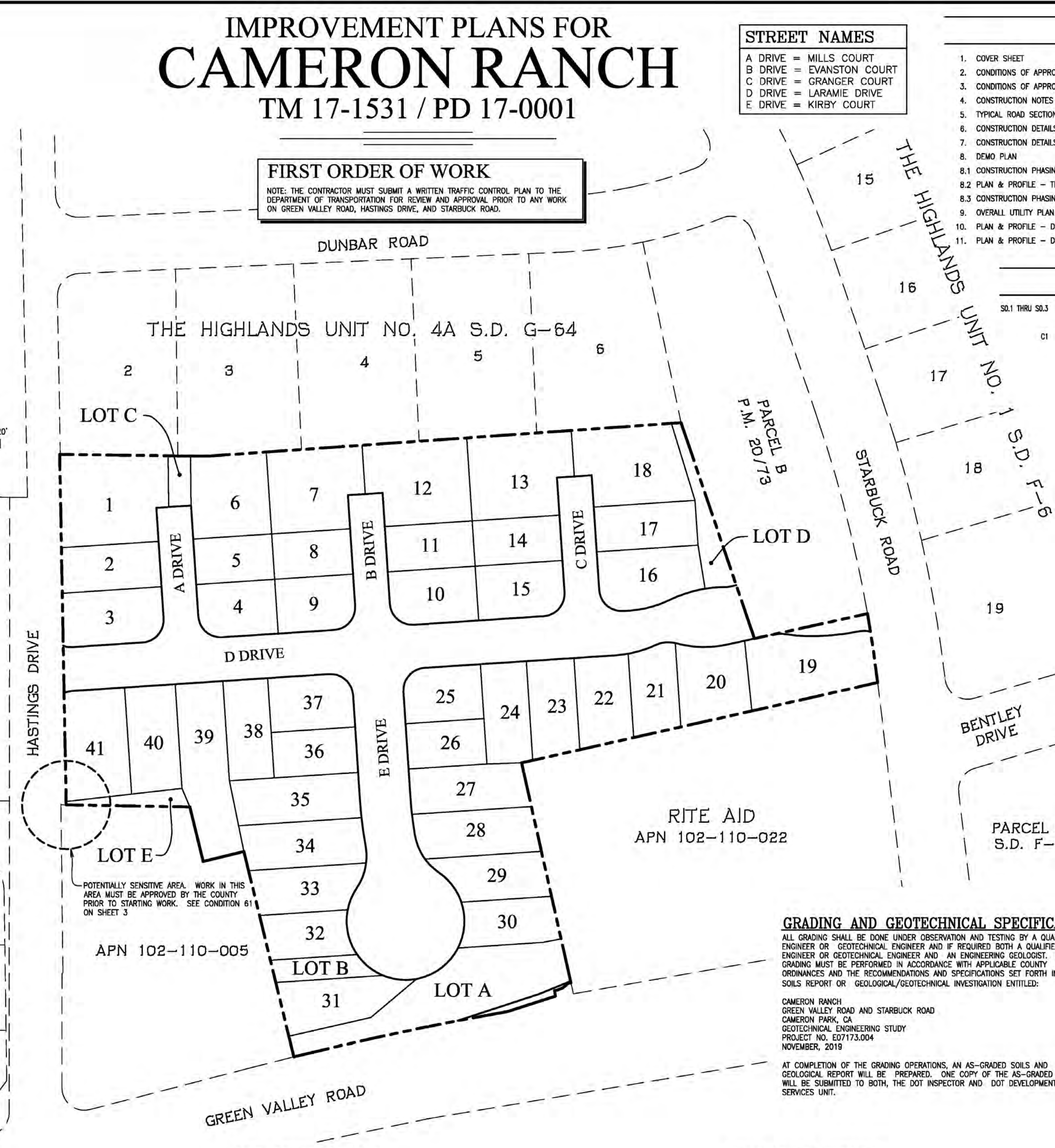
SEWER SERVICE CERTIFICATE

I HEREBY CERTIFY THAT THE SEWER SYSTEM AS SHOWN ON DRAWING NUMBER SHEETS 1 THROUGH 25 HAS BEEN DESIGNED TO PROVIDE EACH LOT (OR FACILITY) OF THIS TRACT (PROJECT) WITH SEWER SERVICE AS OF THE DATE SHOWN, BASED ON CRITERIA SUPPLIED BY EL DORADO IRRIGATION DISTRICT.

[Signature] C34520 07/22/20 REGISTERED CIVIL ENGINEER RCE NO. DATE

MATERIAL LIST - WATER

ITEM	MANUFACTURER	MODEL/TYPE/SIZE	QUANTITY
PIPE			
SERVICE			
FIRE HYDRANTS			
VALVES (BY TYPE)			
ARV			
BOV			



SEWER SERVICE CERTIFICATE

I HEREBY CERTIFY THAT THE SEWER SYSTEM AS SHOWN ON DRAWING NUMBER SHEETS 1 THROUGH 25 HAS BEEN DESIGNED TO PROVIDE EACH LOT (OR FACILITY) OF THIS TRACT (PROJECT) WITH SEWER SERVICE AS OF THE DATE SHOWN, BASED ON CRITERIA SUPPLIED BY EL DORADO IRRIGATION DISTRICT.

[Signature] C34520 07/22/20 REGISTERED CIVIL ENGINEER RCE NO. DATE

MATERIAL LIST - SEWER

ITEM	MANUFACTURER	MODEL/TYPE/SIZE	QUANTITY
PIPE			
MANHOLES			
SERVICE			
ARV			
BOV			

RECORD DRAWING CERTIFICATE

THIS SET OF PLANS, HAVING BEEN REVIEWED BY ME, REFLECT ALL APPROVED REVISIONS TO THE PROJECT KNOWN TO ME, AND ALL FIELD DEVIATIONS TO THE PLANNED IMPROVEMENTS BY THE CONSTRUCTION CONTRACTOR, AS REPORTED TO ME AS OF _____ IT DOES NOT REPRESENT FIELD VERIFICATION OF PLANNED IMPROVEMENTS BY ME.

[Signature] C34520 07/22/20 REGISTERED CIVIL ENGINEER RCE NO. DATE

UTILITY REPRESENTATIVES

UTILITY	REPRESENTATIVE	TELEPHONE
GAS	PG & E	JENNIFER DONOVAN (530)621-7228
ELECTRICITY	PG & E	JENNIFER DONOVAN (530)621-7228
TELEPHONE	AT&T	WILLARD ASTRID (916)453-6136
WATER	EID	MIKE BRINK (530)642-4054
SEWER	EID	MIKE BRINK (530)642-4054
DRAINAGE	EL DORADO COUNTY	CONTACT INSPECTOR (530)621-5900
U.S.A.		(800)227-2800
FIRE	CAMERON PARK FIRE DEPARTMENT	MIKE SMITH (530)677-6190
CABLE	COMCAST	AVGOSTIN MARCHENKO (916)376-7763

STREET NAMES

A DRIVE	= MILLS COURT
B DRIVE	= EVANSTON COURT
C DRIVE	= GRANGER COURT
D DRIVE	= LARAMIE DRIVE
E DRIVE	= KIRBY COURT

SHEET INDEX

1. COVER SHEET	12. PLAN & PROFILE - A DRIVE & C DRIVE
2. CONDITIONS OF APPROVAL	13. PLAN & PROFILE - E DRIVE & B DRIVE
3. CONDITIONS OF APPROVAL	14. PLAN & PROFILE - WATER LATERAL A
4. CONSTRUCTION NOTES	15. PLAN & PROFILE - SEWER LATERAL A & STORM DRAIN LATERAL A
5. TYPICAL ROAD SECTIONS & CONSTRUCTION DETAILS	16. PLAN & PROFILE - STORM DRAIN LATERAL B
6. CONSTRUCTION DETAILS	17. SURFACE IMPROVEMENT DETAILS
7. CONSTRUCTION DETAILS	18. GRADING & DRAINAGE PLAN - AREA 1
8. DEMO PLAN	19. GRADING & DRAINAGE PLAN - AREA 2
8.1 CONSTRUCTION PHASING PLAN - PHASE 1	20. GRADING & DRAINAGE PLAN - AREA 3
8.2 PLAN & PROFILE - TEMP SEWER LATERAL	21. DETENTION / WATER QUALITY POND & GREEN VALLEY ROAD FRONTAGE
8.3 CONSTRUCTION PHASING PLAN - PHASE 2	22. GRADING DETAILS & SECTIONS
9. OVERALL UTILITY PLAN	23. RETAINING WALL PROFILES
10. PLAN & PROFILE - D DRIVE BEGIN TO 14+00	24. FIRE DEPARTMENT SPEC PLAN/ SIGNING & STRIPING PLAN
11. PLAN & PROFILE - D DRIVE 14+00 TO END	25. GREEN VALLEY ROAD STRIPING PLAN

CONSULTANT SHEET INDEX

SD.1 THRU SD.3	RETAINING WALL & MASONRY FENCE WALL STRUCTURAL DETAILS (RM ROCK ENGINEERING)	BMP SITE PLANS (BRYAN ENVIRONMENTAL) - 4 SHEETS TOTAL
LD.0 THRU LD.5	LANDSCAPE PLANS (J.K. CLAUSEN, INC)	
C1	3 CARTRIDGE STEEL CATCHBASIN (CONITECH)	

APN'S 102-421-001, 102-110-024, & 102-110-014

RECORD MONUMENTS

RECORD MONUMENTS USED FOR THIS PROJECT ARE 3/4" CAST IRON PIPES FOUND WITH PM 49-109

BASIS OF BEARING

THE MERIDIAN ON THIS SURVEY IS IDENTICAL TO THAT OF PM 44-41 AND IS TRUE NORTH.

BENCH MARK: ELEV.=1362.22

DOT BENCHMARK NUMBER 002-001

VERTICAL BASIS: DETERMINED FROM GPS OBSERVATIONS BASED ON USGS BENCHMARK DATUM 1929

DESCRIPTION/LOCATION: REBAR WITH CAP STAMPED "CDC DOT CAM-1". POINT IS NEAR THE NORTHWEST CORNER OF GREEN VALLEY ROAD & STARBUCK RD/CAMERON PARK DR, 158± FROM THE CENTERLINE OF STARBUCK RD PARALLEL TO GREEN VALLEY ROAD, 25± FROM THE EDGE OF PAVEMENT OF GREEN VALLEY ROAD.

PREPARED UNDER THE DIRECTION OF:

[Signature] 07/22/20

D. CROSAROL DATE

GEOTECHNICAL ENGINEER:

YOUNGDAHL CONSULTING GROUP
 1234 GLENHAVEN COURT
 EL DORADO HILLS, CA 95762
 PH. (916) 933-0633

GEOTECHNICAL ENGINEERS STATEMENT:

THESE GRADING PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS OUTLINED IN THE REFERENCE SOILS REPORT OR GEOLOGICAL/GEOTECHNICAL INVESTIGATION PREPARED FOR THIS DEVELOPMENT.

LICENSE # _____ DATE: _____ EXPIRES: _____ (SEAL)

FIRE DEPARTMENT APPROVAL

APPROVED BY: _____ DATE: _____

CAMERON PARK FIRE DEPT.

EL DORADO IRRIGATION DISTRICT

APPROVED BY: _____ DATE: _____

COUNTY OF EL DORADO PLANNING & BUILDING DEPARTMENT

APPROVED BY: _____ DATE: _____

PROJECT NO. 3192DEV WORK ORDER NO. 889187 DRAWING NO. _____

COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION

APPROVED BY: _____ DATE: _____

ANDREW GABER, DEPUTY DIRECTOR, R.C.E. 45187

COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION

APPROVED BY: _____ DATE: _____

THE COUNTY'S SIGNATURE IS FOUNDED ON THE PREMISE THAT THE OWNER AND ENGINEER OF RECORD HAVE PROVIDED ACCURATE INFORMATION TO THE COUNTY. IF ANY OF THE INFORMATION IS FOUND TO BE ERRONEOUS, THEN THE COUNTY MAY REQUIRE THE OWNER, ENGINEER OF RECORD AND CONTRACTOR TO STOP ALL NON-EROSION CONTROL, RELATED WORK UNTIL THE DISCREPANCY IS RECTIFIED TO THE SATISFACTION OF THE COUNTY.

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monter Circle, Rancho Cordova, CA 95742
 T (916) 838-2479 • F (916) 838-2479 • www.cta.com

DEVELOPER/OWNER
 RIVERLAND HOMES, INC
 4170 DOUGLAS BLVD, STE 150
 ROSEVILLE, CA
 PHONE # (916) 950-0536

CAMERON RANCH COVER SHEET

TM 17-1531 / PD 17-0001

COVER SHEET

DRAWN BY: STAFF
 DESIGNED BY: K. WPF
 CHECKED BY: D. CROSAROL
 SCALE: AS SHOWN
 DATE: JULY, 2020
 SHEET NO. 1 / 25
 JOB NO. 19-129-001

Z17-0001/PD17-0001/TM17-1531/Cameron Ranch – As approved by the Board of Supervisors on June 26, 2018

Conditions of Approval

Planning Services

1. This Tentative Subdivision Map is based upon and limited to compliance with the project description, the hearing exhibits, and conditions of approval set forth below. Any deviations from the project description, exhibits or conditions must be reviewed and approved by the County for conformity with this approval. Deviations may require approved changes to the permit and/or further environmental review. Deviations without the above described approval will constitute a violation of permit approval.

The project description is as follows:

TM17-1531 consists of a Tentative Subdivision

Map to create 41 residential lots (32 Attached, 9 Detached) ranging in size from 2,821 square feet to 7,225 square feet. Access shall be provided via Starbuck Road and Hastings Drive through Shingle Road and Brandon Road. The project shall connect to public water and sewer facilities provided by El Dorado Irrigation District (EID). The approval includes the following:

Lot Number	Gross Area	Improvements
1	7,560 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
2	3,652 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
3	4,453 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
4	3,616 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
5	3,038 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
6	6,076 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
7	5,739 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
8	2,835 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
9	3,374 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
10	4,150 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
11	3,483 Sqft.	New Single-family home, driveway

12	6,960 Sqft.	improvements, public water, and public sewer
13	6,181 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
14	3,037 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
15	3,616 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
16	5,821 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
17	4,477 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
18	7,725 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
19	5,765 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
20	4,212 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
21	2,821 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
22	4,360 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
23	3,699 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
24	3,668 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
25	3,309 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
26	2,835 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
27	4,188 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
28	4,375 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
29	4,124 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
30	3,537 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
31	5,251 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
32	3,281 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
33	4,086 Sqft.	New Single-family home, driveway

34	4,611 Sqft.	improvements, public water, and public sewer
35	4,409 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
36	2,835 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
37	3,309 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
38	3,560 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
39	6,949 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
40	5,000 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
41	5,833 Sqft.	New Single-family home, driveway improvements, public water, and public sewer
Lot A	10,261	Retention Detention Basin

The grading, development, use, and maintenance of the property, the size, shape, arrangement, and location of structures, parking areas and landscape areas, and the protection and preservation of resources shall conform to the project description above and the hearing exhibits and conditions of approval below. The project and any portions thereof shall be sold, leased or financed in compliance with this project description and the approved hearing exhibits and conditions of approval hereto. All plans (such as Landscape and Tree Protection Plans) must be submitted for review and approval and shall be implemented as approved by the County.

- Permit Time Limits:** This Tentative Parcel Map shall expire 36 months from the date of approval unless a timely extension has been filed.
- Fish and Wildlife Fee:** The applicant shall submit to Planning Services a \$50.00 recording fee and the current Department of Fish and Wildlife fee prior to filing of the Notice of Determination by the County. Please submit check for the total amount to Planning Services and make the check payable to El Dorado County. No permits shall be issued or final map filed until said fees are paid.
- Steep Slopes:** Development or disturbance of the project site shall be restricted to areas with slopes not exceeding 30 percent.
- Indemnity:** In the event of any legal action instituted by a third party challenging the validity of any provision of this approval, the developer and landowner agree to be responsible for the costs of defending such suit and shall hold County harmless from any legal fees or costs County may incur as a result of such action.

The developer and land owner shall defend, indemnify, and hold harmless El Dorado County and its agents, officers, and employees from any claim, action, or proceeding against El Dorado County or its agents, officers, or employees to attack, set aside, void, or annul an approval of El Dorado County concerning a Parcel Map.

The County shall notify the applicant of any claim, action, or proceeding, and the County shall cooperate fully in the defense.

- Final Map Recordation:** Prior to final map recordation, the applicant shall provide a written description, together with appropriate documentation, showing conformance of the project with each condition imposed as part of the project approval.
- Park Fees:** The subdivision shall be subject to parkland dedication in-lieu fees based on values supplied by the County Assessor and calculated in accordance with Section 16.12.090 of the County Code. The applicant shall provide proof of payment of parkland dedication in-lieu fees to Planning Services prior to filing the final map.
- Fees:** All fees associated with the tentative subdivision map shall be paid prior to filing the final subdivision map.
- Liens and Bonds:** Prior to filing a final map, if the subject property is subject to liens for assessment or bonds, pursuant to the provisions of Government Code Section 66493, the owner or subdivider shall either: (a) Pay the assessment or bond in full, or (b) File security with the Clerk of the Board of Supervisors, or (c) File with the Clerk of the Board of Supervisors the necessary certificate indicating provisions have been made for segregation of bond assessment responsibility pursuant to Government Code Section 66493(d).

Mitigation Measures

- Mitigation Measure BIO-1:** The project would mitigate for removal of Tree #344 via payment of the in-lieu fee identified in the ORMP. The in-lieu fee for individual oak trees is \$153 per inch of dbh. The estimated Project in-lieu fee is \$4,284 (28 inches x \$153 per inch). The ultimate determination of the fee amount will be made by El Dorado County.
- Mitigation Measure NOI-1:** A sound wall with a minimum height of seven (7) feet at lot 31 and six-and-a-half' (6.5) feet at lot 30, relative to the respective lot pad elevations, would reduce exterior traffic noise exposure to below 60 dBL. The sound wall may be located at either the southern backyard property line or the southern project boundary, but must be constructed to the prescribed height above lot elevation and must connect with the eastern boundary sound wall (lot 30) and the western boundary sound wall (lot 31). A sound wall with a minimum height of six (6) feet above respective lot pad elevations at lots 28, 29, 32, 33 and 34 would reduce exterior traffic noise exposure to below 60 dBL within the individual backyards. It should be noted, the existing wall located between lot 28-30 and Rite Aid, on their eastern lot boundary, will be sufficient to properly mitigate

noise levels within the individual backyards. A sound wall with a minimum height of four (4) feet above lot pad elevation at lot 19 should be constructed to reduce noise levels exposure below 60 dBL. The wall should turn upward, toward the north, for a minimum distance of ten (10) feet to avoid acoustical flanking. Suitable construction materials include concrete blocks, masonry or stucco on both sides of a wood or steel stud wall. Second-story exterior balconies facing the roadways should not be constructed for the above-described lots.

Monitoring Responsibility: El Dorado County Planning and Building Department.

12. **Mitigation Measure NOI-2:** Air conditioning or mechanical ventilation should be installed in all 41 homes so that it will be possible for windows and doors to remain closed for sound insulation purposes.

Monitoring Responsibility: El Dorado County Planning and Building Department.

13. **Mitigation Measure TR-1:** Regarding the impact to Green Valley Road/ Hastings Drive-Winterhaven Drive the project shall re-stripe the intersection to include a two-way left-turn median lane along Green Valley Road in place of the existing eastbound and westbound left-turn pockets.

Monitoring Requirement: All grading and construction activities will require compliance with the El Dorado County Design and Improvement Standards Manual and measures as described in the *Cameron Ranch Development Transportation Impact Study and Supplemental Memo* prepared by Wood Rogers dated (March 15, 2018) (Attachment). Planning Services shall verify the inclusion of the requirement prior to the issuance of grading and building permits.

Monitoring Responsibility: Community Development Services- Transportation Division.

Transportation Department

14. **Road Design Standards:** Construct all internal project roadways in conformance with the typical sections shown on the approved Tentative Map.

15. **Frontage Improvements:** Construct County Standard Type 2 Vertical Curb and Gutter, and a 6-foot wide sidewalk across the entire project frontage on Green Valley Road, connecting to the existing accessible ramp on the west side of the Rite-Aid driveway. This ramp shall be reconstructed to current accessibility standards.

Alignment and grade of the curb and gutter shall be subject to review and approval by County, and at a minimum, provide for a minimum westbound lane width of 12 feet, and a minimum paved shoulder width of 8 feet (measured to the flowline of the new curb and gutter). Stripe the shoulder for Class 2 Bike Path.

The proposed soundwall shall be set back from the edge of the right of way so that the soundwall footing does not encroach into Green Valley Road Right of Way.

16. **Offer of Dedication:** Offer to dedicate rights of way for the project's internal roadways with the final map. Said offer shall include all appurtenant slope, drainage, pedestrian, public utility, or other public service easements as determined necessary by the County.

The offer(s) will be rejected by the County, and a Homeowners Association (or other mechanism approved by County) shall be formed for the purpose of maintaining the private roads and drainage facilities.

Offer to dedicate, in fee, the rights of way necessary for frontage improvements required on Green Valley Road. The limit of the dedication shall be one-half foot (six inches) behind the required sidewalk. This offer will be accepted by County.

17. **Encroachment Permit(s):** Obtain an encroachment permit from DOT and construct the roadway encroachments from D Drive onto Hastings Road and Starbuck Road to the provisions of County *Standard Plan 103C*.

Obtain an encroachment permit or Road Improvement Agreement for work associated with required Frontage Improvements.

18. **Off-site Improvements (Acquisition):** As specified elsewhere in these Conditions of Approval, the applicant is required to perform off-site improvements. If the applicant does not secure, or cannot secure sufficient title or interest for lands where said off-site improvements are required, and prior to filing of any final or parcel map, the applicant shall enter into an agreement with the County pursuant to Government Code Section 66462.5. The agreement will allow the County to acquire the title or interests necessary to complete the required off-site improvements. The Form, Terms and Conditions of the agreement are subject to review and approval by County Councils.

The agreement requires the applicant: pay all costs incurred by County associated with the acquisition of the title or interest; provide a cash deposit, letter of credit, or other securities acceptable to the County in an amount sufficient to pay such costs, including legal costs; If the costs of construction of the off-site improvements are not already contained in a Subdivision Improvement Agreement or Road Improvement Agreement, the applicant shall provide securities sufficient to complete the required improvements, including but not limited to, direct construction costs, construction management and surveying costs, inspection costs incurred by County, and a 20% contingency; provides a legal description and exhibit map for each title or interest necessary, prepared by a licensed Civil Engineer or Land Surveyor; provides an appraisal for each title or interest to be acquired, prepared by a certified appraiser; Approved improvement plans, specifications and contract documents of the off-site improvements, prepared by a Civil Engineer.

19. **Curb Returns:** Where sidewalks are provided, all curb returns shall include pedestrian ramps with truncated domes conforming to Caltrans Standard Plan A88A, including a 4 foot sidewalk/landing at the back of the ramp. Alternate plans satisfying the current accessibility standards may be used, subject to review and approval by County.

20. **Maintenance Entity:** The proposed project must form an entity for the maintenance of public and private roads and drainage facilities. If there is an existing entity, the property owner shall modify the document if the current document does not sufficiently address maintenance of the roads of the current project. Transportation Division shall review the document forming the entity to ensure the provisions are adequate prior to filing of the final map.

Green Valley Road is an existing County maintained road shown on General Plan Exhibit TC-1 and will be accepted by County without a Maintenance Entity.

21. **Common Fence/Wall Maintenance:** The responsibility and access rights for maintenance of any fences and walls constructed on property lines shall be included in the Covenants Codes and Restrictions (CC&Rs).

22. **Consistency with County Codes and Standards:** The developer shall obtain approval of project improvement plans and cost estimates consistent with the Subdivision Design and Improvement Standards Manual (as may be modified by these Conditions of Approval or by approved Design Waivers) from the Transportation Division and pay all applicable fees prior to filing of the final map.

Additionally, the project improvement plans and grading plans shall conform to the County *Grading, Erosion and Sediment Control Ordinance, Grading Design Manual, the Drainage Manual, Storm Water Ordinance (Ord. No. 5022), Off-Street Parking and Loading Ordinance, all applicable State of California Water Quality Orders, the State of California Handicapped Accessibility Standards, and the California Manual on Uniform Traffic Control Devices (MUTCD)*.

23. **Stormwater Management:** The project shall construct post construction storm water mitigation measures to capture and treat the 85th percentile 24 hour storm event as outlined in the CA Phase II MS4 Permit and the County's *West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan*. The Project shall also show detention and/or retention facilities on the project improvement plans to fully mitigate any increased runoff peak flows and volumes in accordance with the County Drainage Manual. As an alternative to treating the entire project with a regional treatment system, the project may propose distributed source control measures to be constructed for the roadways, any other impervious surfaces and on each lot with the individual lot building permits to achieve the same effect. In which case, a deed restriction shall be recorded with the final map to ensure construction of individual lot source control measures.

24. **Soils Report:** At the time of the submittal of the grading or improvement plans, the applicant shall submit a soils and geologic hazards report (meeting the requirements for such reports provided in the El Dorado County Grading Ordinance) to, and receive approval from the Transportation Division. Grading design plans shall incorporate the findings of detailed geologic and geotechnical investigations and address, at a minimum, grading practices, compaction, slope stability of existing and proposed cuts and fills, erosion potential, ground water, pavement section based on TI and R values, and recommended design criteria for any retaining walls.

25. **Water Quality Stamp:** All new or reconstructed drainage inlets shall have a storm water quality message stamped into the concrete, conforming to the Storm Water Quality Design Manual for the Sacramento and South Placer Regions, Chapter 4, Fact Sheet SD-1. All stamps shall be approved by the El Dorado County inspector prior to being used.

26. **Drainage (Cross-Lot):** Cross lot drainage shall be avoided. When concentrated cross lot drainage does occur or when the natural sheet flow drainage is increased by the project, it shall be contained within dedicated drainage easements. This drainage shall be conveyed via closed conduit or open channel, to either a natural drainage course of adequate size or an appropriately sized storm drain system. The Grading and Improvement plans shall show drainage easements for all on-site drainage facilities where required.

27. **Regulatory Permits and Documents:** All regulatory permits and agreements between the project and any State or Federal Agency shall be incorporated into the Project Improvement Plans prior to the start of construction of improvements.

Improvement plans for any phase may be approved prior to obtaining regulatory permits or agreements for that phase, but grading/construction of improvements may not proceed until the appropriate permits or agreements are obtained and the grading/improvement plans reflect any necessary changes or modifications to reflect them.

Project conditions of approval shall be incorporated into the Project Improvement Plans when submitted for review.

28. **Electronic Documentation:** Upon completion of the improvements required, and prior to acceptance of the improvements by the County, the developer will provide a CD to the Transportation Division with the drainage report, structural wall calculations, and geotechnical reports in PDF format and the record drawings in TIF format.

Air Quality Management District

29. **Fugitive Dust:** The project construction will involve grading and excavation operations, which will result in a temporary negative impact on air quality with regard to the release of particulate matter (PM₁₀) in the form of dust. The project shall adhere to the

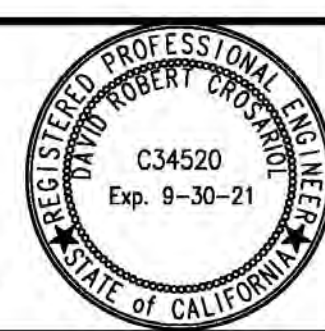
NUMBER	DESCRIPTION	BY	DATE

REVISION BLK.	DRAWN BY: STAFF
	DESIGNED BY: K. WIPF
	CHECKED BY: D. CROSARIOL
	SCALE: N/A
	DATE: JULY, 2020
	F.B. REF.

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

D. CROSARIOL
DATE: 07/22/20



EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
CONDITIONS OF APPROVAL

SHEET
2
OF
25
JOB NO. 19-129-001
23-07-39 G 2 of 48

regulations and mitigation measures for fugitive dust emissions during the construction process. In addition, a Fugitive Dust Mitigation Plan (DMP) Application with appropriate fees shall be submitted to and approved by the AQMD prior to start of project construction if a Grading Permit is required from the Building Dept. (Rules 223 and 223.1)

- 30. Paving: Project construction will involve road development and shall adhere to AQMD Cutback and Emulsified Asphalt Paving Materials (Rule 224).
- 31. Painting/Coating: The project construction may involve the application of architectural coating, which shall adhere to AQMD Rule 215 Architectural Coatings.
- 32. Open Burning: Burning of wastes that result from "Land Development Clearing" must be permitted through the AQMD. Only dry vegetative waste materials originating from the property may be disposed of using an open outdoor fire (Rule 300 Open Burning).
- 33. Construction Emissions: During construction, all self-propelled diesel-fueled engines greater than 25 horsepower shall be in compliance with the California Air Resources Board (ARB) Regulation for In-Use Off-Road Diesel Fueled Fleets (§ 2449 et al, title 13, article 4.8, chapter 9, California Code of Regulations (CCR)). The full text of the regulation can be found at ARB's website here: <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm> An applicability flow chart can be found here: <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm> Questions on applicability should be directed to ARB at 1-866-634-3735. ARB is responsible for enforcement of this regulation.
- 34. New Point Source: Prior to construction/installation of any new point source emissions units (e.g., gasoline dispensing facility, emergency standby engine, etc.), Authority to Construct applications shall be submitted to the AQMD. Submittal of applications shall include facility diagram(s), equipment specifications and emission factors. (Rule 501 and 523)
- 35. Portable Equipment: All portable combustion engine equipment with a rating of 50 horsepower or greater shall be registered with the California Air Resources Board (CARB). A copy of the current portable equipment registration shall be with said equipment. The applicant shall provide a complete list of heavy-duty diesel-fueled equipment to be used on this project, which includes the make, model, year of equipment, daily hours of operations of each piece of equipment.

Surveyor's Office

- 36. All survey monuments must be set prior to the filing the Final Map or the developer shall have surety of work to be done by bond or cash deposit. Verification of set survey

monuments, or amount of bond or deposit to be coordinated with the County Surveyors Office prior to the filing of the Final Map.

- 37. The roads serving the development shall be named by submitting a completed Road Name Petition, with the County Surveyors Office, prior to filing the Final Map with the Board of Supervisors. Proof of any signage required by the Surveyor's Office must also be provided prior to filing the Final Map. All associated fees will be the responsibility of the applicant.

- 38. Situs addressing for the project shall be coordinated with the County Surveyors Office prior to filing the Final Map.

Cameron Park Fire Department:

- 39. The water system with the purpose of fire protection for this residential development shall provide a minimum fire flow of 1,000 gallons per minute with a minimum residual pressure of 20 psi for a two-hour duration. This requirement is based on a single family dwelling 3,600 square feet or less in size. If the square footage is above 3,600 the minimum fire flow will be 1,500 gpm @20 psi for two (2) hours. This fire flow rate shall be in excess of the maximum daily consumption rate for this development. A set of engineering calculations reflecting the fire flow capabilities of this system shall be supplied to the Fire Department for review and approval.
- 40. All homes shall be fire sprinklered in accordance with NFPA 13D and Fire Department requirements.
- 41. Provide documentation from EID to the fire department to show that the system will meet required fire flow for this project.
- 42. Approximately four (4) additional hydrant(s) will be required for this project. The hydrant manufacturer and type shall be approved by EID and the Fire Department. Actual number and location of the hydrant(s) shall be approved by the Fire Department during Civil Plan Review. Fire hydrant spacing shall be in accordance with Section 507 and Appendix C of California Fire Code. The spacing between hydrants in this development shall not exceed 500 feet. Exception: For Group R-3 and Group U Occupancies, equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.1, the distance requirement shall be not more than 500 feet.
- 43. In order to enhance nighttime visibility, each hydrant shall be painted safety red enamel and marked in the roadway with a blue reflective marker as specified by the Fire Department and State Fire Safe Regulations.
- 44. In order to provide this development with adequate fire and emergency medical response during construction, all Fire Access Roads and fire hydrant systems shall be constructed and approved prior to combustibles being brought on site. "NO PARKING FIRE LANE" signs shall be posted during construction as needed.

- 45. The above referenced project shall comply with 2016 California Fire Code, Chapter 5, Fire Service Features and Appendix D, Fire Apparatus Access Roads.

- a. All fire apparatus access roads shall be made of asphalt, concrete, or other approved driving surface capable of supporting the imposed load of fire apparatus.
- b. For one and two family dwelling units (R3) applications, fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm). This conforms to Title 24, Part 9, California Fire Code.
- c. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 and 503.2.2 shall be maintained at all times. To comply with Section 503.4 of the California Fire Code, A, B, and C Drives shall be a minimum of 28' wide, unless otherwise approved by the Fire Department. It is strongly encouraged that the 28' in width be measured from face of curb to face of curb, but an allowance will be made to include 27' of pavement and 6" flush curb on each side of pavement to equal a total width of 28'. D and E Drives as shown on the Tentative Map comply with the California Fire Code.
- d. This development shall be prohibited from installing any type of traffic calming device that utilizes a raised bump/dip section of roadway.
- e. For one and two family dwelling units (R3) applications, dead-end fire apparatus access roads shall comply with Title 14 SRA Fire Safe Regulations as adopted by El Dorado County Section 1273.09 and shall have a turnaround constructed at its terminus. The required turning radius of a fire apparatus access road shall be 56' outside & 40' inside.
- f. Fire Apparatus Access Road Gates shall meet the standards identified in the Fire Department's Gate Standard.
- g. Section 501 shall be adhered to for the above referenced project.
- h. Approved fire apparatus access roads shall be provided for every facility, building, or portion of building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building measured by an approved route around the exterior of the building or facility.

- 46. All roads, streets, private lanes and driveways shall not exceed sixteen (16) percent grade to be consistent with state regulations.

- 47. All driveways, as defined by Title 14 Fire Safe Regulations, shall not be less than twelve (12) feet wide as per the California Fire Code as amended locally.

- 48. The vegetation management provisions of the Cameron Park Community Services District "Weed and Rubbish Abatement" Ordinance 2016.03.16 shall be maintained annually. A funding mechanism shall be established to fund these maintenance provisions, some examples, but not all, would be;
 - i. Road Association
 - ii. Community Service District (CSD)
 - iii. Homeowners Association (HOA)
 - iv. Zone of Benefit

- 49. If any fencing is used that backs up to wildland open space, it shall be required to use noncombustible type fencing.

- 50. The fire code official shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.

- 51. The landscaping plan will be reviewed to ensure that no tree will impede fire apparatus access when fully grown.

- 52. Fire apparatus access roads, 20 to 29 feet wide, shall be posted on both sides as a fire lane, with no parking allowed on either side of the roadway. To mitigate a possible illegal parking issue, the owner of the proposed subdivision shall come up with a suitable parking and/or enforcement plan.

- 53. Fire apparatus access roads, 30 to 35 feet wide, shall be posted on one side as No Parking, Fire Lane, with parking allowed only on the opposite side of the roadway.

- 54. Fire apparatus access roads, 36 feet and greater in width, may allow parking on both sides of the roadway.

- 55. All No Parking-Fire Lane issues on access roads shall comply with El Dorado County Regional Fire Protection Standard #B-004.

- 56. Payment for Fire Prevention Fees for Services in Full

- 57. **Archaeological Resources:** In the event of the discovery of human remains, all work shall cease and the County coroner shall be immediately notified pursuant to subdivision(c) of Section 7050.5 of the Health and Safety Code and Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or in his or her authorized

representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. The Native American Heritage Commission will immediately notify the person it believes to be the most likely descendant of the deceased Native American.

Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in Section 5097.98 of the Public Resources Code, with the most likely descendants regarding their recommendations. The descendants shall complete their inspection and make their recommendation within 48 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials or other proper method(s) for handling the remains in accordance with Section 5097.98(b-h). Any additional costs as a result of complying with this section shall be borne by the project applicant. Grading and construction activities may resume after appropriate measures are taken.

- 58. Should the applicant wish to request waivers or other concessions based upon providing moderate "affordable housing," applicant may provide a written affordable housing plan to include, but not be limited to, the number of units, bedroom composition, and sales price targets for moderate-income households, and work with the County's Housing Community and Economic Development Programs. A copy of the affordable housing plan shall be submitted to the Planning and Building Department prior to final occupancy of the first unit.

- 59. Provide an affordable housing plan to include, but not be limited to, noticing requirements to current tenants, relocation financing arrangements, comparable replacement housing policy and a two-year monitoring program for displaced residents in accordance with California Government Code Sections 7260-7277 – Relocation Assistance.

- 60. **Landscape:** In addition to the submitted typical front and side yard landscape and irrigation plan, to be maintained by the HOA, the applicant shall submit a proposed landscape and irrigation plan, also to be maintained by the HOA for review and approval by El Dorado County Planning Services prior to issuance of grading and building permits. The proposed landscape plan shall be consistent with the recommendation made by the Planning Commission on May 10, 2018 to include landscaping along the north side of Drive D, Lot A and the 10.5-foot tall sound wall along Green Valley Road. The landscaping along the north side of Drive D will include one foot of impervious surface adjacent to the curb with the remaining 3 feet of the 4-foot bench to include groundcover,

shrubs, and street trees. The landscaping against the 10.5-foot tall sound wall along Green Valley Road shall use vines or tall shrubs to soften and screen the sound wall.

- 61. **Cultural Resource Feature:** Prior to issuance of the Final Map, the applicant shall submit an enlargement on the Tentative Tract Map that demonstrates the protection of the potential cultural resource feature identified as Cameron Ranch Feature 1 in the Cultural Resource Reinvestigation report prepared by Historic Resource Associates dated June 21, 2018; or the item is to be relocated to St. Michael's Cemetery or other suitable property as recommended in the report.

Should the feature not be relocated to St. Michael's Cemetery or other suitable property, the feature shall be protected in place by isolating it via wall or fence, establishing a minimum three-foot setback buffer boundary around it. Temporary protective fencing shall be installed around the cultural resource feature during construction to protect it in place. The Final Map shall include a lettered lot owned and maintained by Cameron Ranch HOA within Cameron Ranch. The lettered lot shall include a minimum three-foot setback from the feature to any proposed property lines, and the Final Map shall also establish a maintenance easement to be maintained by the Cameron Ranch HOA that encompasses the portion of the cultural resource within the project's boundary. During home construction for Lot 41, a permanent wall or fence shall be constructed around the feature, and it shall match the height, color, and materials of the project's adjacent perimeter wall or fencing. Construction of the fence or wall will be included in the project improvement plans and improvement agreements. A no cost encroachment permit shall be obtained from DOT, to allow for maintenance of that portion of Feature 1 within the Hastings Drive right of way.


In the event that subsequent investigations reveal that Feature 1 is not a significant cultural resource, protective measures outlined in this condition may be waived by the Director of Planning and the County Engineer.

\\ds609\DS-Share\DISCRETIONARY\TM2017\TM17-1531_Z17-0001_PD17-0001_Cameron Ranch_BOS\Pod Hearing\Z17-0001_PD17-0001_TM17-1531_Findings_Conditions-Final.docx

NUMBER	DESCRIPTION	BY	DATE

REVISION BLK.	DRAWN BY: STAFF
	DESIGNED BY: K. WIPF
	CHECKED BY: D. CROSARIOL
	SCALE: N/A
	DATE: JULY, 2020
	F.B. REF.

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

D. CROSARIOL
DATE: 07/22/20

REGISTERED PROFESSIONAL ENGINEER
LAND SURVEYING
C34520
Exp. 9-30-21
STATE OF CALIFORNIA

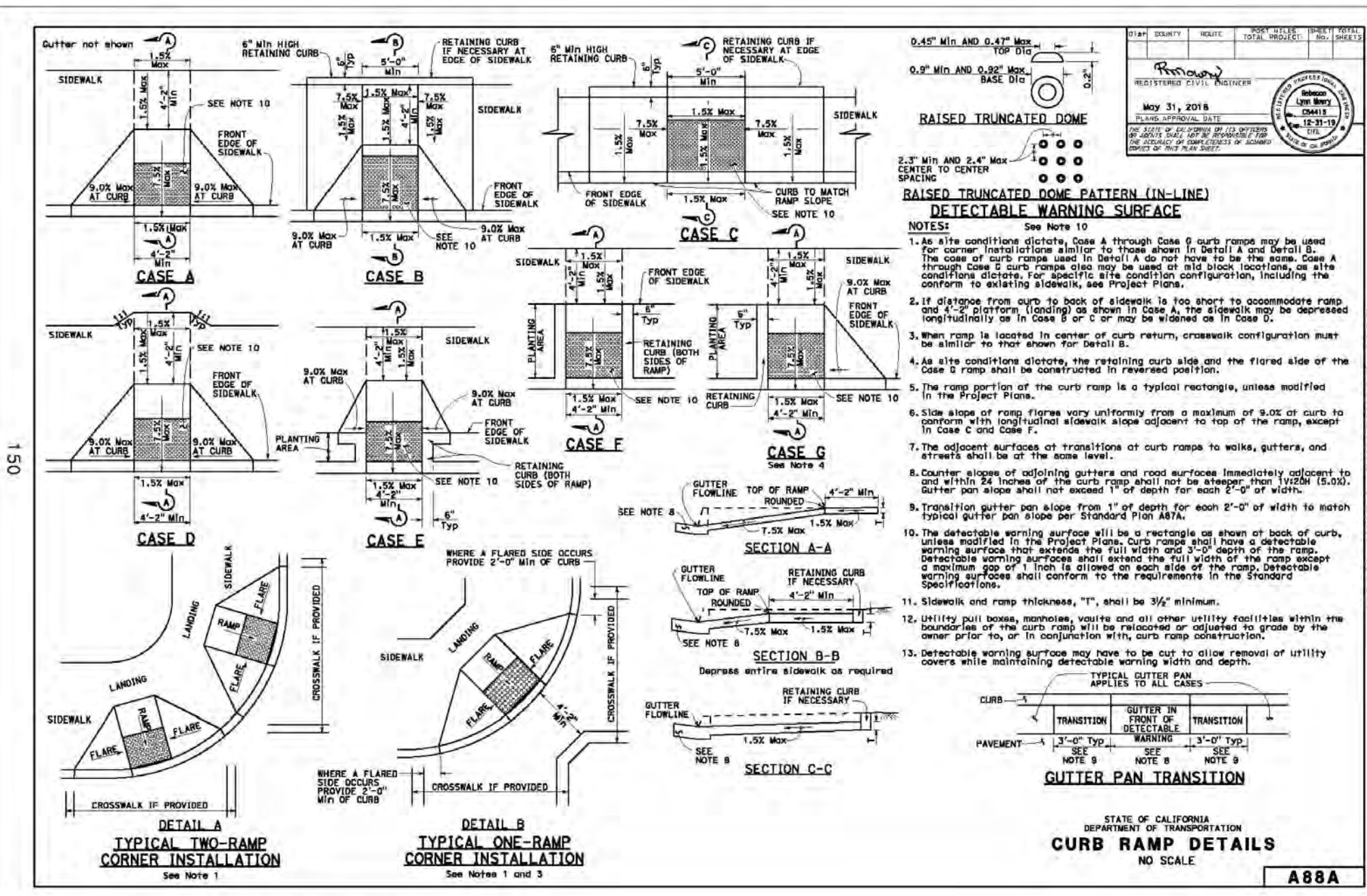
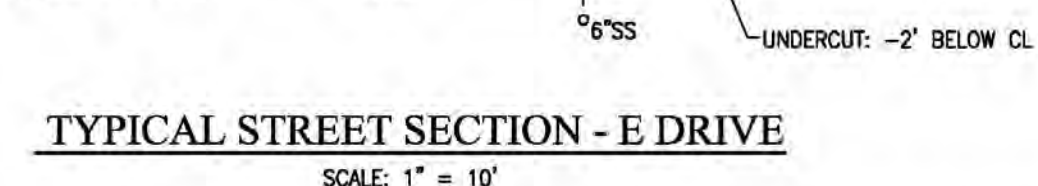
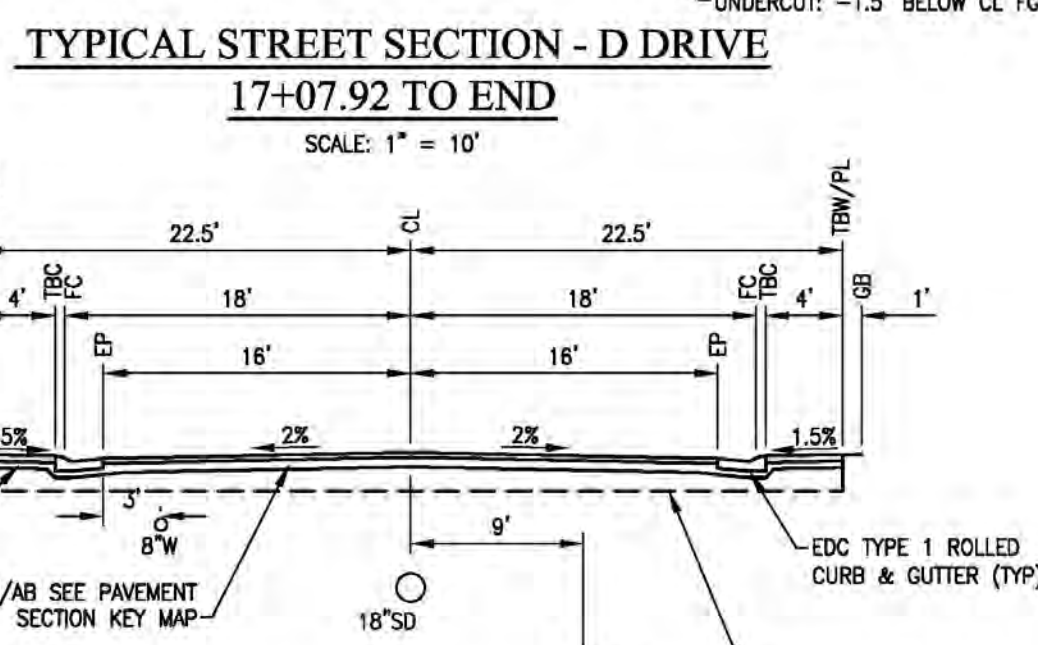
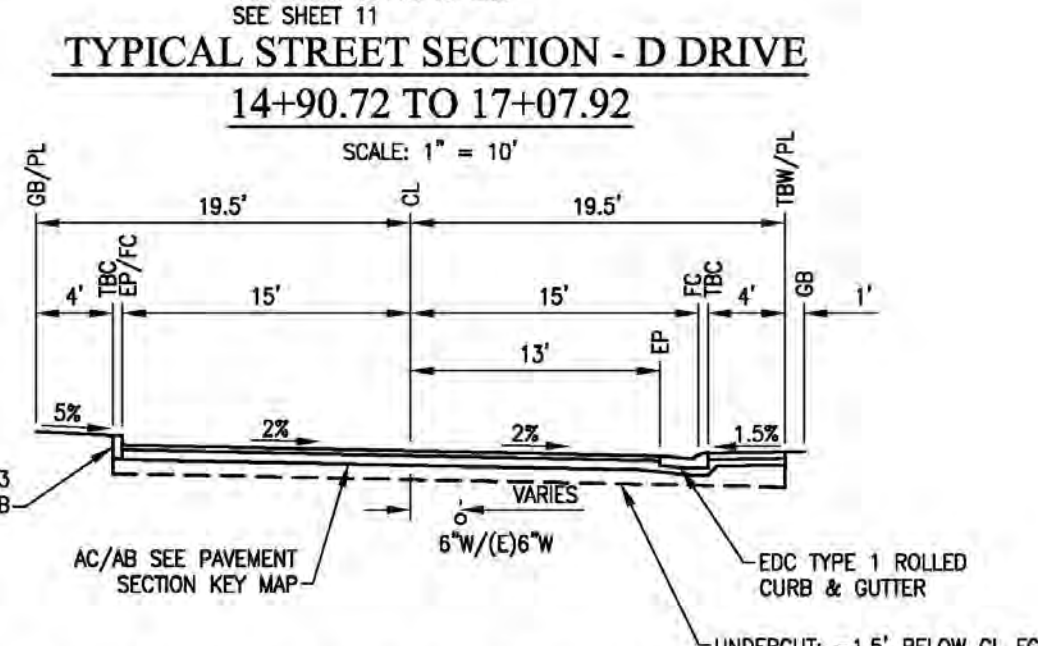
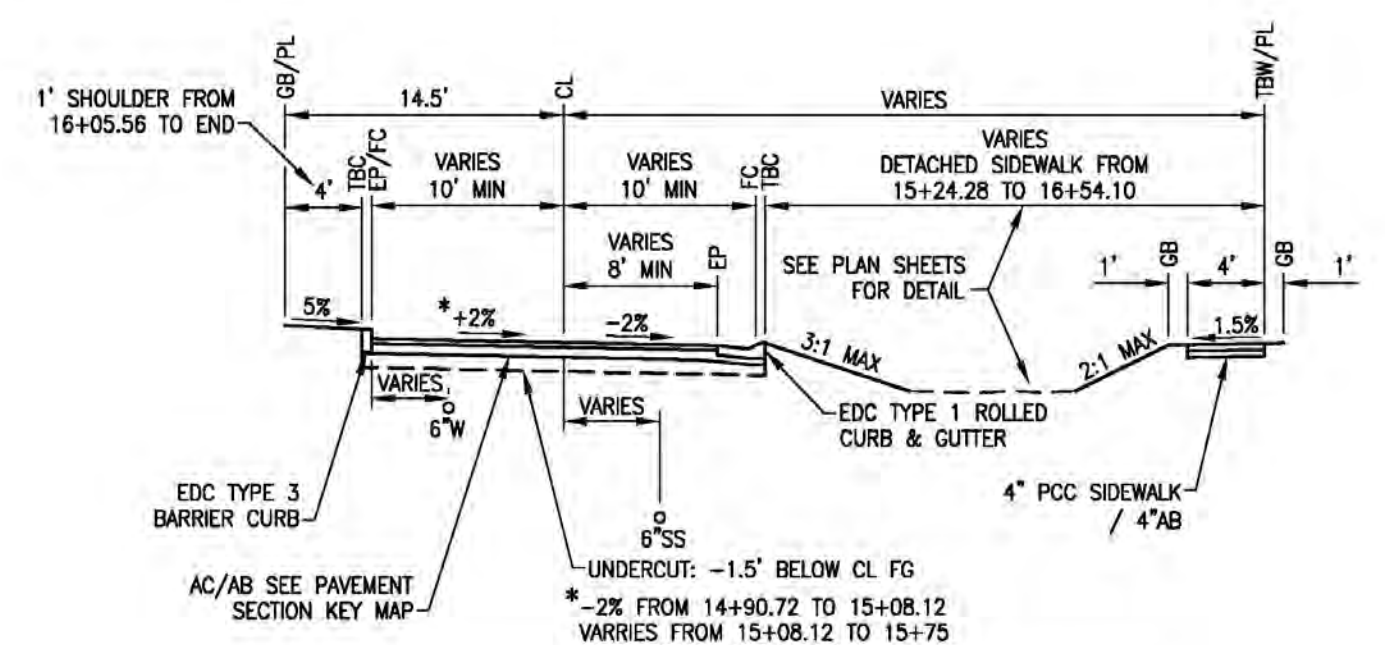
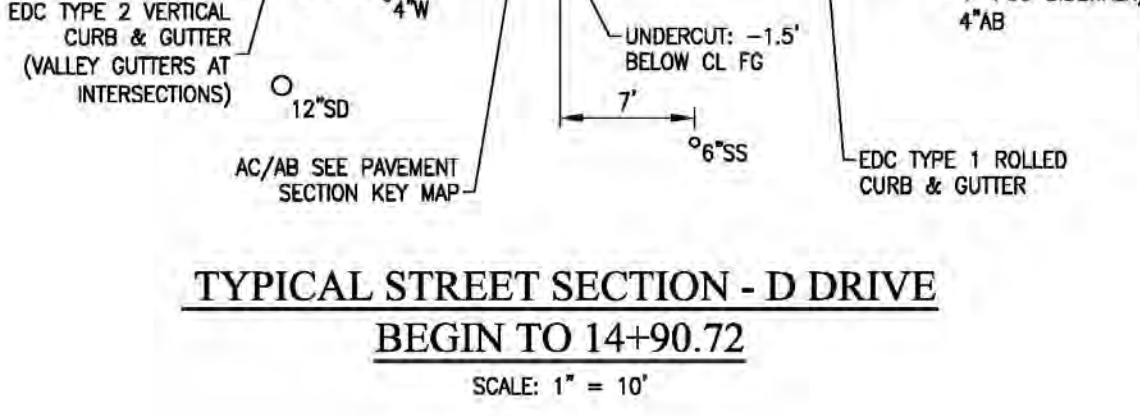
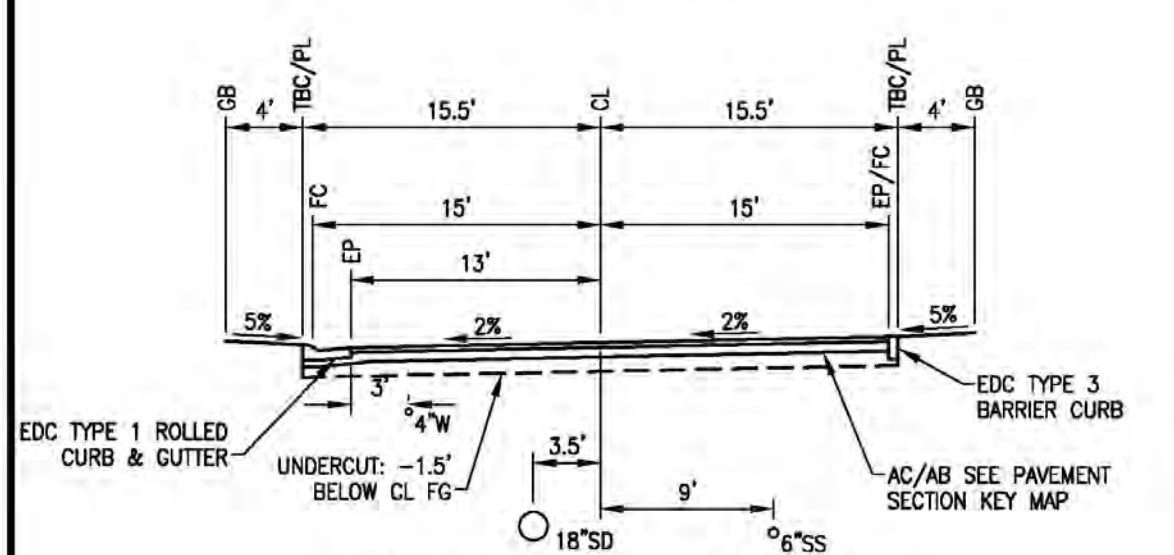
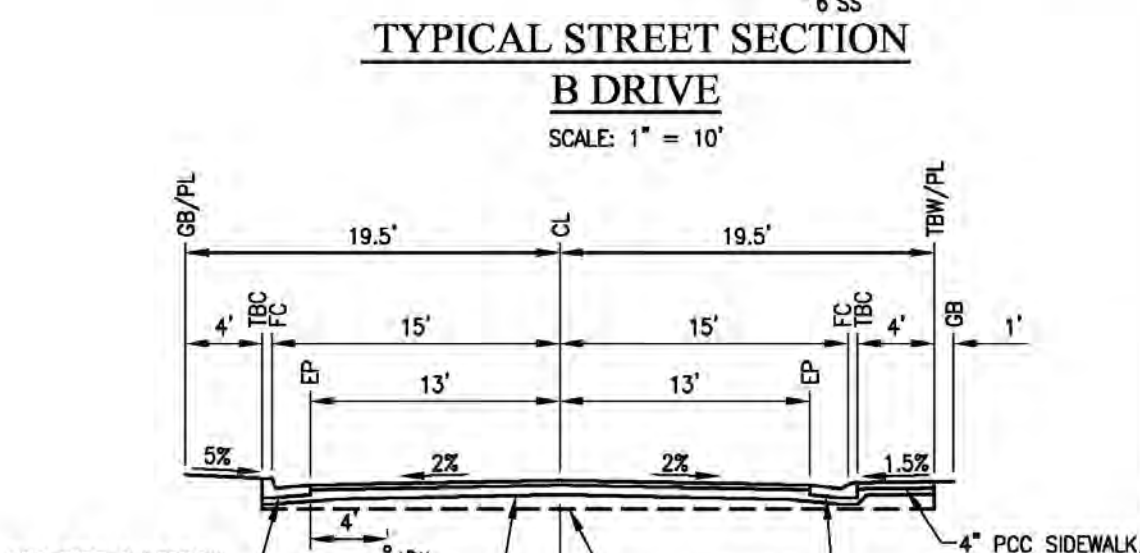
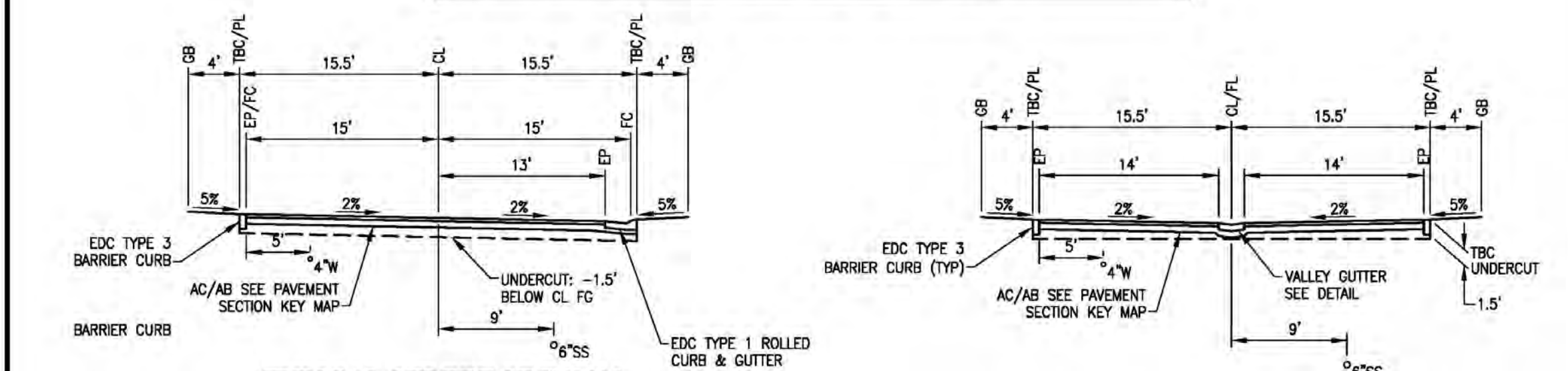
EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
CONDITIONS OF APPROVAL

SHEET	3
OF	25
JOB NO.	19-129-001
CALIFORNIA	23-0739 G 3 of 48

TYPICAL STREET SECTION NOTES

- UTILITIES SHOWN ARE GENERAL LOCATIONS. SEE PLAN & PROFILE SHEETS FOR PROPOSED DESIGN.
- SEE MINIMUM UTILITY SEPARATIONS TABLE, THIS SHEET.
- SEE PAVEMENT SECTION KEY MAP FOR PAVEMENT SECTIONS, THIS SHEET.
- SEE LANDSCAPE PLANS FOR PROPOSED CONCRETE BAND ALONG D-DRIVE.



W: IF THE ROADWAY SPEED LIMIT IS LESS THAN OR EQUAL TO 35 MPH, AC GRIND AND OVERLAY SHALL BE 10 FEET BOTH SIDES OF THE EXCAVATION REGARDLESS WHETHER A SINGLE LANE OR BOTH LANES ARE EFFECTED, UNLESS OTHERWISE SHOWN.

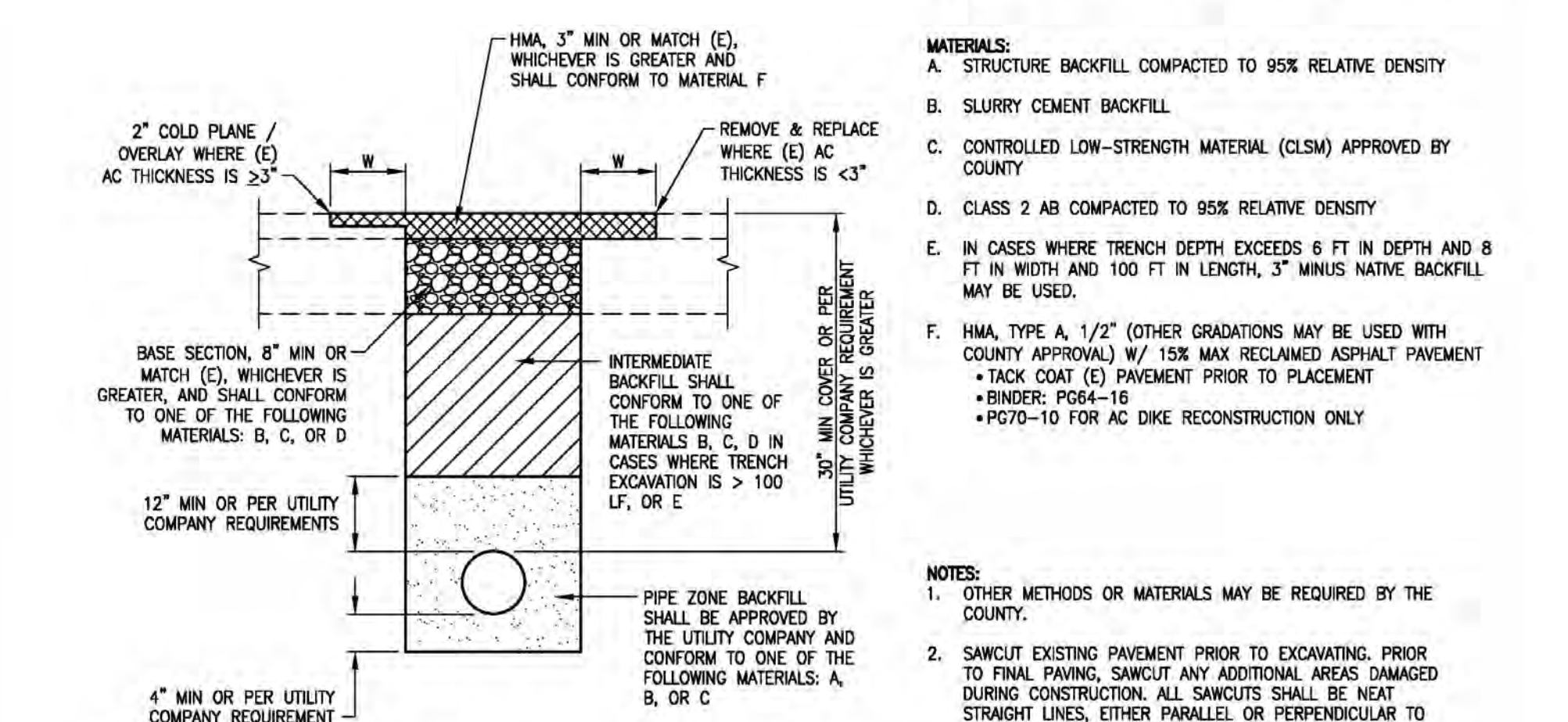
IF THE ROADWAY SPEED LIMIT IS GREATER THAN 35 MPH: W = 20 FEET ON THE APPROACH SIDE OF THE EXCAVATION AND W = 10 FEET ON THE DEPARTURE SIDE OF THE EXCAVATION FROM CENTER LINE TO EP IF ONLY A SINGLE LANE IS EFFECTED. IF THE EXCAVATION CROSSES BOTH LANES W = 20 FEET BOTH SIDES OF THE EXCAVATION, UNLESS OTHERWISE SHOWN.

MATERIALS:

- STRUCTURE BACKFILL COMPACTED TO 95% RELATIVE DENSITY
- SLURRY CEMENT BACKFILL
- CONTROLLED LOW-STRENGTH MATERIAL (CLSM) APPROVED BY COUNTY
- CLASS 2 AB COMPACTED TO 95% RELATIVE DENSITY
- IN CASES WHERE TRENCH DEPTH EXCEEDS 6 FT IN DEPTH AND 8 FT IN WIDTH AND 100 FT IN LENGTH, 3" MINUS NATIVE BACKFILL MAY BE USED.
- HMA, TYPE A, 1/2" (OTHER GRADATIONS MAY BE USED WITH COUNTY APPROVAL) W/ 15% MAX RECLAIMED ASPHALT PAVEMENT + TACK COAT (E) PAVEMENT PRIOR TO PLACEMENT
• BINDER: PG64-16
• PG70-10 FOR AC DIKE RECONSTRUCTION ONLY

NOTES:

- OTHER METHODS OR MATERIALS MAY BE REQUIRED BY THE COUNTY.
- SAWCUT EXISTING PAVEMENT PRIOR TO EXCAVATING. PRIOR TO FINAL PAVING, SAWCUT ANY ADDITIONAL AREAS DAMAGED DURING CONSTRUCTION. ALL SAWCUTS SHALL BE NEAT STRAIGHT LINES, EITHER PARALLEL OR PERPENDICULAR TO THE ROADWAY LANE LINES.
- PONDING OR JETTING IS NOT PERMITTED WITHIN THE ROADWAY, OR WITHIN FIVE FEET (5') OF THE EDGE OF PAVEMENT.
- SPECIAL CONDITIONS MAY BE ATTACHED TO INDIVIDUAL PERMITS.
- MATERIALS TO BE COMPACTED SHALL BE MEASURED BY CA TEST METHOD 231F OR ASTM 1557.
- BITUMINOUS SEAL AS SPECIFIED ON PLANS SHEETS (2" MIN BEYOND COLD PLANE LIMITS).

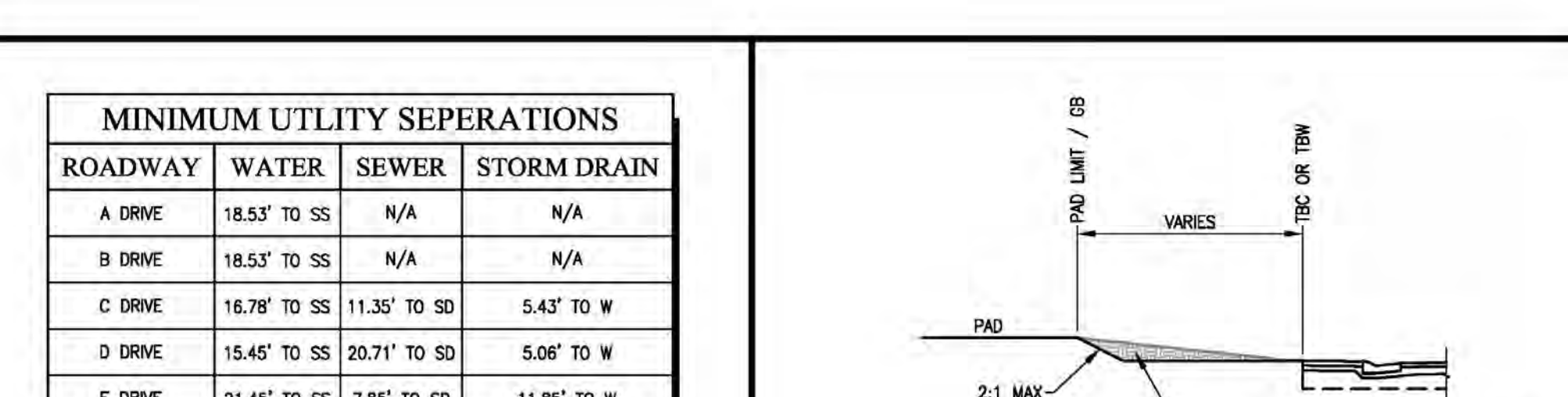


MINIMUM UTILITY SEPARATIONS

ROADWAY	WATER	SEWER	STORM DRAIN
A DRIVE	18.5' TO SS	N/A	N/A
B DRIVE	18.5' TO SS	N/A	N/A
C DRIVE	16.78' TO SS	11.35' TO SD	5.43' TO W
D DRIVE	15.45' TO SS	20.71' TO SD	5.06' TO W
E DRIVE	21.45' TO SS	7.85' TO SD	11.85' TO W

NOTES:

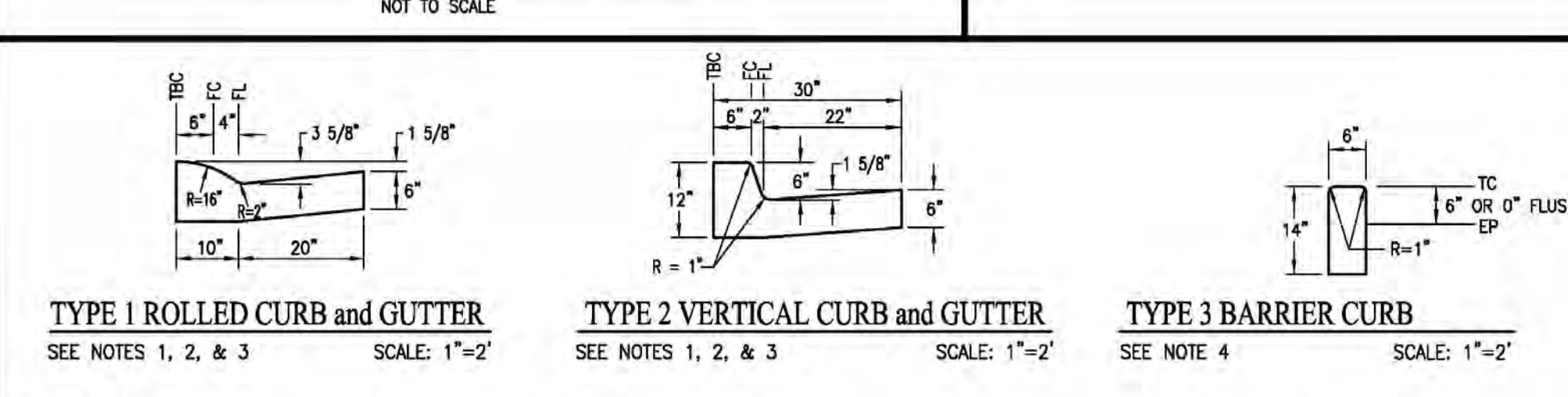
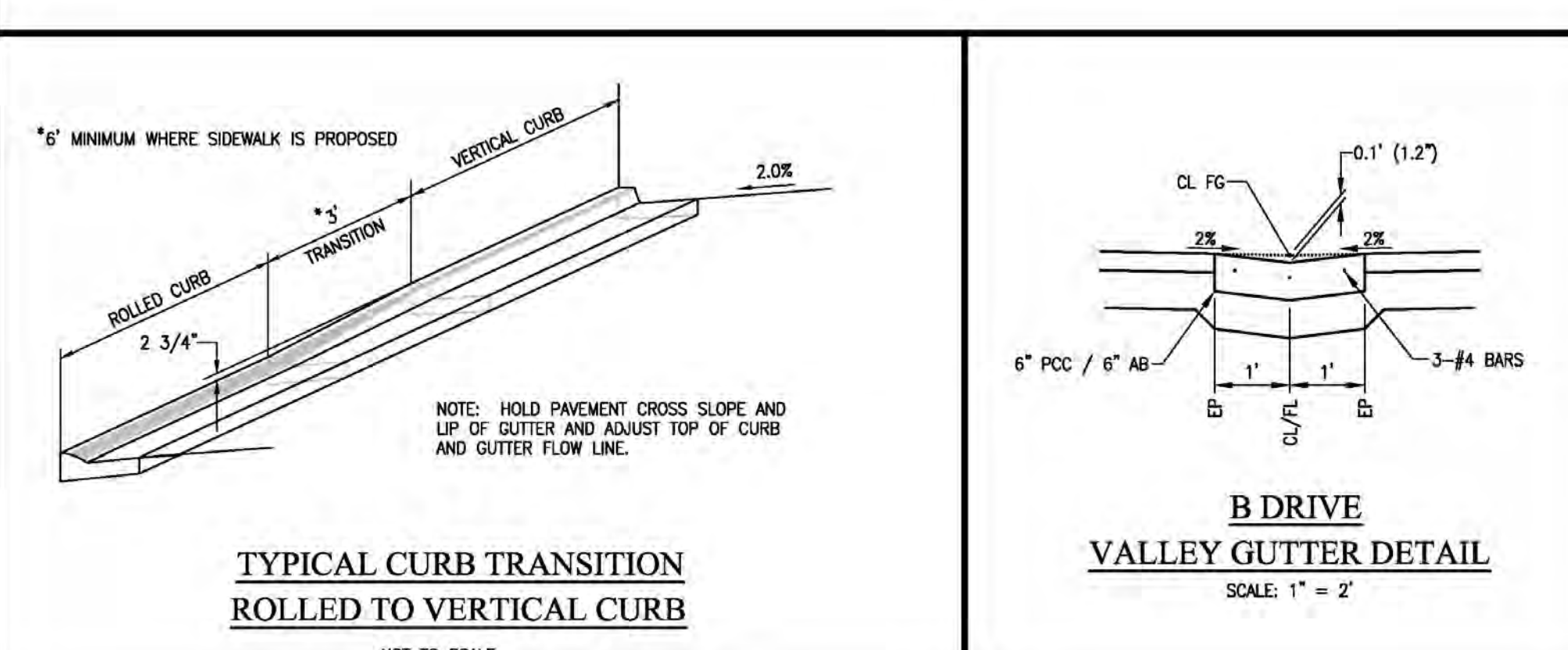
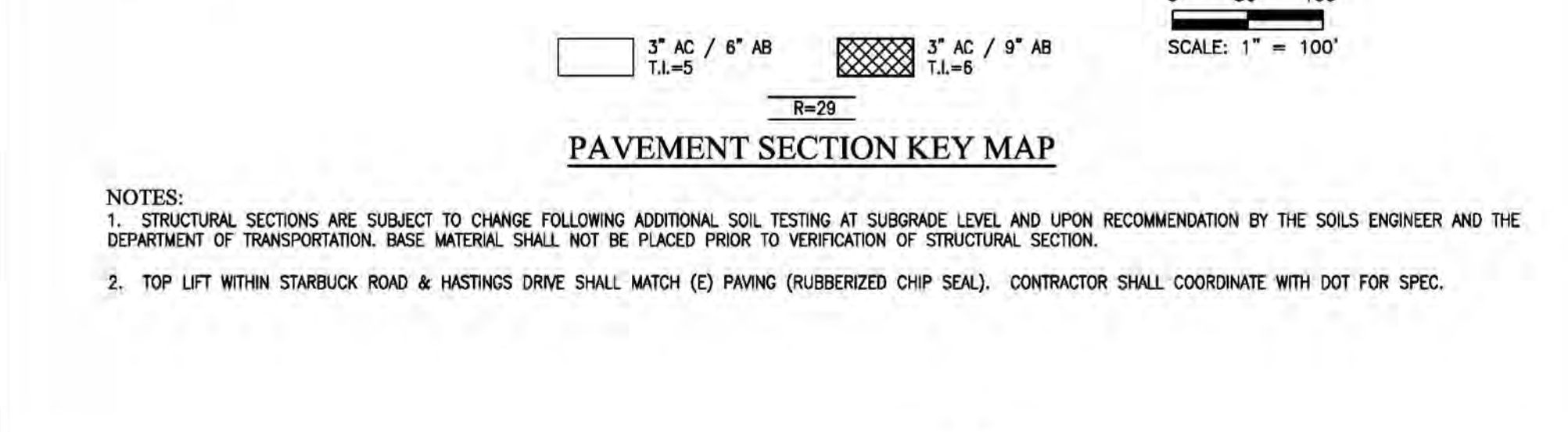
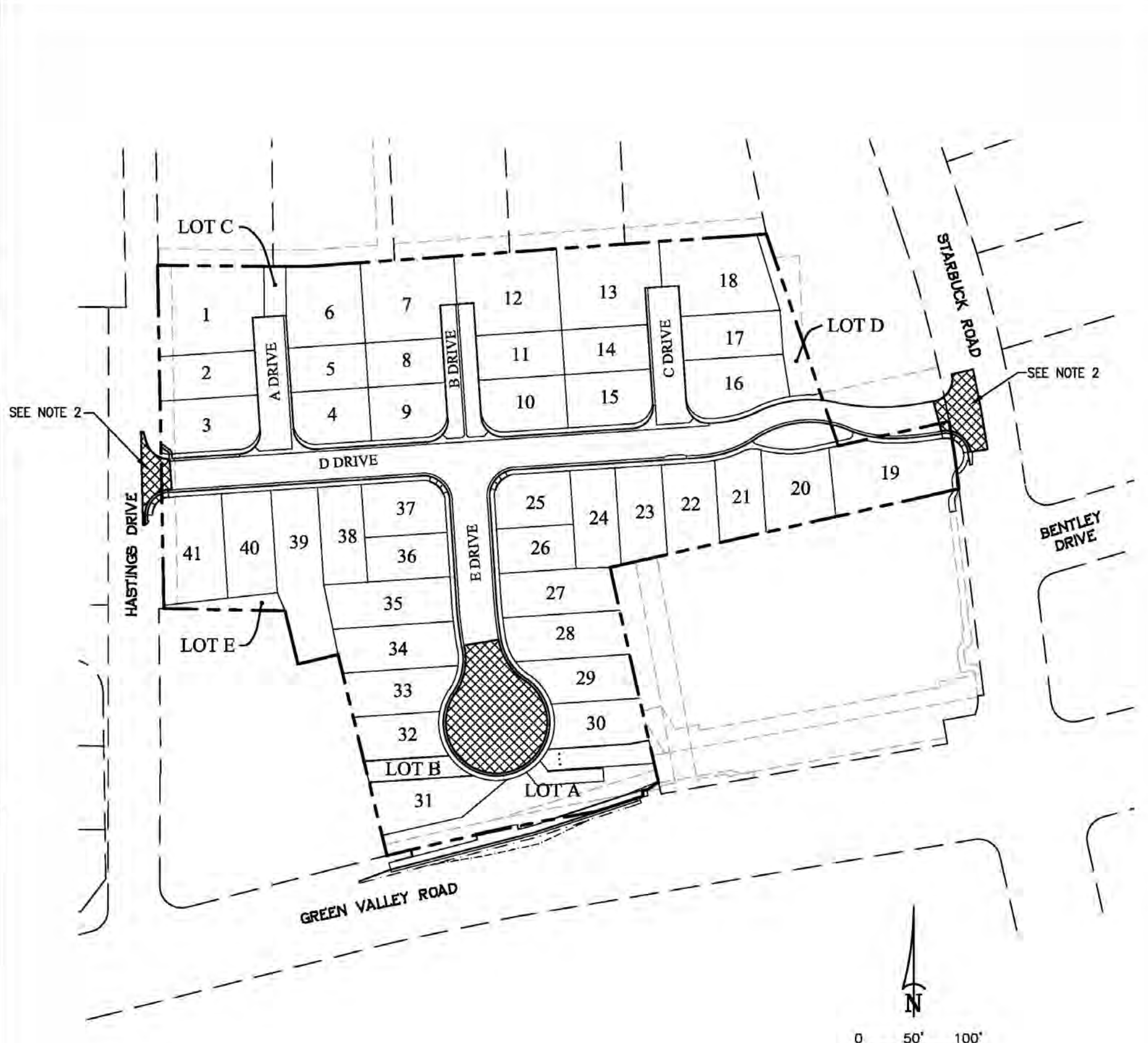
- MINIMUM UTILITY SEPARATIONS NOTED REPRESENT THE WORST CASE SCENARIO WITHIN EACH ROADWAY. DIMENSIONS INCLUDE PIPE WALL THICKNESS. SEE PLAN & PROFILE SHEETS FOR PROPOSED DESIGN.
- IN THE EVENT THESE MINIMUM SEPARATIONS CANNOT BE MET, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE EID INSPECTOR AND CTA FOR FURTHER ASSESSMENT.



PAVEMENT SECTION KEY MAP

NOTES:

- STRUCTURAL SECTIONS ARE SUBJECT TO CHANGE FOLLOWING ADDITIONAL SOIL TESTING AT SUBGRADE LEVEL AND UPON RECOMMENDATION BY THE SOILS ENGINEER AND THE DEPARTMENT OF TRANSPORTATION. BASE MATERIAL SHALL NOT BE PLACED PRIOR TO VERIFICATION OF STRUCTURAL SECTION.
- TOP LIFT WITHIN STARBUCK ROAD & HASTINGS DRIVE SHALL MATCH (E) PAVING (RUBBERIZED CHIP SEAL). CONTRACTOR SHALL COORDINATE WITH DOT FOR SPEC.



NOTES:

- ALL PORTLAND CEMENT SHALL BE PER CALTRANS SPECIFICATIONS, SECTION 73
- 1/2" x 18" LONG DOWEL MINIMUM 4 FT. CENTER TO CENTER SPACING, OR APPROX.
- PLACE 1/2" TRANSVERSE EXPANSION JOINTS OF ASPHALT IMPREGNATED CELOTEX IN SIDEWALK, CURB & GUTTER AT 20' INTERVALS. ALL CONCRETE TO BE CLASS "B" AND SCORED EVERY 10'.
- LOCATE WEAKEN PLANE JOINTS AT 18' INTERVALS. USE 5' INTERVALS FOR RADIUS LESS THAN 25'

NUMBER	DESCRIPTION	BY	DATE

cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: AS SHOWN
DATE: JULY, 2020 **F.B. REF.**

PREPARED UNDER THE DIRECTION OF:
D. CROSARIOL **DATE:** 07/22/20

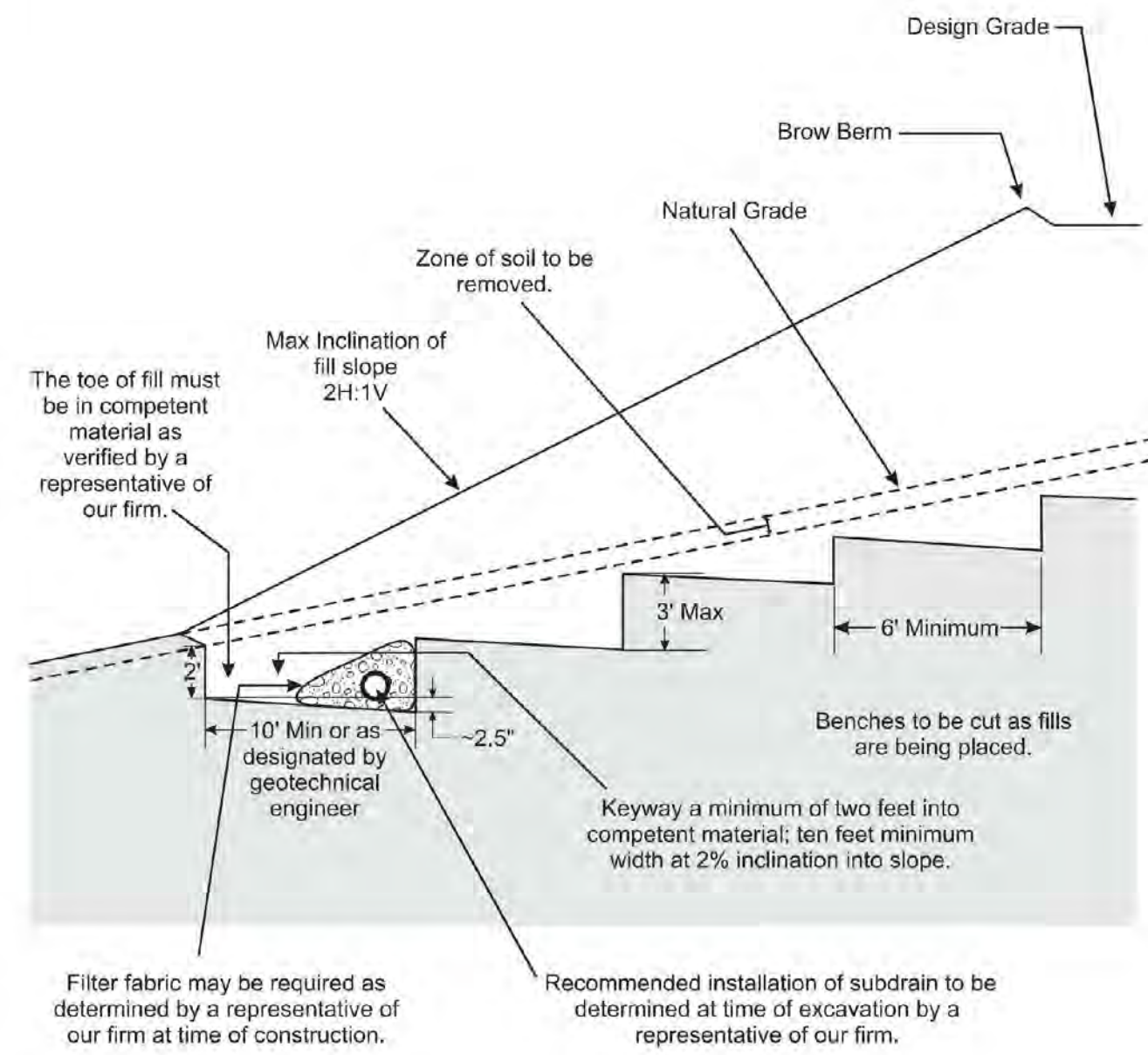
REGISTERED PROFESSIONAL ENGINEER
C34520
Exp. 9-30-21
EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
TYPICAL ROAD SECTIONS
& CONSTRUCTION DETAILS

SHEET 5 OF 25
JOB NO. 19-129-001
CALIFORNIA 23-0739 G 5 of 48

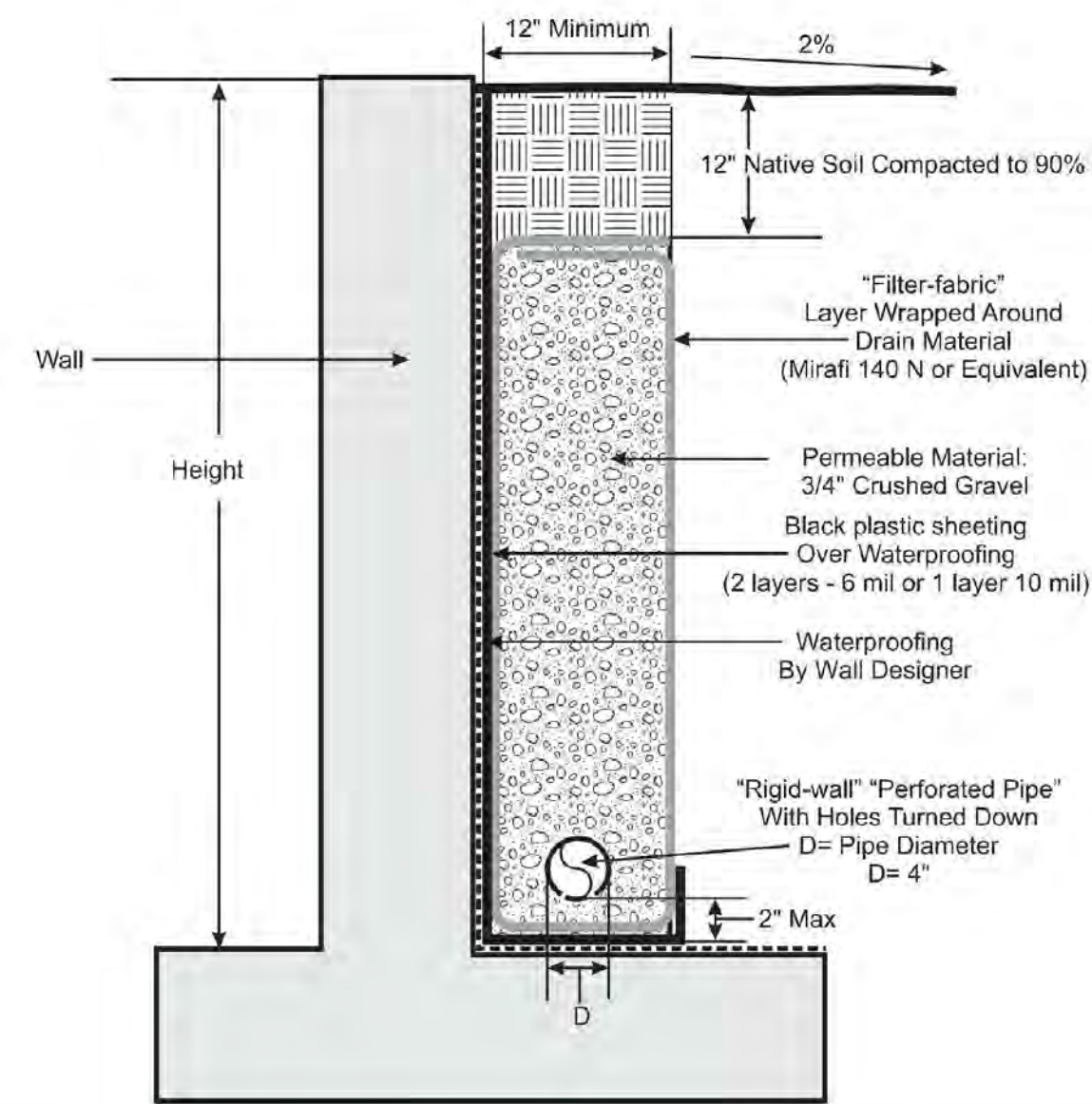
PLACEMENT OF FILL ON NATURAL SLOPE
(Typical)

All keyways should be observed and approved prior to placement of fill.
A keyway is required by CBC for fills on natural slopes of 5H:1V or steeper.



YOUNGDAHL CONSULTING GROUP, INC. GEOTECHNICAL • ENVIRONMENTAL • MATERIALS TESTING	Project No.: E07173.004 November 2019	KEYWAY & BENCH WITH DRAIN Cameron Ranch Cameron Park, California	FIGURE B-1
--	---	---	----------------------

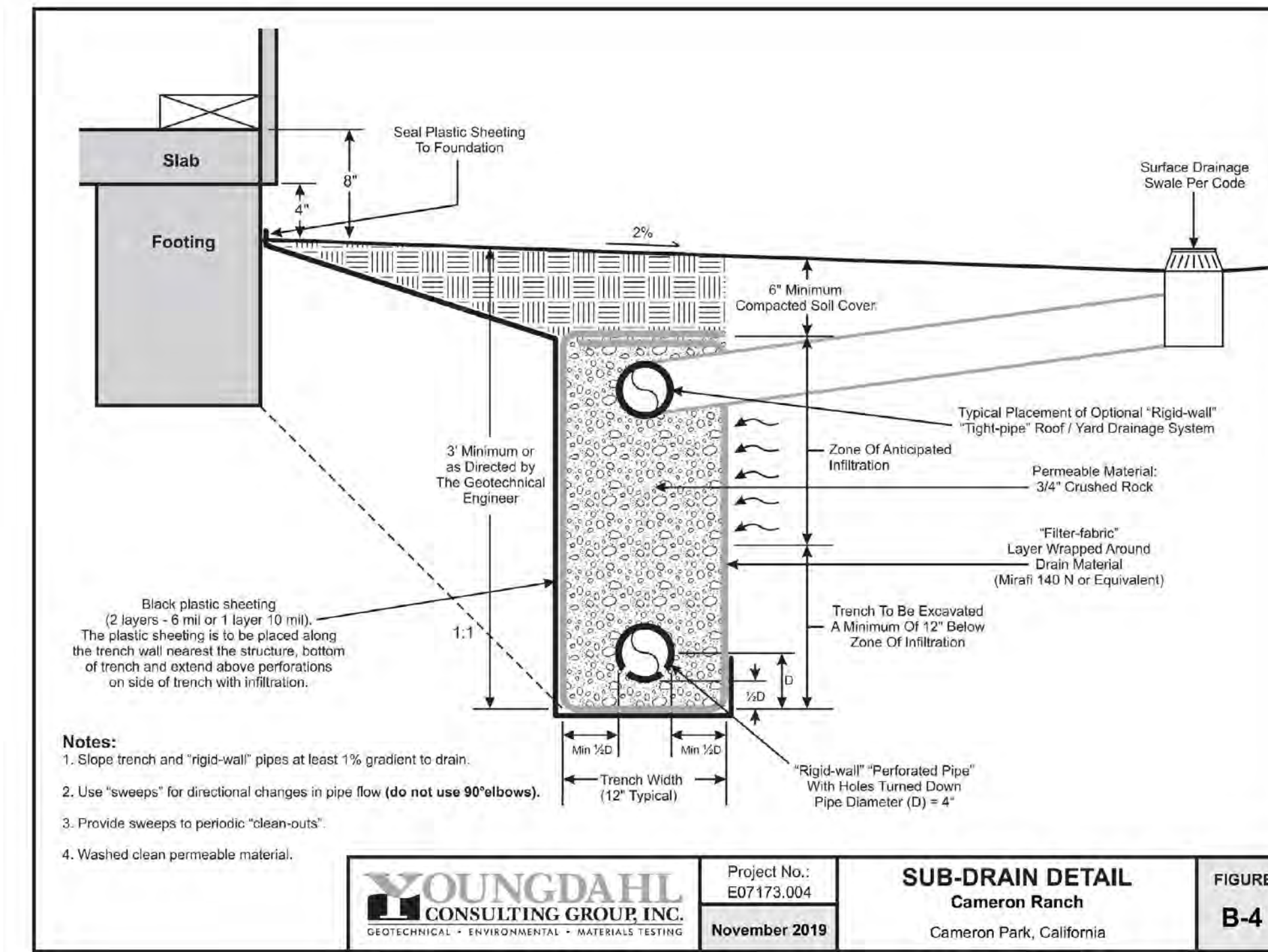
Retaining Wall With
"Perforated Pipe Sub-Drain"
(Typical Cross Section)



- Notes:
- Slope footing and "rigid-wall" pipes along flow line parallel to wall at least 1% gradient to drain to an appropriate outfall area away from residence.
 - Use "sweeps" for directional changes in pipe flow (do not use 90° elbows).
 - Provide periodic "clean-outs".
 - Washed clean permeable material.

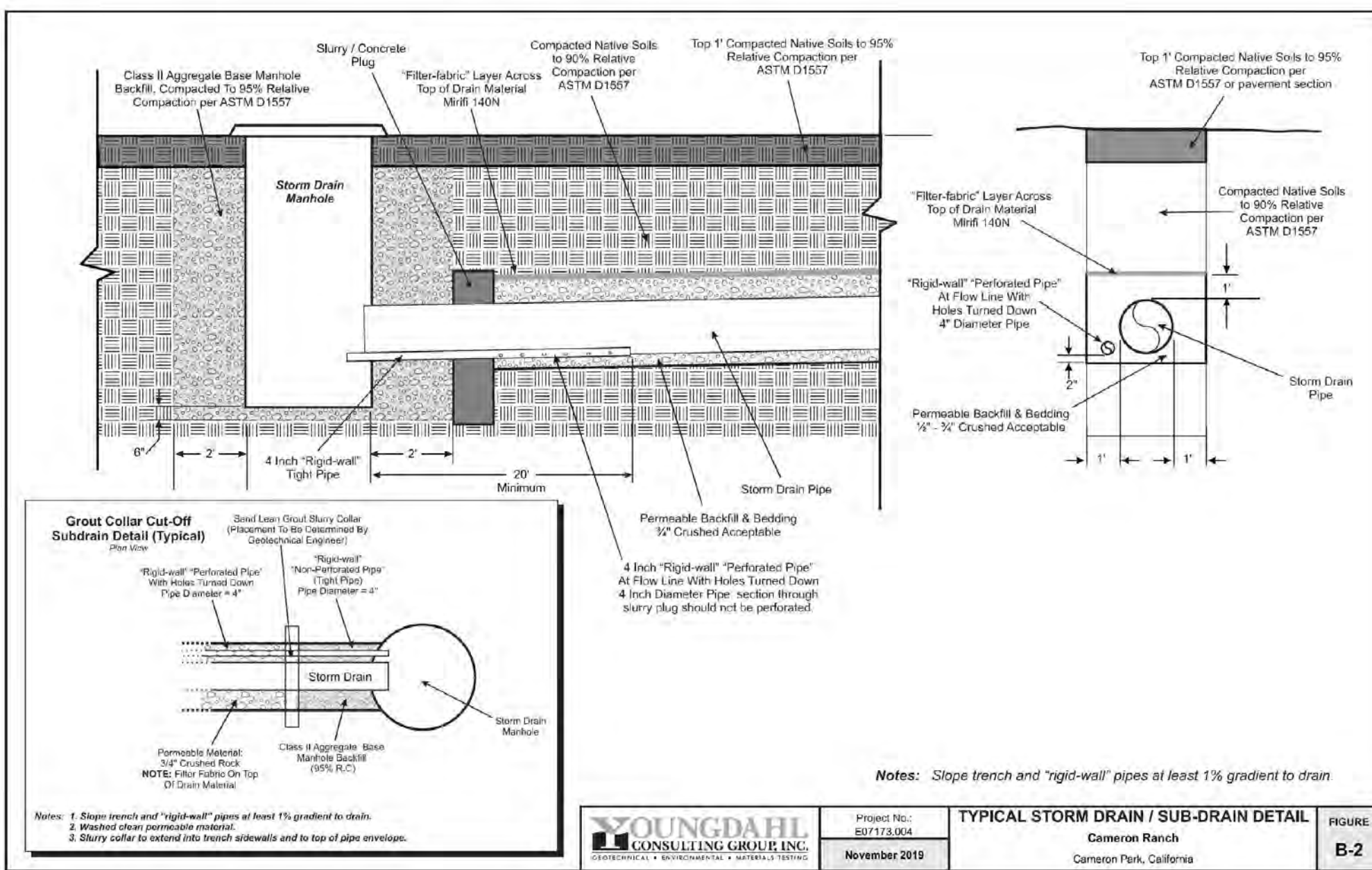
Not To Scale

YOUNGDAHL CONSULTING GROUP, INC. GEOTECHNICAL • ENVIRONMENTAL • MATERIALS TESTING	Project No.: E07173.004 November 2019	RETAINING WALL DRAIN DETAIL Cameron Ranch Cameron Park, California	FIGURE B-3
--	---	---	----------------------

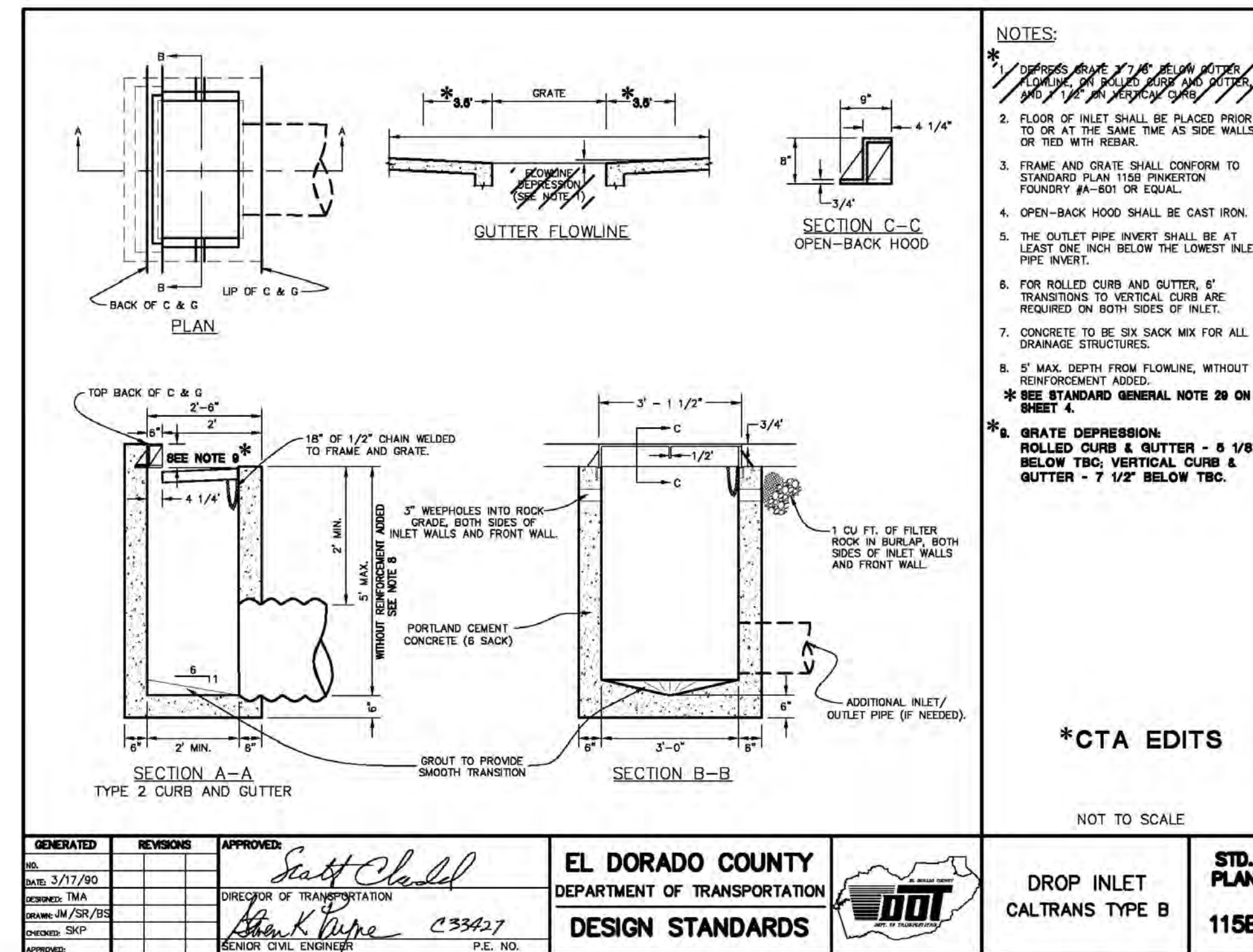


- Notes:
- Slope trench and "rigid-wall" pipes at least 1% gradient to drain.
 - Use "sweeps" for directional changes in pipe flow (do not use 90° elbows).
 - Provide sweeps to periodic "clean-outs".
 - Washed clean permeable material.

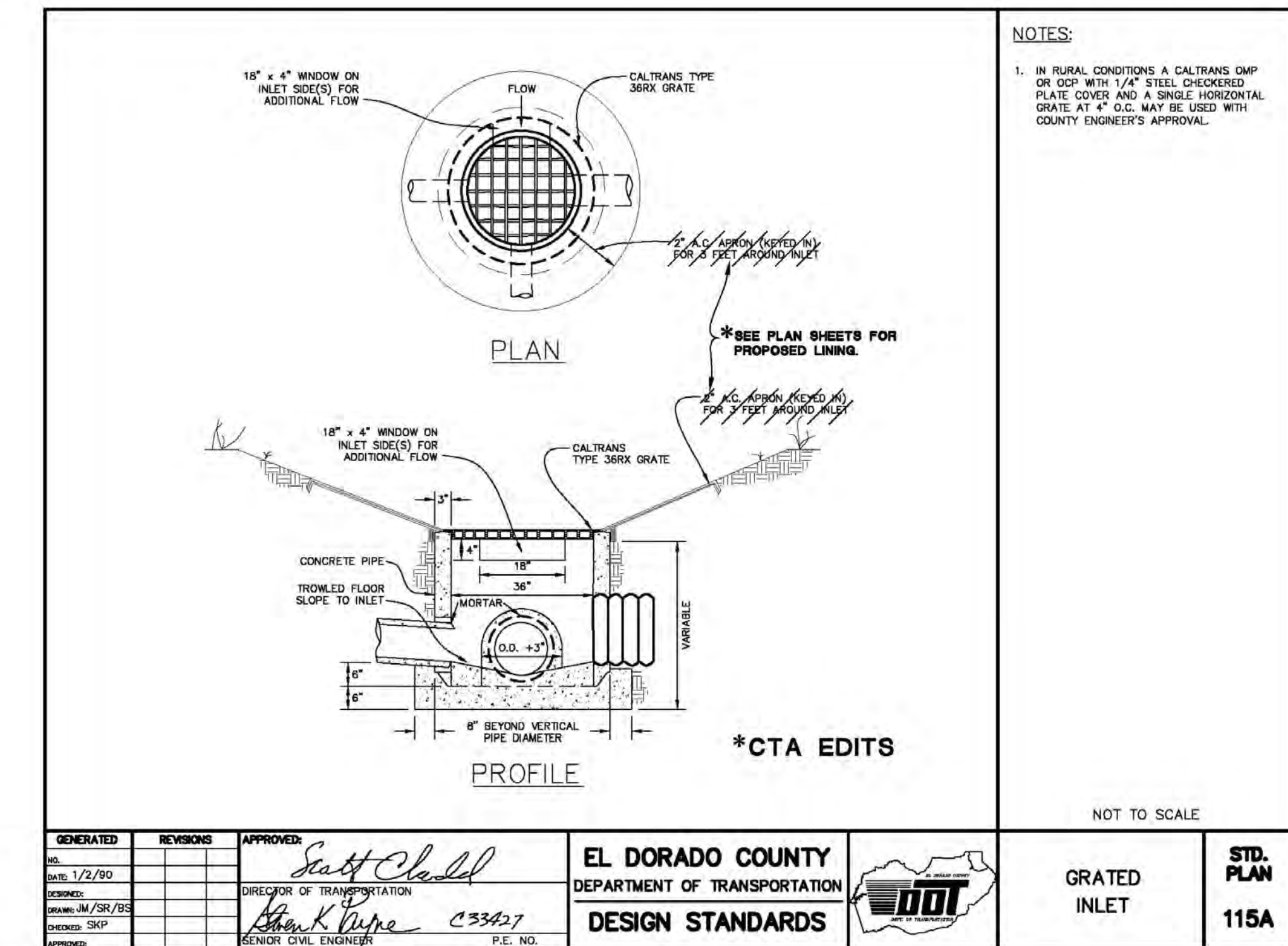
YOUNGDAHL CONSULTING GROUP, INC. GEOTECHNICAL • ENVIRONMENTAL • MATERIALS TESTING	Project No.: E07173.004 November 2019	SUB-DRAIN DETAIL Cameron Ranch Cameron Park, California	FIGURE B-4
--	---	--	----------------------



YOUNGDAHL CONSULTING GROUP, INC. GEOTECHNICAL • ENVIRONMENTAL • MATERIALS TESTING	Project No.: E07173.004 November 2019	TYPICAL STORM DRAIN / SUB-DRAIN DETAIL Cameron Ranch Cameron Park, California	FIGURE B-2
--	---	--	----------------------



GENERATED: 3/17/20	DESIGNED: TMA	APPROVED: Scott Cladd	EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS	DROP INLET CALTRANS TYPE B	STD. PLAN 115B
--------------------	---------------	-----------------------	---	--------------------------------------	--------------------------



GENERATED: 3/17/20	DESIGNED: TMA	APPROVED: Scott Cladd	EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS	GRATED INLET	STD. PLAN 115A
--------------------	---------------	-----------------------	---	---------------------	--------------------------

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF	DESIGNED BY: K. WIPF	CHECKED BY: D. CROSARIOL	SCALE: AS SHOWN	DATE: JULY, 2020	F.B. REF.
------------------------	-----------------------------	---------------------------------	------------------------	-------------------------	------------------

cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaeng.com

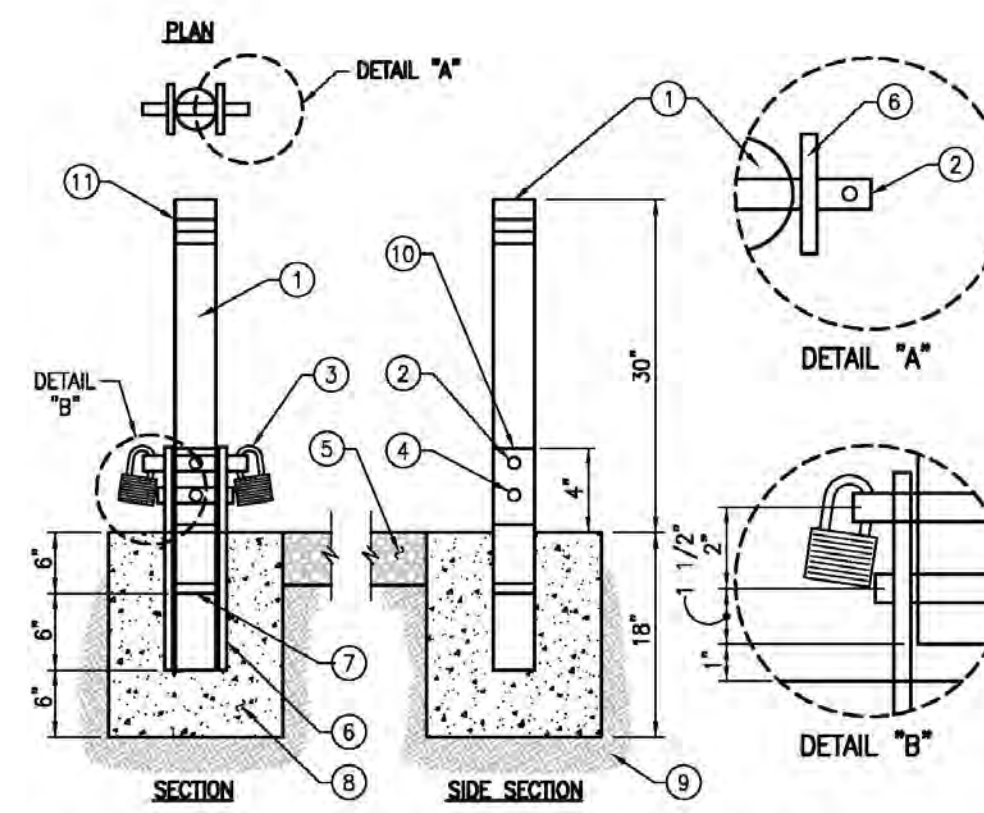
PREPARED UNDER THE DIRECTION OF:
D. CROSARIOL
DATE: 07/22/20

REGISTERED PROFESSIONAL ENGINEER
C34520
Exp. 9-30-21
STATE OF CALIFORNIA

IMPROVEMENT PLANS FOR:
CAMERON RANCH
CONSTRUCTION DETAILS

SHEET
6
OF
25

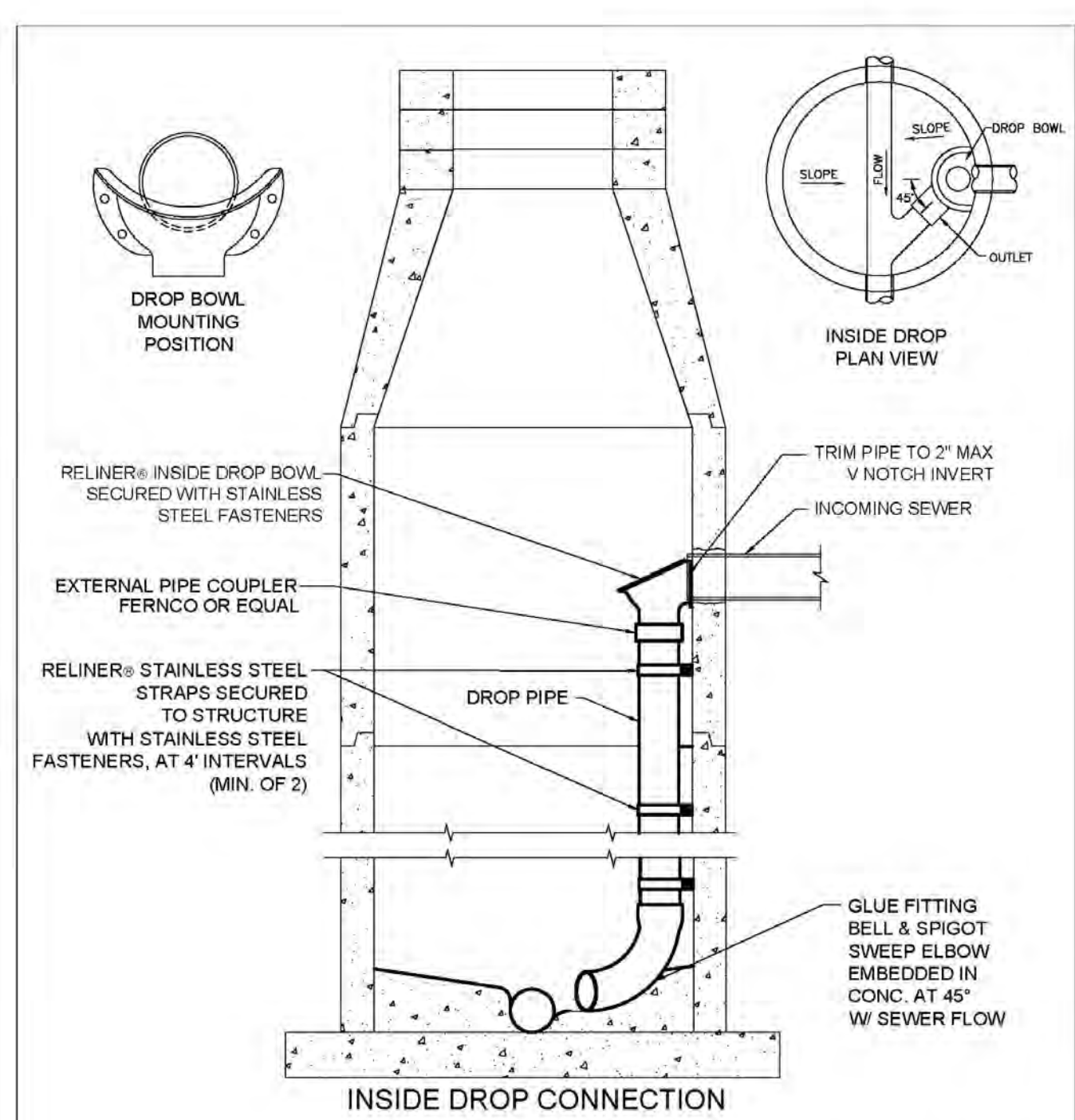
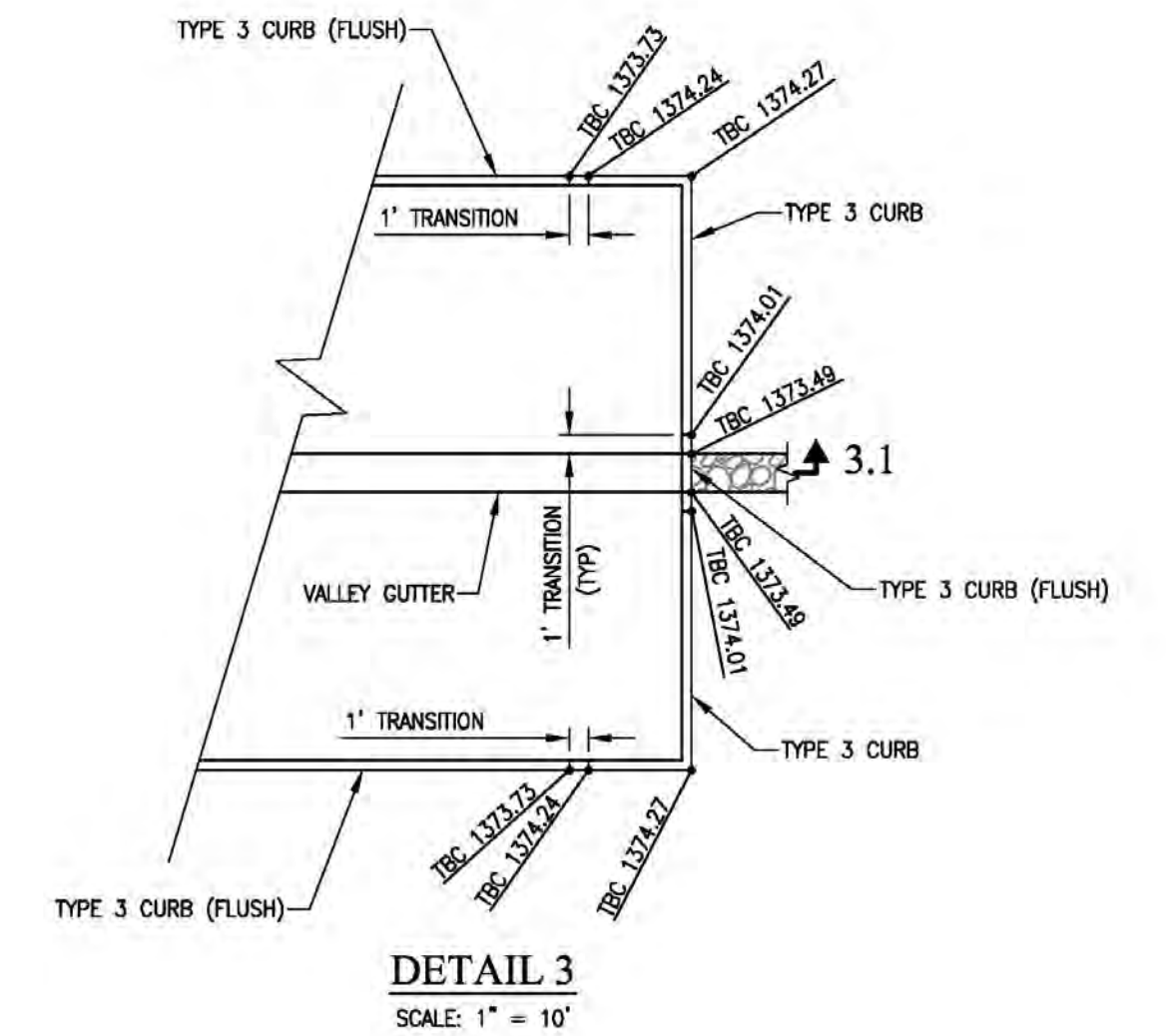
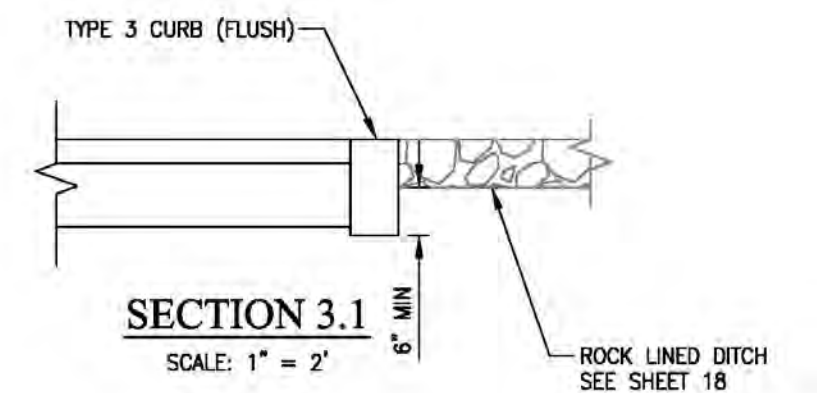
JOB NO. 19-129-001
CALIFORNIA 23-0739 G 6 OF 48



- LEGEND:**
1. 1" GAUGE 2 3/4" O.D. ROUND STEEL POST WITH CAPPED TOP & 3/4" HOLES FOR SWIVEL ROD AND 3/4" HOLES FOR LOCKING PIN. EASE ALL EDGES OF STEEL POST.
 2. 3/8" DIA x 6" LOCKING PIN WITH 3/8" HOLES 1/4" FROM EACH END OF PIN OR 3/8" DIA x 5" LOCKING PIN WITH FLAT WASHER ON ONE END AND 3/8" HOLE 1/4" FROM END OF PIN.
 3. PADLOCKS TO BE PROVIDED BY CONTRACTOR.
 4. 5/8" DIA STEEL SWIVEL ROD. WELD SWIVEL ROD TO SIDE PLATES - NO WASHERS.
 5. MAINTENANCE ROAD.
 6. 3/8" x 16" x 4" STEEL BASE PLATE WITH 1" RADIUS CORNERS. EASE ALL EDGES.
 7. 3/8" STEEL BRACE. FILLET WELD BOTH SIDES TO BASE PLATES.
 8. 2' ROUND CONCRETE x 18" DEEP FOOTING.
 9. COMPACTED SUBGRADE.
 10. 1" RADIUS CORNERS, TYP.
 11. 1" RED DIAMOND REFLECTIVE TAPE.

- NOTES:**
1. ALL PIPE SHALL BE BLACK STEEL PIPE.
 2. ALL JOINTS SHALL BE WELDED IN ACCORDANCE W/ CA STATE STANDARD SPECIFICATIONS FOR WELDING STRUCTURAL STEEL.
 3. ALL PARTS (EXCEPT PADLOCK) SHALL BE PAINTED W/ 2 COATS OF ZINC CHROMATE PRIMER AND 2 COATS OF EXTERIOR ENAMEL. COLOR: SAFETY YELLOW.
 4. BOLLARD SHALL BE INSTALLED SUCH THAT WHEN FOLDED IT LAYS FLAT IN THE DIRECTION TO BE TRAVELED.

COLLAPSIBLE BOLLARD
(OR APPROVED EQUAL - SEE SHEET 15 FOR LOCATION)
N/S



RELINER / DURAN, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 508-6001 FAX: (877) 434-3197
WWW.RELINER.COM

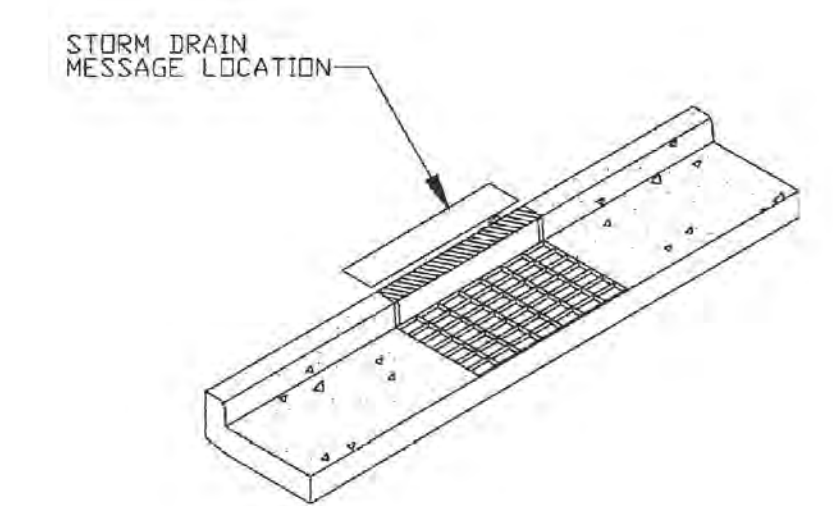
DESCRIPTION	DATE	SCALE
DROP CONNECTIONS	12/28/16	NONE

DRAWING NUMBER: DC-1

REVISION	BLK.	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: AS SHOWN
DATE: JULY, 2020 **F.B. REF.**

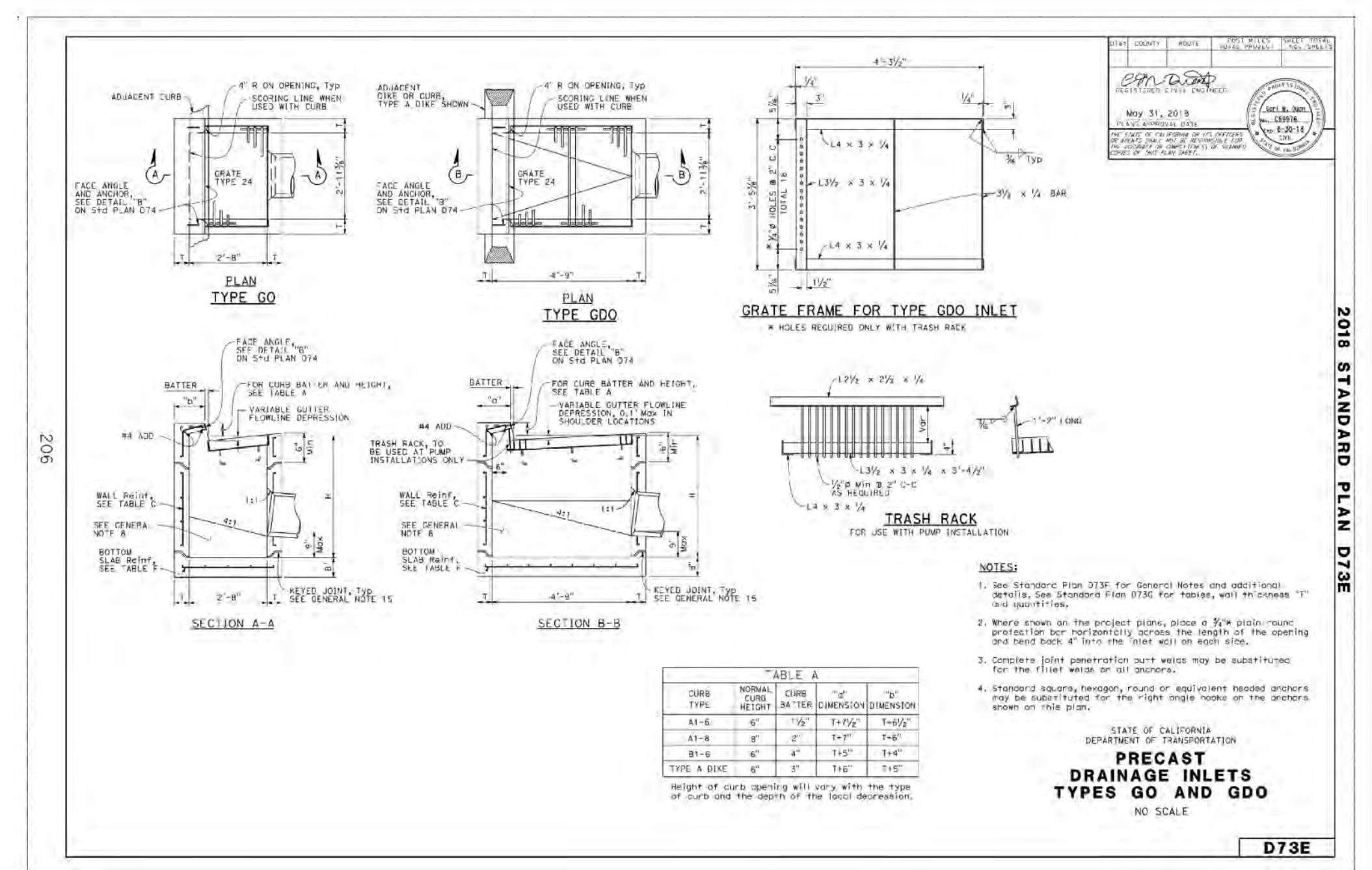
cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net



- NO DUMPING!
FLOWS TO RIVER
- NO DUMPING!
FLOWS TO CREEK
- NO DUMPING!
I LIVE DOWNSTREAM

- NOTES:**
1. STORM DRAIN MESSAGE SHALL BE APPLIED IN SUCH A WAY AS TO PROVIDE A CLEAR, LEGIBLE IMAGE.
 2. STORM DRAIN MESSAGE SHALL BE PERMANENTLY APPLIED DURING THE CONSTRUCTION OF THE CURB AND GUTTER USING A METHOD APPROVED BY THE LOCAL AGENCY.
 3. FOR AREA DRAIN INLETS, STORM DRAIN MESSAGE SHALL BE PLACED ADJACENT AND PARALLEL TO THE LONG AXIS OF THE DRAIN.
 4. LETTERS SHALL BE 1-1/2" IN HEIGHT. DIMENSIONS OF STORM DRAIN MESSAGE SHALL NOT EXCEED 12" X 33".
 5. IF THE MESSAGE IS STAMPED IN CONCRETE, THE DEPTH SHOULD BE APPROXIMATELY 0.25".
 6. IF AN ALTERNATIVE STORM DRAIN MESSAGE IS PROPOSED, IT SHALL BE APPROVED BY THE LOCAL AGENCY.

STORM WATER QUALITY MESSAGE DETAIL
N/S



NUMBER	DESCRIPTION	BY	DATE

PREPARED UNDER THE DIRECTION OF:
D. CROSARIOL
DATE: 07/22/20

REGISTERED PROFESSIONAL ENGINEER
NO. C34520
EXPIRES 9-30-21
STATE OF CALIFORNIA

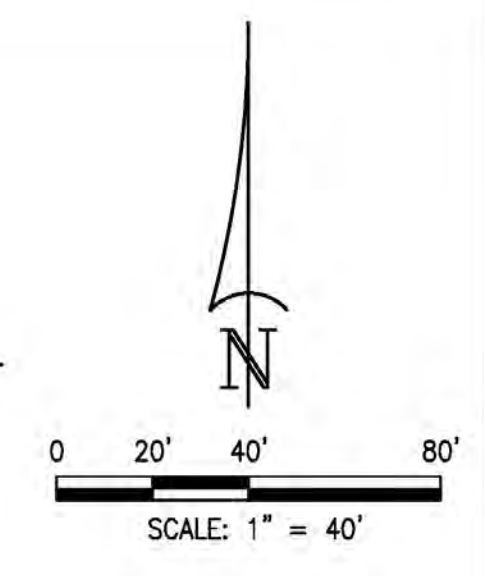
IMPROVEMENT PLANS FOR:
CAMERON RANCH
CONSTRUCTION DETAILS

EL DORADO COUNTY

SHEET 7 OF 25
JOB NO. 19-129-001
CALIFORNIA 23-0739 G 7 of 48



- NOTES**
- PER EID CONSTRUCTION RECORDS REGARDING TIMING OF ADJACENT EXISTING SEWER FACILITIES, THE EXISTING ON-SITE BUILDING MAY HAVE UTILIZED A SEPTIC TANK & LEACH FIELD SOMETIME IN THE PAST. THE CONTRACTOR SHALL VERIFY & REMEDIATE IF NECESSARY.
 - REFER TO SHEETS 8.1 & 8.3 FOR CONSTRUCTION PHASING/TIMING OF DEMO WORK.
 - NO EID WATER OR SEWER UTILITIES SHALL BE REMOVED UNTIL NEW REPLACEMENT UTILITIES ARE IN AND ACCEPTED BY EID.




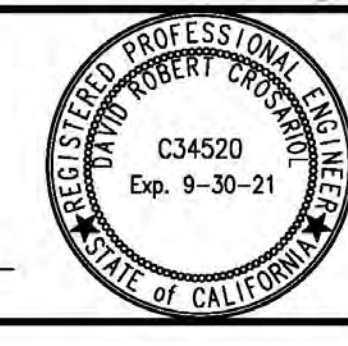
- KEY NOTES**
- OBLETERATE SURFACING (INCLUDING PILASTERS AT (E) DRIVE & STARBUCK RD) - APPROX 2,595 SF. SEE GEOTECHNICAL STUDY FOR RECOMMENDATIONS
 - REMOVE (E) BUILDING - APPROX 3,460 SF. SEE GEOTECHNICAL STUDY FOR RECOMMENDATIONS
 - REMOVE (E) 6" AC WATER LINE - APPROX 700 LF. SEE SHEETS 9 & 11 FOR TIE-IN LOCATIONS
 - SALVAGE (E) FIRE HYDRANT & PROVIDE TO EID - 1 EA
 - REMOVE (E) WATER SERVICE - 1 EA
 - REMOVE (E) 6" SEWER LINE - APPROX 768 LF. SEE SHEETS 12 & 15 FOR TIE-IN LOCATIONS
 - REMOVE (E) SEWER MANHOLE - 3 EA
 - REMOVE (E) SEWER SERVICE - 1 EA
 - REMOVE (E) DRAIN STRUCTURE - 1 EA
 - REMOVE (E) DRAIN LINE - 51 LF
 - (E) DRY UTILITIES - RELOCATION & OR REMOVAL BY OTHERS (TYP)
 - SLURRY FILL APPROX 33 LF OF (E) 6" SS PER EID SPECS
 - ABANDON (E) SS/MH PER EID SPECS BY REMOVING TOP 3' OF MH AND BACKFILLING
 - REMOVE APPROX. 75 LF OF (E) SEWER SERVICE LINE. CAP JUST SHORT OF (E) SS/MH PER EID SPECS
 - PLUG (E) 15" OPENING AT (E)DI
 - REMOVE (E) SIDEWALK BARRICADE

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
 DESIGNED BY: K. WIPF
 CHECKED BY: D. CROSARIOL
 SCALE: 1" = 40'
 DATE: JULY, 2020 F.B. REF.

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

 D. CROSARIOL DATE: 07/22/20



EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
 DEMO PLAN

SHEET 8 OF 25
 JOB NO. 19-129-001
 23-0739 G 8 of 48



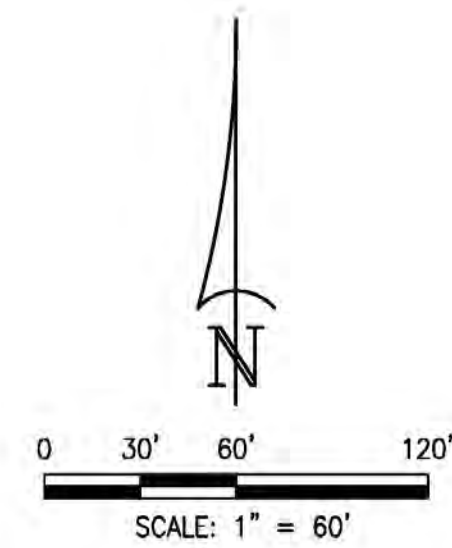
PHASE 1 CONSTRUCTION SEQUENCE

1. CONSTRUCT WATER LATERAL A & LOT E BOV NEAR APARTMENTS - SEE SHEETS 9 & 14
 - 1.1. PLACE TEMP BOV AT D-DRIVE
 - 1.2. TEST & DISINFECT
 - 1.3. PUT INTO SERVICE
 - 1.4. REMOVE (E)6"W. SEE SHEET 8 FOR LIMITS
2. CONSTRUCT SEWER LATERAL A (SL-A) UP TO TEMP SSC0
 - 2.1. CONSTRUCT RETAINING WALL FOOTINGS WHERE ADJACENT TO SL-A
 - 2.2. TEST SL-A
 - 2.3. MAKE SOUTHERN CONNECTION
 - 2.4. REMOVE (E) DOWNSTREAM SEWER. SEE SHEET 8 FOR LIMITS
3. MAKE ROUGH GRADE
4. CONSTRUCT REMAINING WET UTILITIES SHOWN TO RIGHT, BELOW, INCLUDING TEMPORARY SEWER LATERAL, CAP (P) 6"W ON EAST SIDE OF (E) 6"SS (D DRIVE)
5. LAY DRY UTILITY CONDUITS INCLUDING BOXES, VAULTS, & TRANSFORMERS
6. MAKE SUBGRADE FOR APPROVAL
7. TEST SEWER & STORM DRAIN SYSTEM AND PRESSURE TEST WATER SYSTEM
8. PLACE TEMP 12" WIDE 6" AB ACCESS ROAD. SEE NOTE 3
9. MAKE NORTHERN SEWER CONNECTION TO (E) SSMH

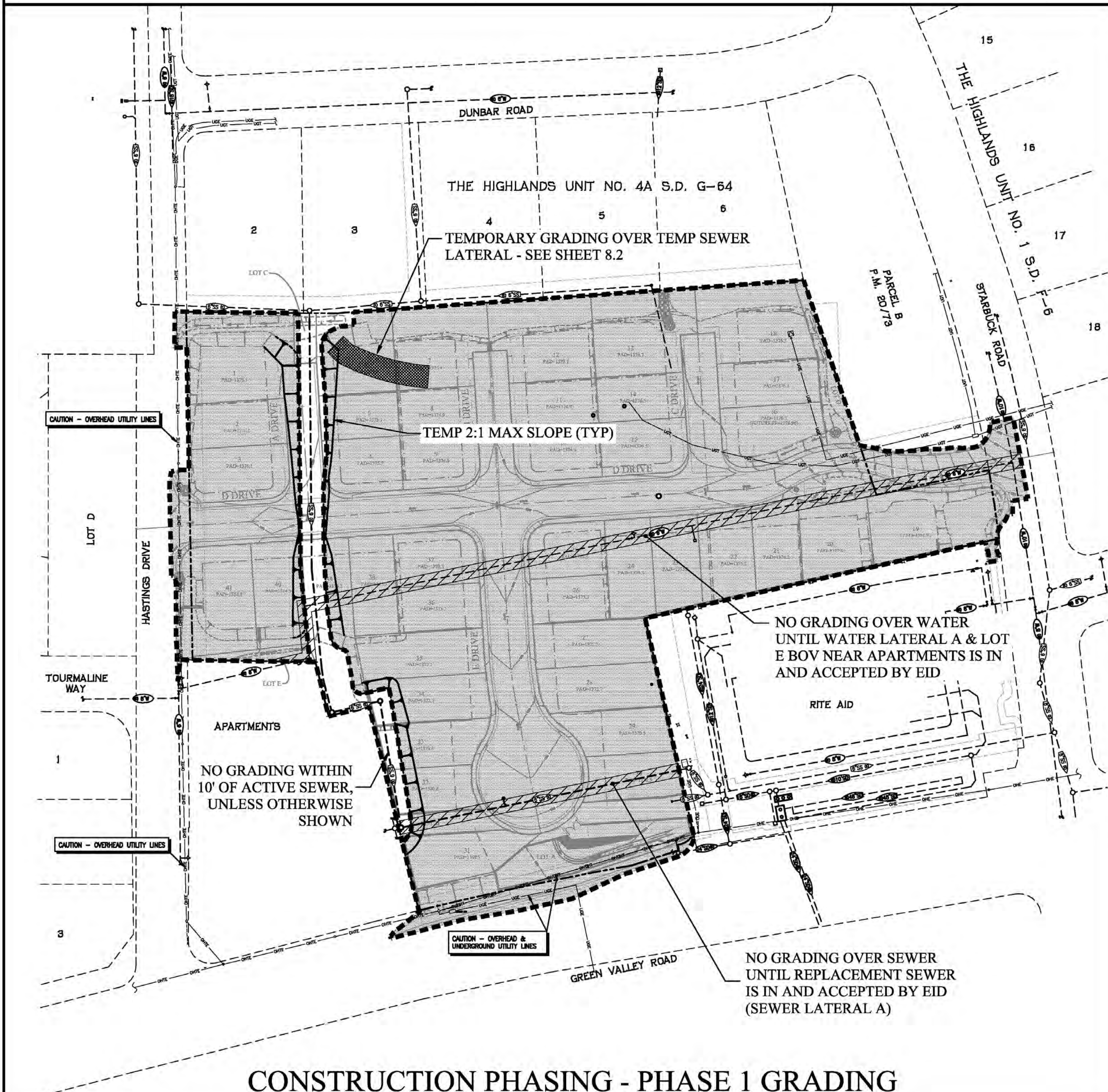
CONSTRUCTION PHASING NOTES

1. CONSTRUCTION PHASING SHOWN IS A RESULT OF THE (E) 6"SS & 6"W RUNNING THROUGH THE SITE. THE CONTRACTOR MAY PROPOSE A DIFFERENT PLAN, SUBJECT TO EID, DOT & CIA APPROVAL.
2. PHASE 1 GRADING LIMITS SHALL BE A MINIMUM OF 10' OFF OF THE (E) 6"SS, WHERE SHOWN.
3. PHASE 1 SEWER SYSTEM UPSTREAM OF SEWER LATERAL A SHALL NOT BE PUT INTO SERVICE UNTIL A 12" WIDE AB ACCESS ROAD HAS BEEN PLACED TO PROVIDE ACCESS TO THE SEWER MANHOLES. ACCESS ONLY NEEDS TO BE PROVIDED TO MANHOLES ACCEPTING FLOW.

LEGEND

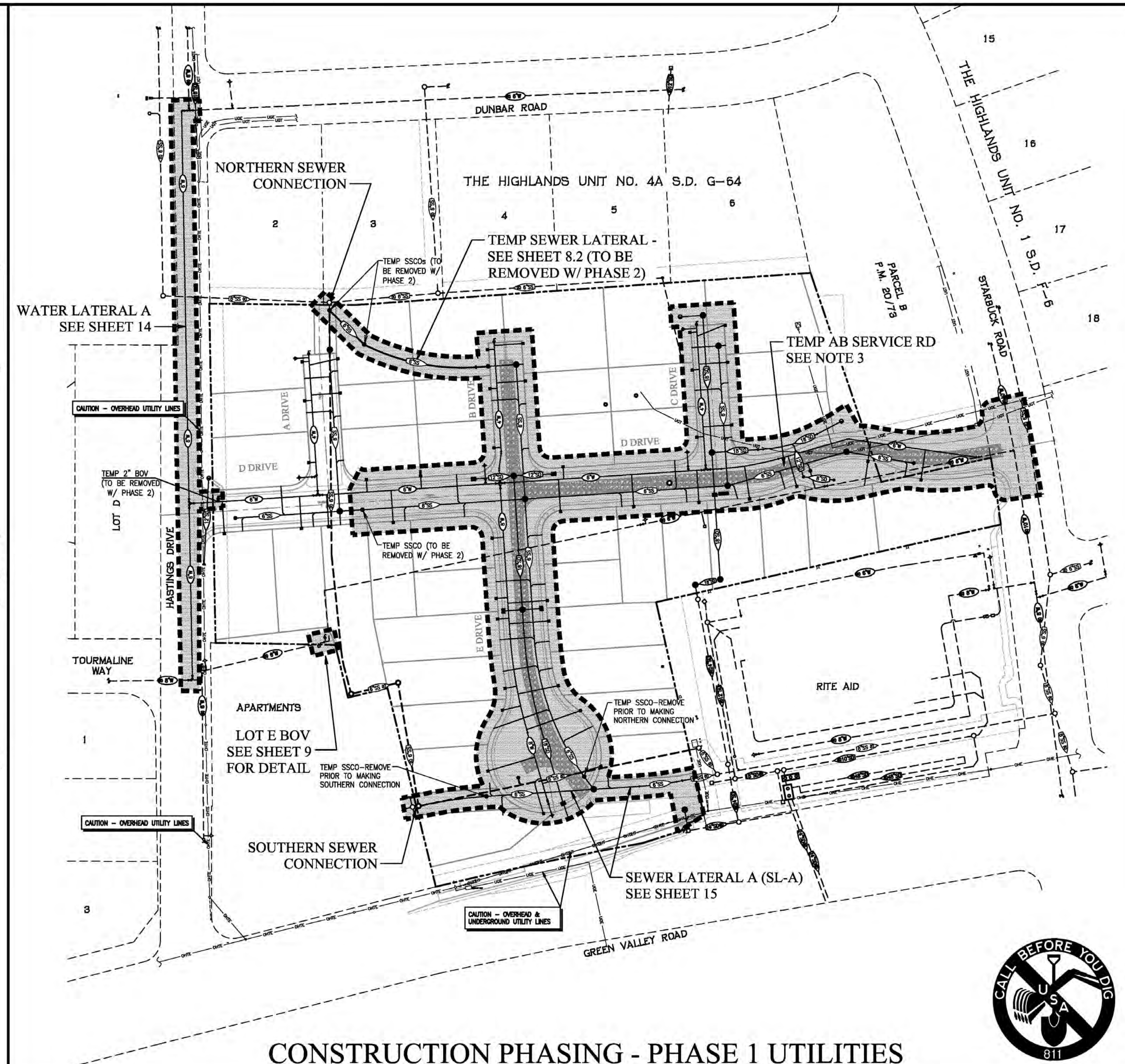


SEE SHEET 8.3 FOR PHASE 2



CONSTRUCTION PHASING - PHASE 1 GRADING

SCALE: 1" = 60'



CONSTRUCTION PHASING - PHASE 1 UTILITIES

SCALE: 1" = 60'

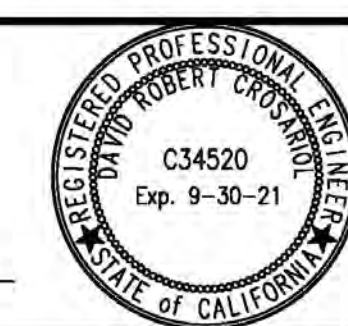
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY:	STAFF
DESIGNED BY:	K. WIPF
CHECKED BY:	D. CROSARIOL
SCALE:	AS SHOWN
DATE:	JULY, 2020
F.B. REF.	

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

D. CROSARIOL
 DATE: 07/22/20



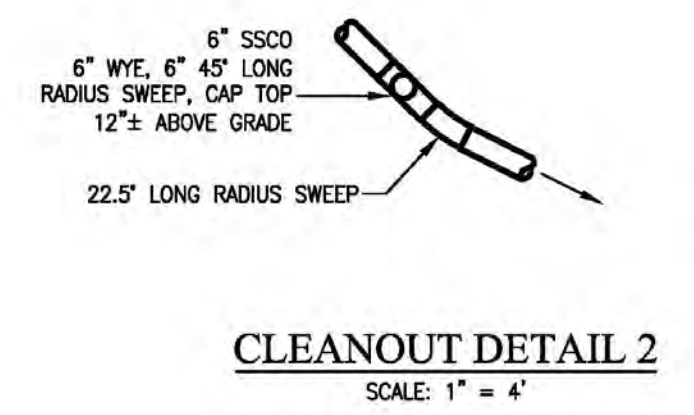
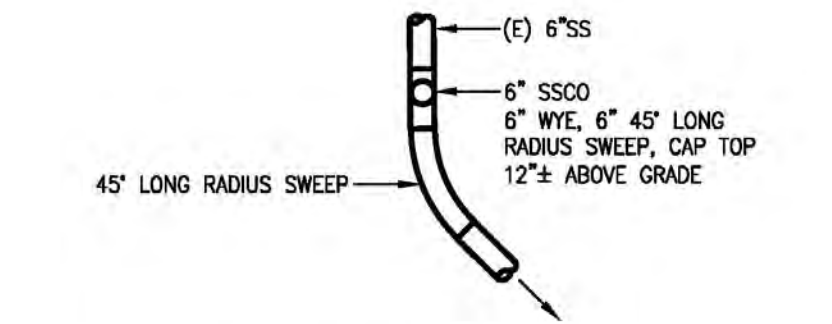
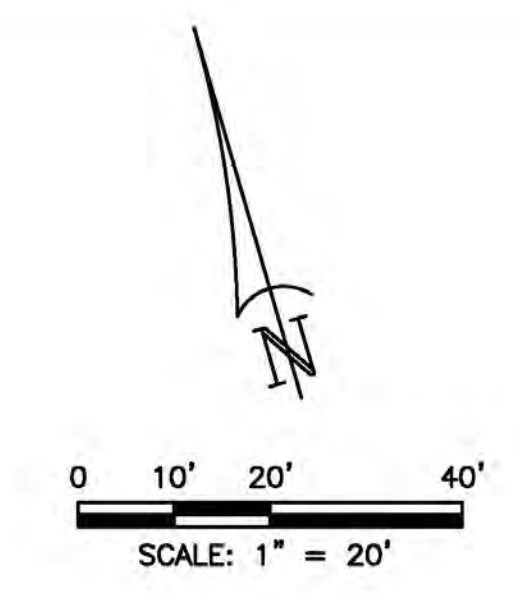
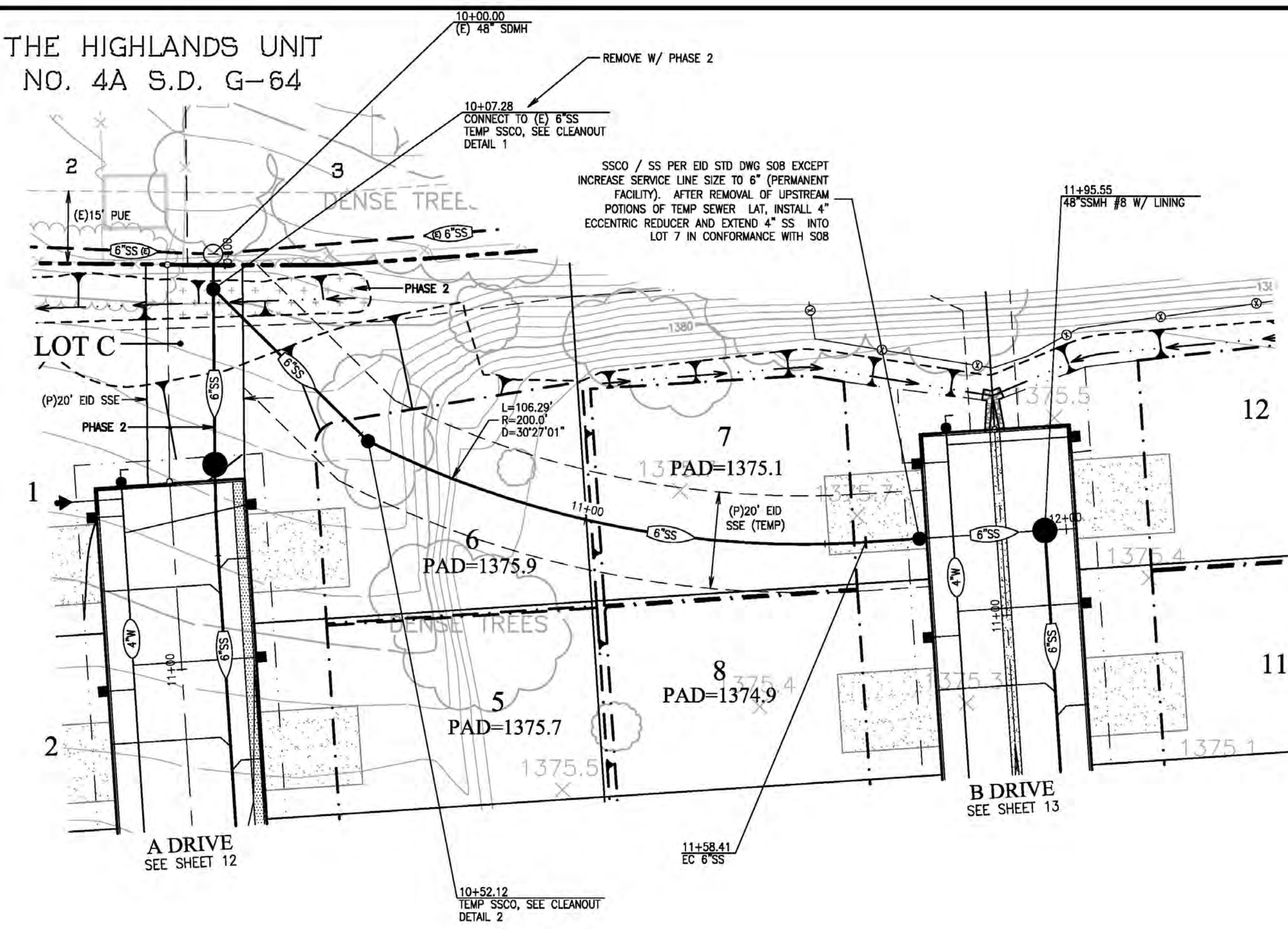
EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
 CONSTRUCTION PHASING PLAN
 PHASE 1



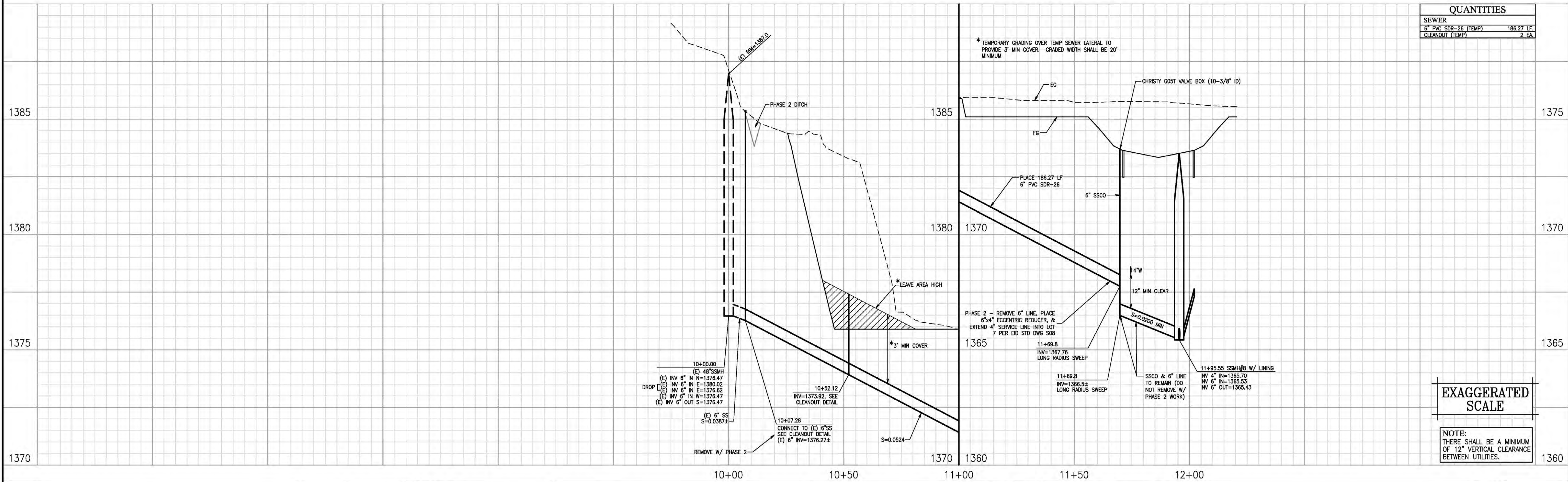
SHEET
8.1
 OF
25
 JOB NO. 19-129-001
 CALIFORNIA 23-0739 G 9 of 48

THE HIGHLANDS UNIT
NO. 4A S.D. G-64



TEMP SEWER LATERAL
(BUILT TO PERMANENT EID STDS)

QUANTITIES	
SEWER	
6" PVC SDR-26 (TEMP)	186.27 LF
CLEANOUT (TEMP)	2 EA



NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: HORZ. 1" = 20' VERT. 1" = 2'
DATE: JULY, 2020 F.B. REF.

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaenr.com

PREPARED UNDER THE DIRECTION OF:
D. CROSARIOL
DATE: 07/22/20
REGISTERED PROFESSIONAL ENGINEER
C34520
Exp. 9-30-21
STATE OF CALIFORNIA

IMPROVEMENT PLANS FOR:
CAMERON RANCH
TEMP SEWER LATERAL
EL DORADO COUNTY
SHEET 8.2 OF 25
JOB NO. 19-129-001
23-0739 G 10 of 48

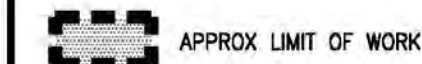
PHASE 2 CONSTRUCTION SEQUENCE

1. REMOVE REMAINING SEWER TO BE DEMO'D. SEE SHEET 8 FOR LIMITS
2. MAKE ROUGH GRADE
3. CONSTRUCT REMAINING WET UTILITIES
4. LAY REMAINING DRY UTILITY CONDUITS INCLUDING BOXES, VAULTS, & TRANSFORMERS
5. MAKE SUBGRADE FOR APPROVAL
6. TEST PHASE 2 SEWER & STORM DRAIN SYSTEM AND TEST & DISINFECT PHASE 1 & 2 WATER SYSTEM
7. PLACE BASE ROCK WITHIN ROADWAYS
8. MAKE REMAINING SEWER & WATER CONNECTIONS
9. REMOVE TEMP SEWER LAT A. UP TO SSCO AT LOT 7 SEWER SERVICE LAT. INSTALL 4" ECCENTRIC REDUCER AND EXTEND 4" SS INTO LOT 7 IN CONFORMANCE WITH S08
10. PAVE PHASE 1 & PHASE 2
11. RAISE IRON TO GRADE

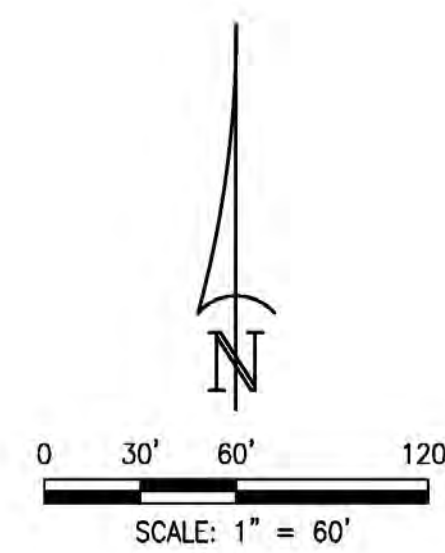
CONSTRUCTION PHASING NOTES

1. CONSTRUCTION PHASING SHOWN IS A RESULT OF THE (E) 6"SS & 6"W RUNNING THROUGH THE SITE. THE CONTRACTOR MAY PROPOSE A DIFFERENT PLAN, SUBJECT TO E.D. DOT & CIA APPROVAL.

LEGEND

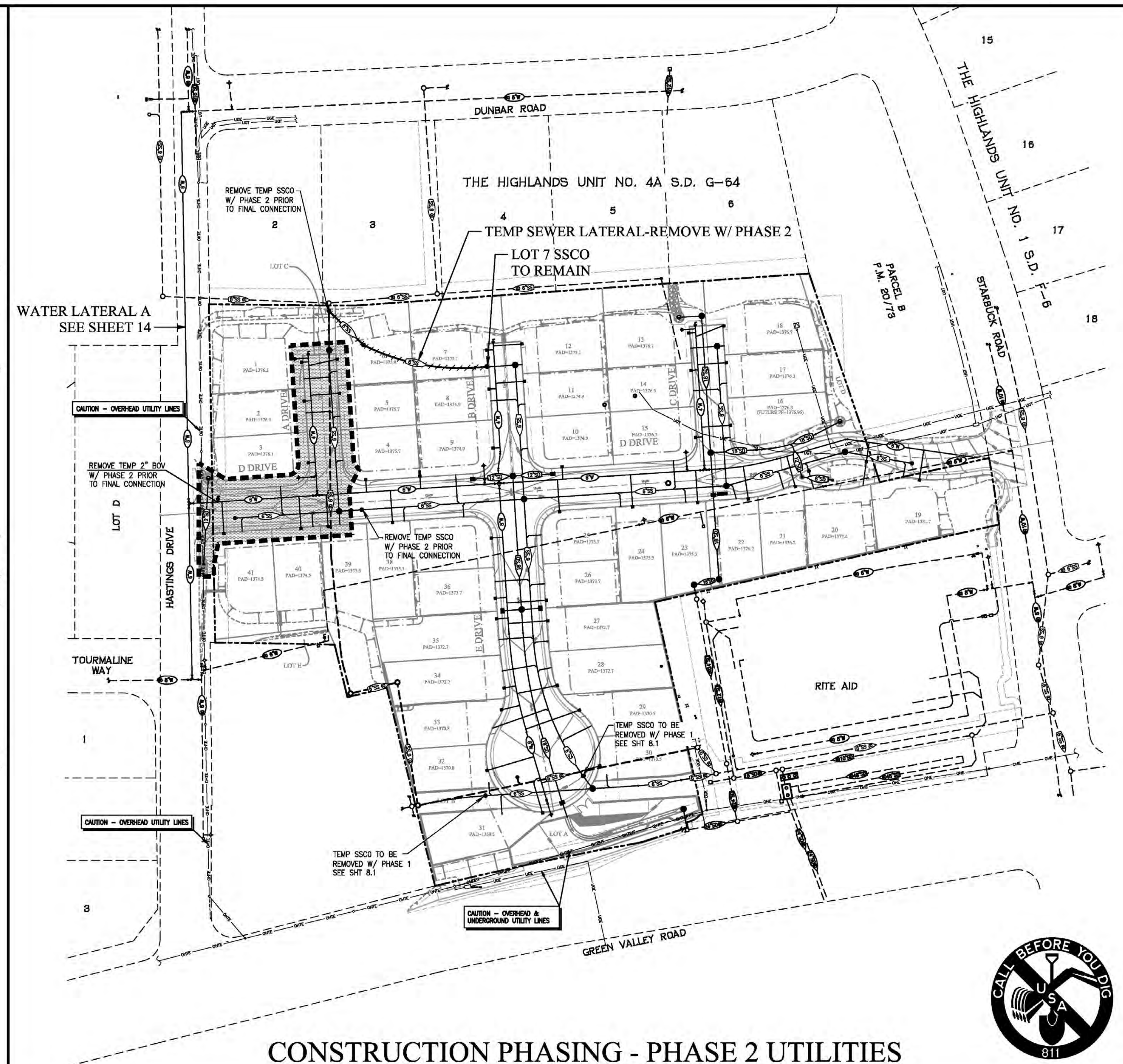


APPROX LIMIT OF WORK



CONSTRUCTION PHASING - PHASE 2 GRADING

SCALE: 1" = 60'



CONSTRUCTION PHASING - PHASE 2 UTILITIES

SCALE: 1" = 60'

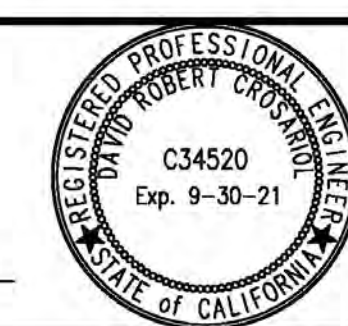
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY:	STAFF
DESIGNED BY:	K. WIPF
CHECKED BY:	D. CROSARIOL
SCALE:	1" = 60'
DATE:	JULY, 2020
F.B. REF.	

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

D. CROSARIOL
 DATE: 07/22/20



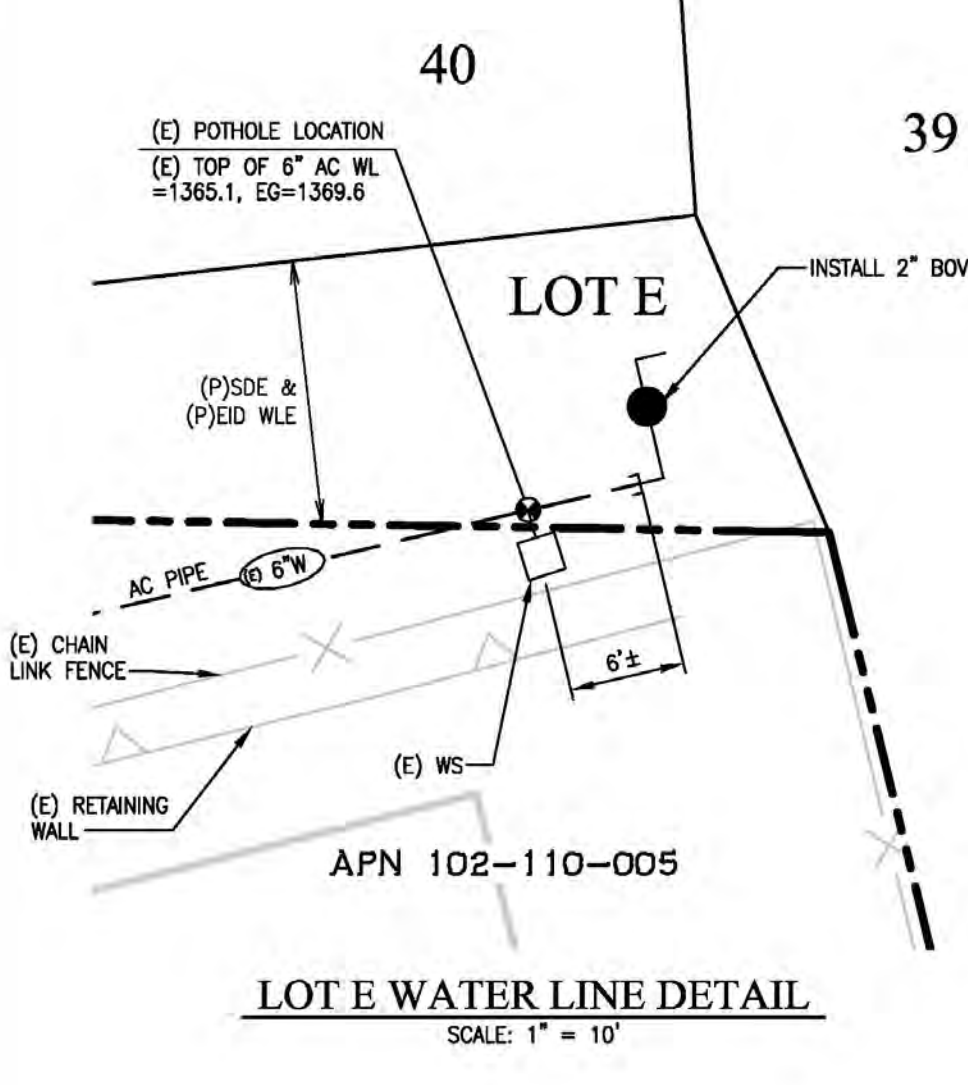
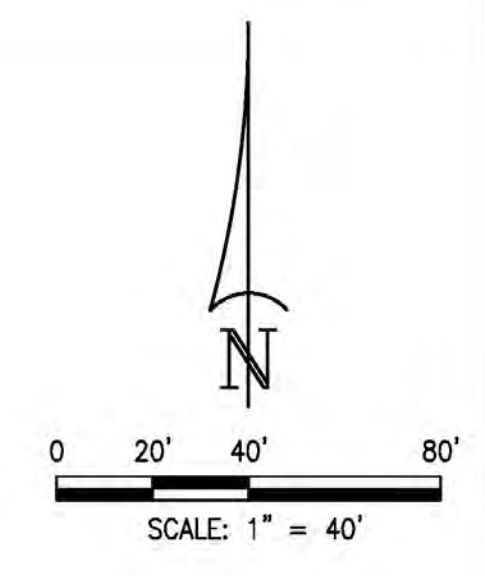
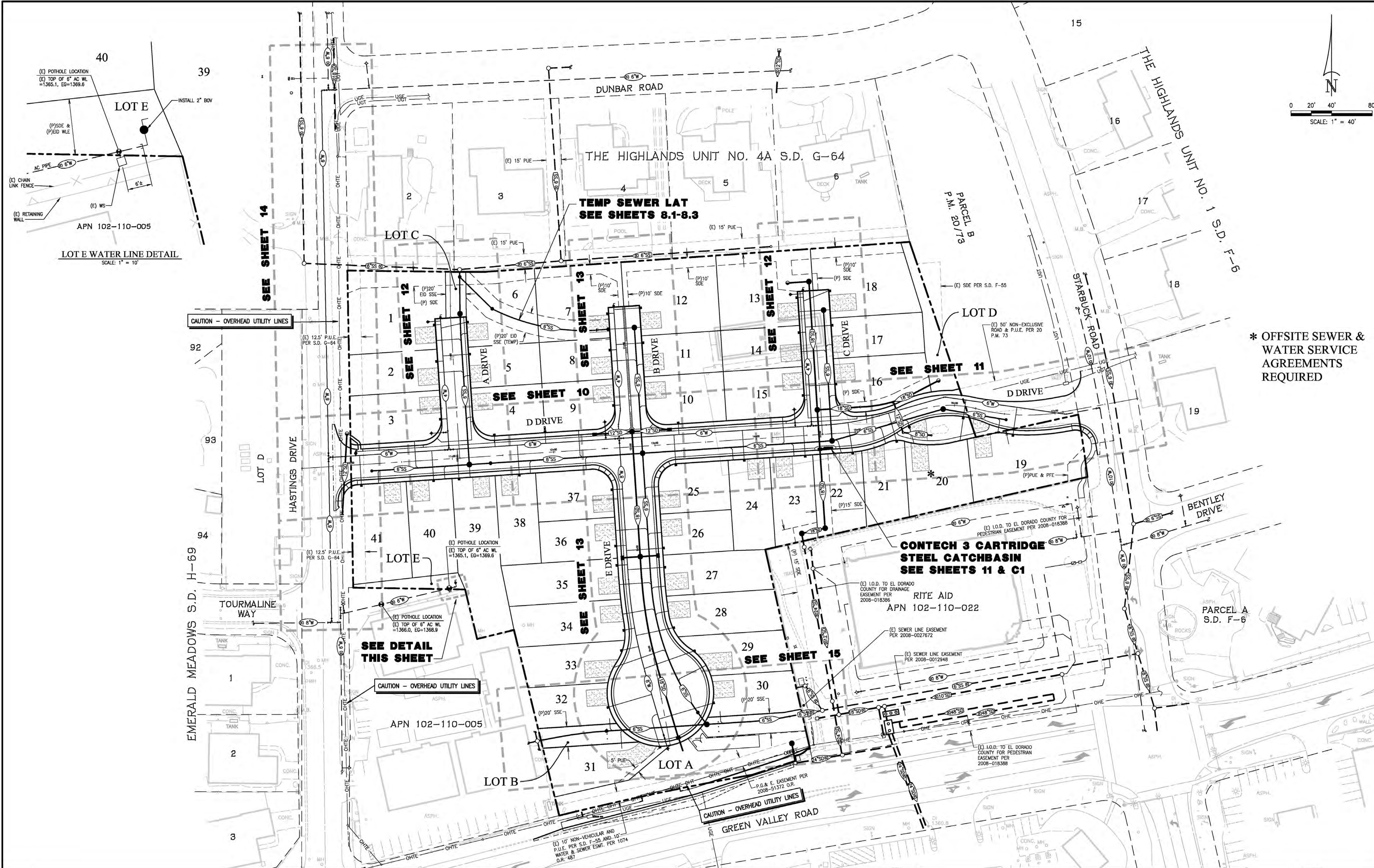
EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
 CONSTRUCTION PHASING PLAN

CALL BEFORE YOU DIG
 811

SHEET **8.3**
 OF **25**

JOB NO. 19-129-001
 CALIFORNIA 23-0739 G 11 of 48



*** OFFSITE SEWER & WATER SERVICE AGREEMENTS REQUIRED**

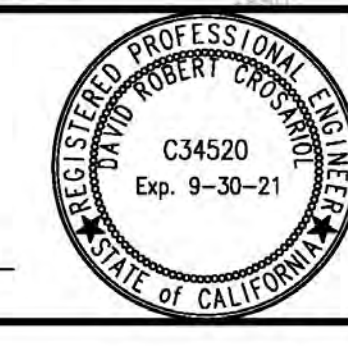
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: 1" = 40'
DATE: JULY, 2020 **F.B. REF.**

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaenr.net

PREPARED UNDER THE DIRECTION OF:

D. CROSARIOL
 DATE: 07/22/20



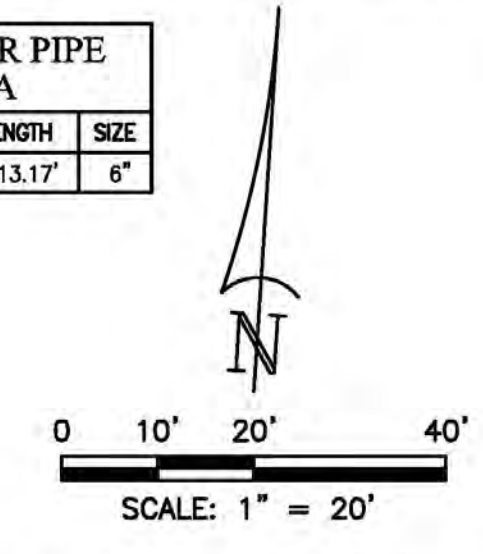
IMPROVEMENT PLANS FOR:
CAMERON RANCH
 OVERALL UTILITY PLAN
 EL DORADO COUNTY

SHEET
9
 OF
25
 JOB NO. 19-129-001
 23-0739 G 12 of 48

**WATER LATERAL A
& HASTINGS PAVEMENT WORK**
SEE SHEET 14

TBC DATA									
#	DELTA	RADIUS	LENGTH	BC EL.	1/4 PT EL.	1/2 PT EL.	3/4 PT EL.	PR EL.	EC EL.
1	86°47'26"	20.00'	30.30'		SEE DETAIL 1 ON SHEET 17				
2	75°49'59"	20.00'	26.47'	5.59%	1373.54	1373.91	1374.28	1374.65	1375.02
3	90°00'00"	19.50'	30.63'		SEE DETAIL 2 ON SHEET 17				
4	90°00'00"	19.50'	30.63'		SEE DETAIL 2 ON SHEET 17				
5	90°00'00"	19.50'	30.63'		SEE DETAIL 3 ON SHEET 17				
6	90°00'00"	19.50'	30.63'		SEE DETAIL 3 ON SHEET 17				
7	90°00'00"	24.00'	37.70'	2.23%	1373.14	1373.93	1374.72	1375.51	1376.30
8	90°00'00"	24.00'	37.70'	2.23%	1373.30	1374.09	1374.88	1375.67	1376.46

DOMESTIC WATER PIPE CURVE DATA			
#	DELTA	RADIUS	LENGTH
1	2°30'58"	300.00'	13.17'



STORM DRAIN DATA

- 9+88.40, 48.09' RT
12" FES, INV=1370.00
CONNECT TO DI 2 W/ 78.4 LF
12" RSP #3 SSMH #1 W/ LINING
- 9+88.03, 31.21' LT
CENTER 8" PIPE SEGMENT AT W CROSSING
PLACE RSP AS SHOWN ON SHT 18
- 9+88.03, 31.21' LT
EDC GRATED INLET
PLACE GROUTED RSP #3 BACKING 1' THICK
FOR 3' AROUND INLET, MIN
SEE DI 2 DETAIL, THIS SHT
- 12+41.31
EDC TYPE B DI
- 12+78.31, 15.00' LT
48" SSMH W/ ECCENTRIC
CONE & 24" GRATE
- 13+15.31
EDC TYPE B DI

(B) BACKWATER VALVE IS REQUIRED ON THIS LOT.

NOTE:
SEWER SERVICES HAVE BEEN DESIGNED WHICH WILL ALLOW THE SERVICE TO BE CONSTRUCTED PER E.I.D. STANDARD SOIL. INVERT GRADES WILL BE SET AT 6.0' BELOW TOP BACK OF CURB ON ALL LOTS UNLESS OTHERWISE SHOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT THE SERVICE PER E.I.D. STANDARDS AND TO AVOID CONFLICTS WITH OTHER UTILITIES.

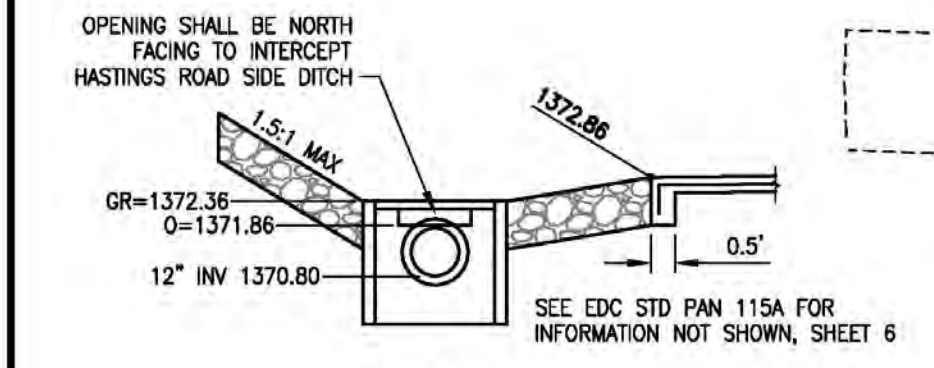
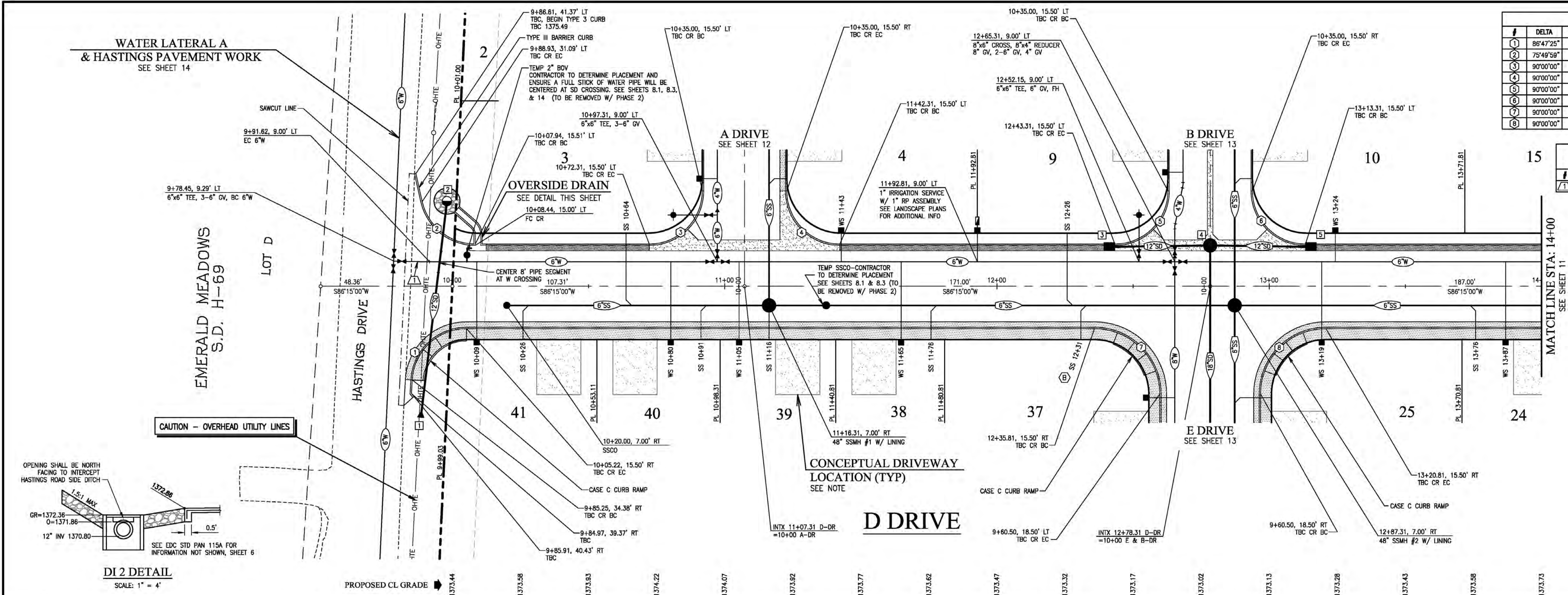
DRIVEWAY NOTE:
DRIVEWAYS SHOWN ARE CONCEPTUAL ONLY. WIDTHS AND LOCATIONS ARE SUBJECT TO CHANGE.

QUANTITIES

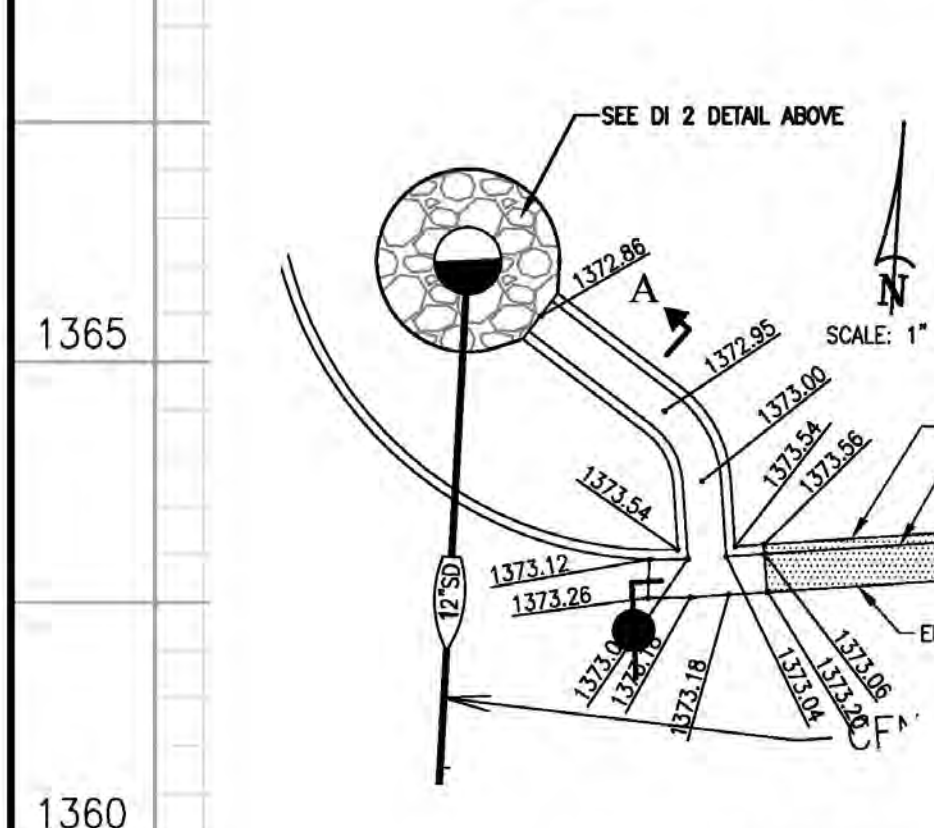
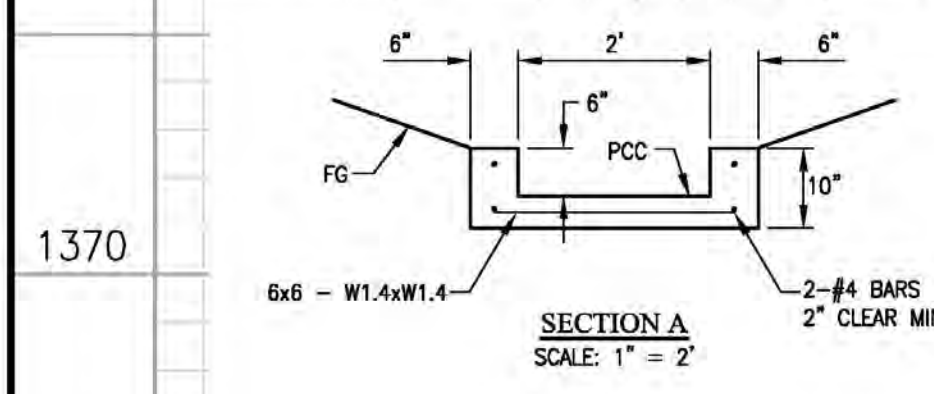
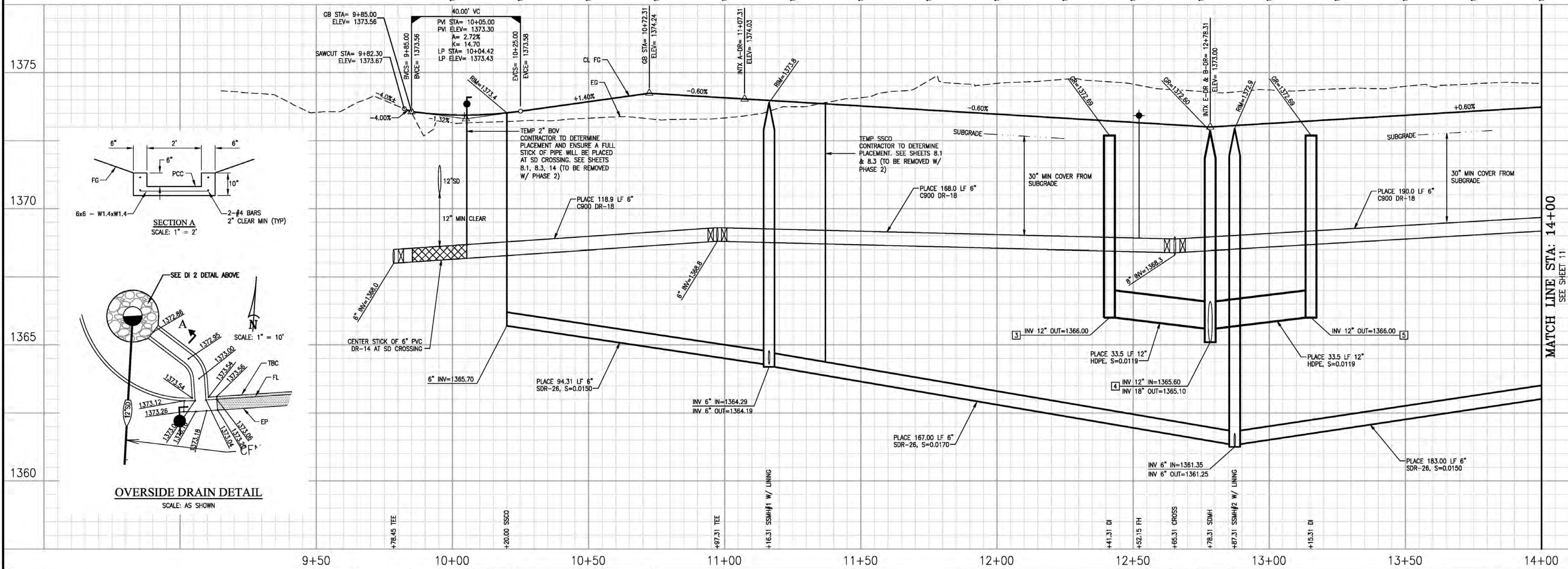
SEWER	QUANTITY
6" PVC SDR-26	444.31 LF
48" MANHOLE W/LINING	2 EA
GRAVITY SERVICE	8 EA
BACKWATER VALVE	1 EA
CLEANOUT	1 EA
TEMP SSCO	1 EA
WATER	
6" PVC C900 DR18	476.90 LF
FIRE HYDRANT ASSEMBLY	1 EA
SERVICES	8 EA
6" GATE VALVES	5 EA
TEMP 2" BOV	1 EA
1" IRR SERVICE & RP ASSEMBLY	1 EA

EXAGGERATED SCALE

NOTE:
THERE SHALL BE A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN UTILITIES.



DI 2 DETAIL
SCALE: 1" = 4'



OVERSIDE DRAIN DETAIL
SCALE: AS SHOWN

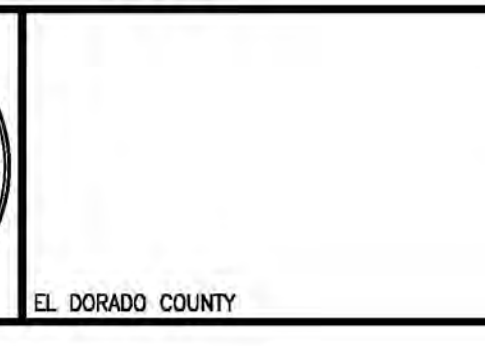
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIFF
CHECKED BY: D. CROSARIOL
SCALE: HORZ. 1" = 20' VERT. 1" = 2'
DATE: JULY, 2020 F.B. REF.

cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

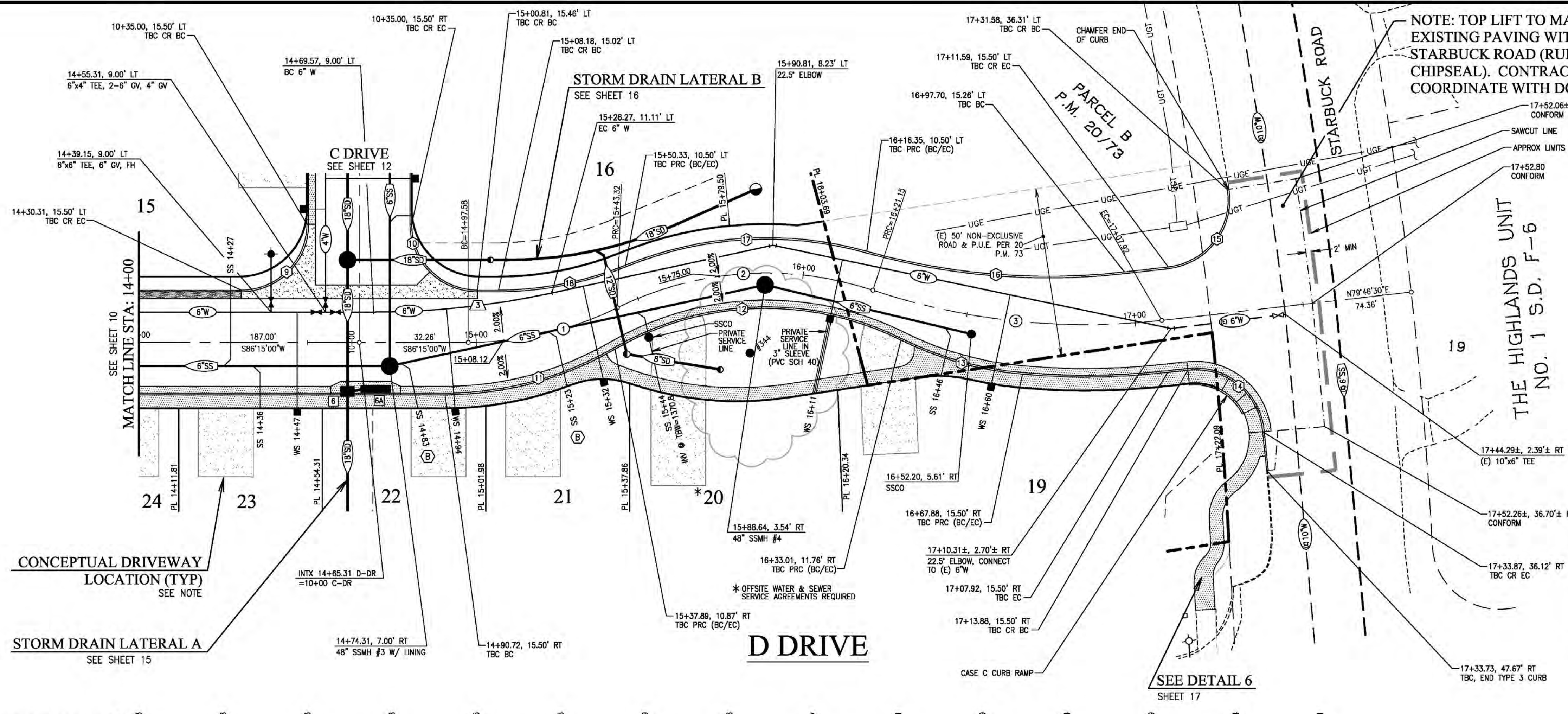
D. CROSARIOL
DATE: 07/22/20



IMPROVEMENT PLANS FOR:
CAMERON RANCH
PLAN & PROFILE D DRIVE
BEGIN TO 14+00

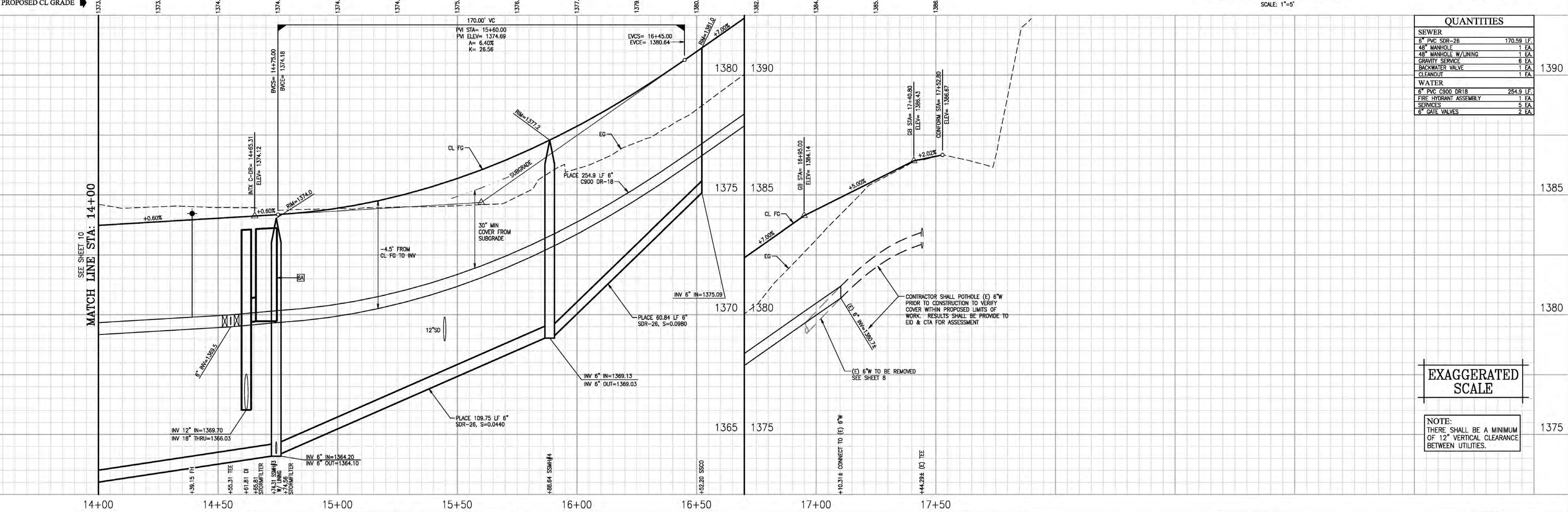
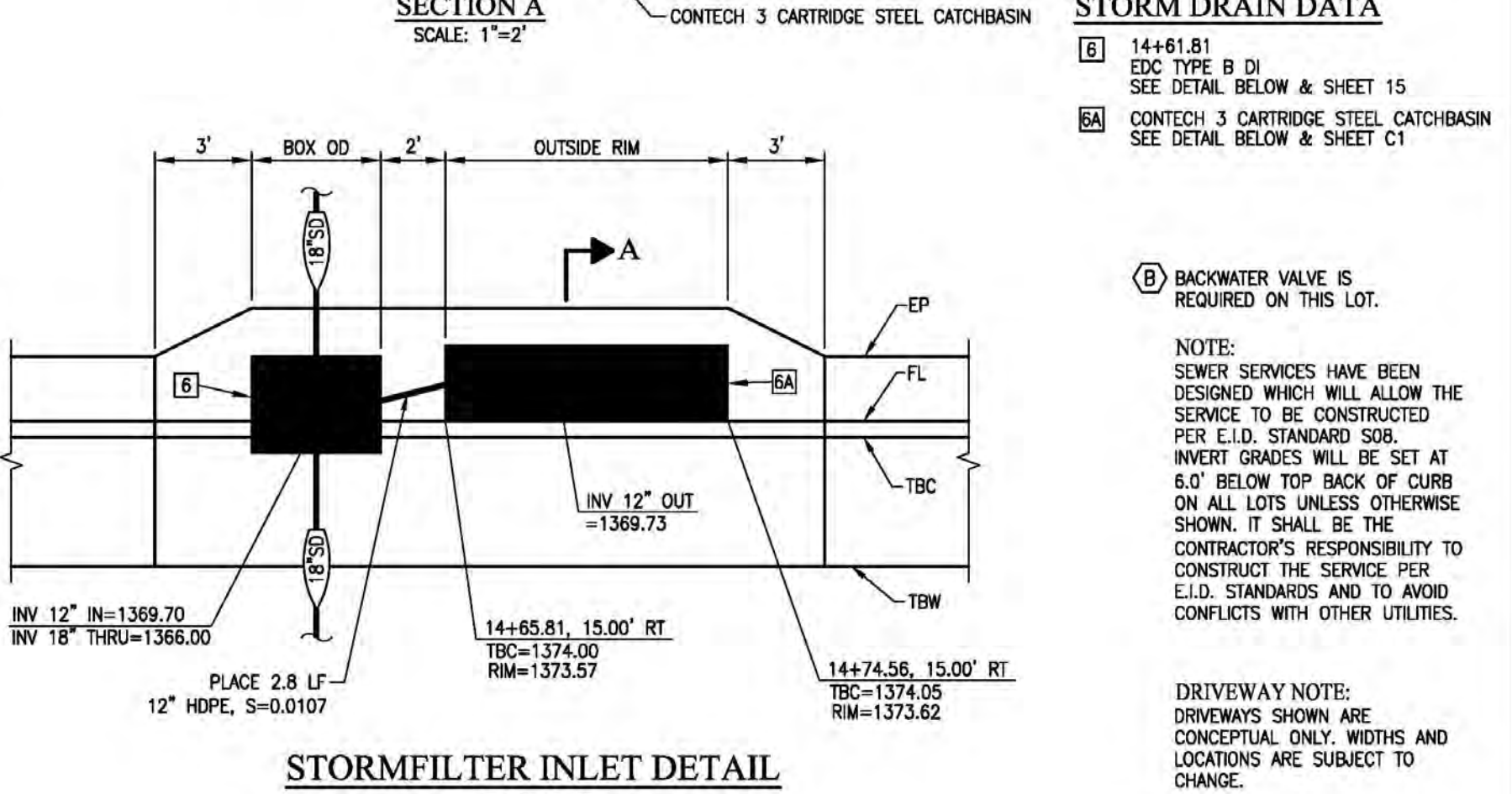
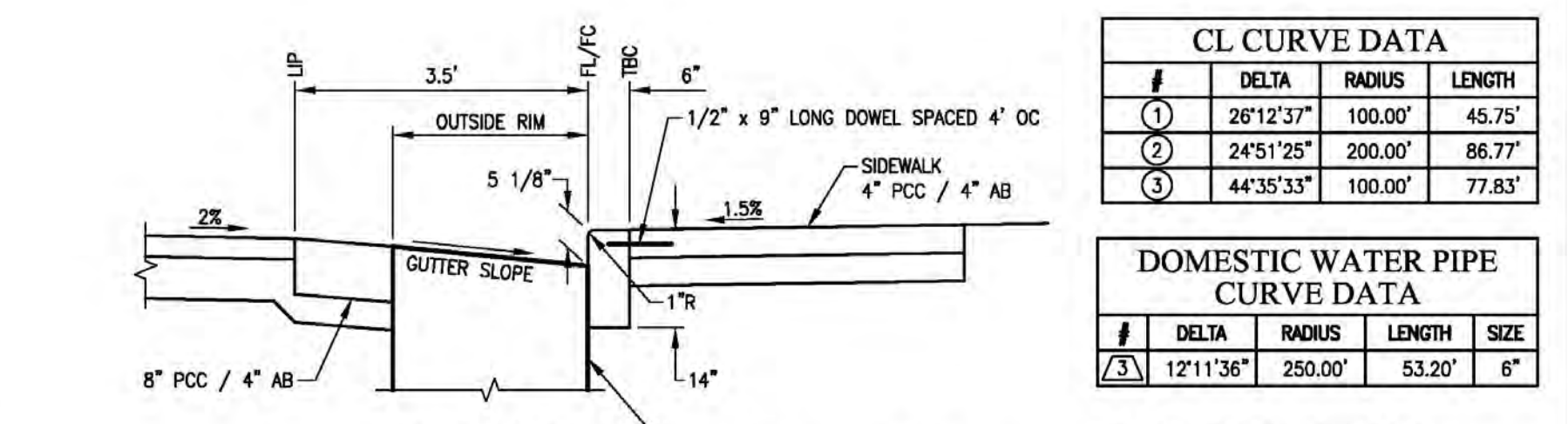
SHEET 10 OF 25

JOB NO. 19-129-001
23-0739 G 13 of 48



NOTE: TOP LIFT TO MATCH EXISTING PAVING WITHIN STARBUCK ROAD (RUBBERIZED CHIPSEAL). CONTRACTOR SHALL COORDINATE WITH DOT FOR SPEC.

TBC DATA									
#	DELTA	RADIUS	LENGTH	SLOPE	BC EL.	1/4 PT EL.	1/2 PT EL.	3/4 PT EL.	EC EL.
9	90°00'00"	19.50'	30.63'						SEE DETAIL 4 ON SHEET 17
10	90°00'00"	19.50'	30.63'						SEE DETAIL 4 ON SHEET 17
11	30°03'57"	100.50'	52.74'	VARIES	1374.20	1374.38	1374.71	1374.91	1375.26
12	56°30'14"	89.50'	88.26'	VARIES	1375.26	1376.08	1377.14	1378.43	1379.81
13	21°26'37"	100.50'	37.61'	VARIES	1379.81	1380.35	1380.93	1381.52	1382.12
14	91°47'15"	20.00'	32.04'						SEE DETAIL 6 ON SHEET 17
15	92°19'59"	20.00'	32.23'	10.30%	1389.09	1388.26	1387.43	1386.60	1385.77
16	22°06'28"	199.50'	76.98'	VARIES	1385.07	1383.65	1382.18	1380.74	1379.49
17	37°48'51"	110.50'	72.98'	VARIES	1379.49	1378.56	1377.74	1376.97	1376.25
18	22°11'53"	99.50'	38.55'	VARIES	1376.25	1375.88	1375.50	1375.13	1374.79



QUANTITIES	
SEWER	
6" PVC SDR-26	170.59 LF
48" MANHOLE W/LINING	1 EA
48" GRAVITY SERVICE	6 EA
BACKWATER VALVE	1 EA
CLEANOUT	1 EA
WATER	
6" PVC C900 DR18	254.9 LF
FIRE HYDRANT ASSEMBLY	1 EA
SERVICES	5 EA
6" GATE VALVES	2 EA

EXAGGERATED SCALE

NOTE: THERE SHALL BE A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN UTILITIES.

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: HORZ. 1" = 20' VERT. 1" = 2'
DATE: JULY, 2020 **F.B. REF.**

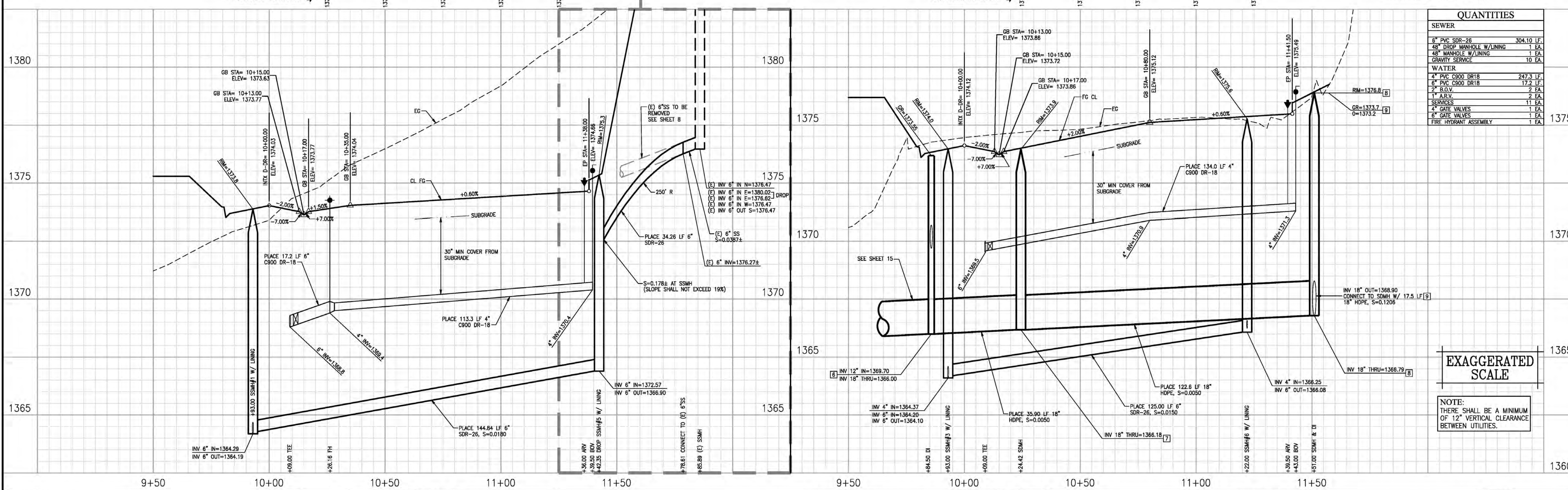
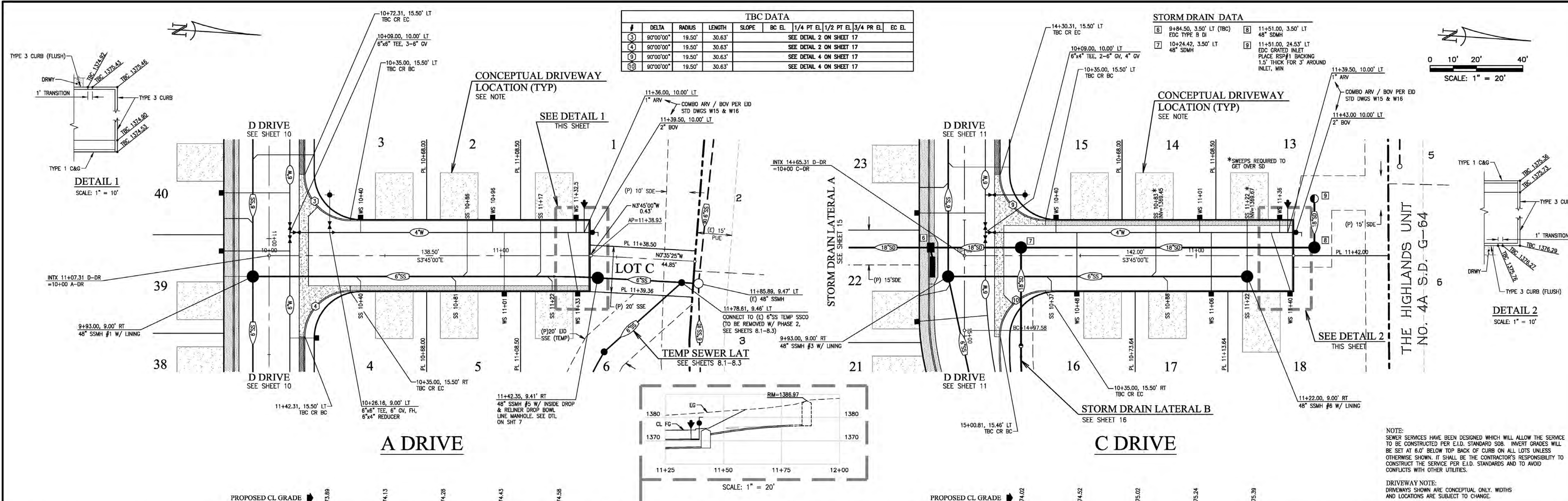
cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaenr.net

PREPARED UNDER THE DIRECTION OF:

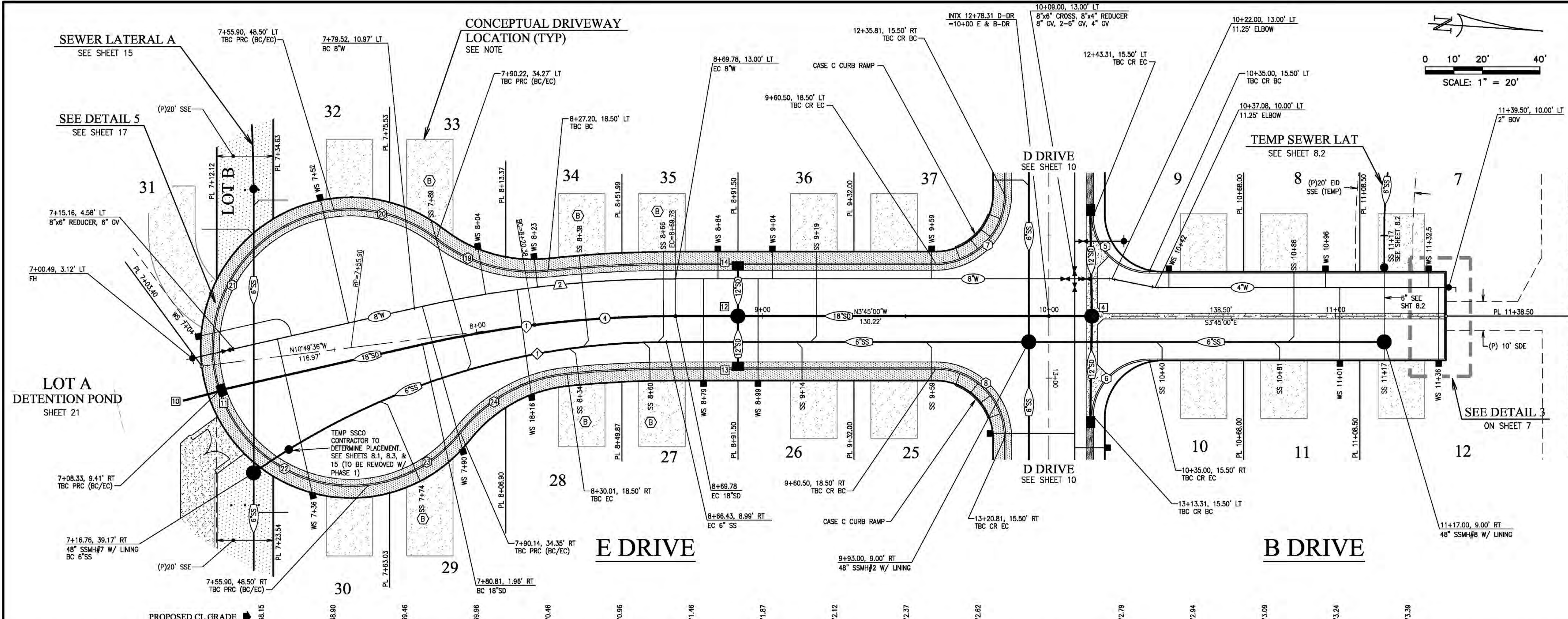
D. CROSARIOL DATE: 07/22/20
 EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
 PLAN & PROFILE D DRIVE
 14+00 TO END

SHEET 11 OF 25
 JOB NO. 19-129-001
 23-0739 G 14 OF 48



REVISION BLK. DRAWN BY: STAFF DESIGNED BY: K. WIPF CHECKED BY: D. CROSARIOL SCALE: HORZ. 1" = 20' VERT. 1" = 2' DATE: JULY, 2020 F.B. REF.	 Civil Engineering • Land Surveying • Land Planning 3233 Monier Circle, Rancho Cordova, CA 95742 T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net	PREPARED UNDER THE DIRECTION OF: D. CROSARIOL DATE: 07/22/20	IMPROVEMENT PLANS FOR: CAMERON RANCH PLAN & PROFILE A DRIVE & C DRIVE	SHEET 12 OF 25
				JOB NO. 19-129-001
				DATE: 07/22/20
				COUNTY: EL DORADO COUNTY



TBC DATA									
#	DELTA	RADIUS	LENGTH	SLOPE	BC EL	1/4 PT EL	1/2 PT EL	3/4 PT EL	EC EL
5	90°00'00"	19.50'	30.63'						SEE DETAIL 3 ON SHEET 17
6	90°00'00"	19.50'	30.63'						SEE DETAIL 3 ON SHEET 17
7	90°00'00"	24.00'	37.70'	2.23%	1373.14	1372.93	1372.72	1372.51	1372.30
8	90°00'00"	24.00'	37.70'	2.23%	1372.30	1372.51	1372.72	1372.93	1373.14
9									SEE DETAIL 5 ON SHEET 17
10									SEE DETAIL 5 ON SHEET 17
11									SEE DETAIL 5 ON SHEET 17
12									SEE DETAIL 5 ON SHEET 17
13									SEE DETAIL 5 ON SHEET 17
14									SEE DETAIL 5 ON SHEET 17
15									SEE DETAIL 5 ON SHEET 17
16									SEE DETAIL 5 ON SHEET 17

STORM DRAIN INLET DATA			
10	6+95.41, 11.16' RT	24" OUTFALL	8+91.50 EDC TYPE B DI
11	7+08.33, 9.41' RT (TBC)	48" SSMH W/ ECCENTRIC CONE & 24" GRATE	8+91.50 EDC TYPE B DI
12	8+91.50 48" SSMH		10+15.00 48" SSMH W/ ECCENTRIC CONE & 24" GRATE SEE SHEET 17 FOR GRATE ORIENTATION
13	8+91.50		
14	8+91.50		

CL CURVE DATA			
#	DELTA	RADIUS	LENGTH
4	7°04'36"	400.00'	49.40'

DOMESTIC WATER PIPE CURVE DATA			
#	DELTA	RADIUS	LENGTH
2	12°45'16"	413.00'	81.94'

SANITARY SEWER PIPE CURVE DATA			
#	DELTA	RADIUS	LENGTH
1	34°42'50"	250.00'	151.47'

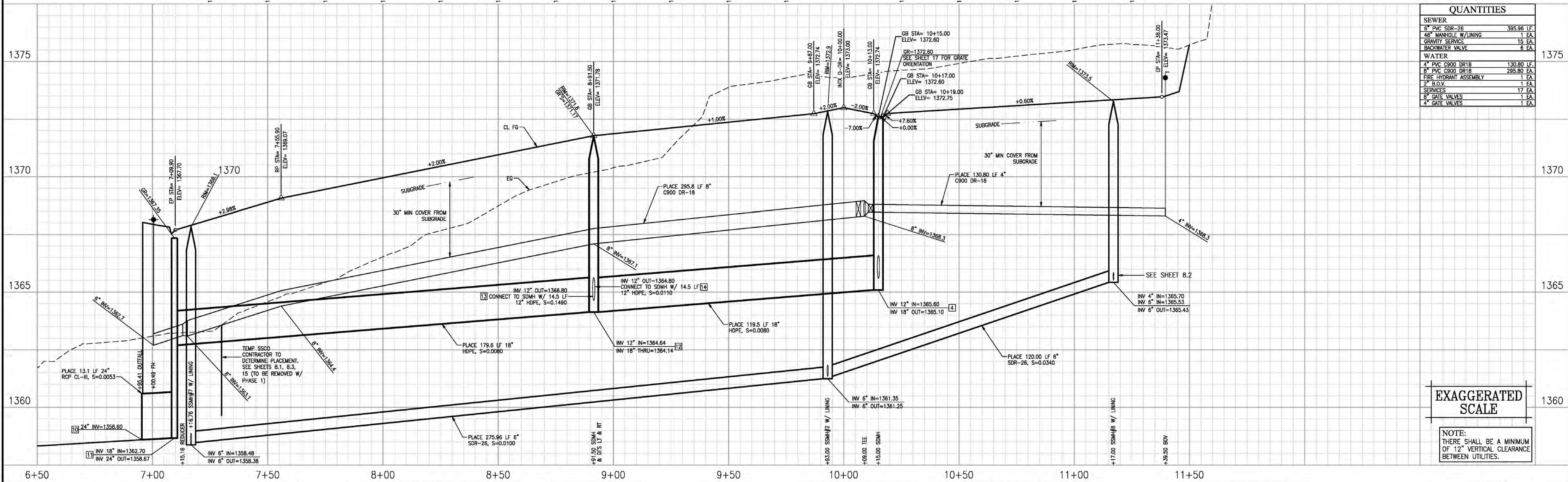
STORM DRAIN PIPE CURVE DATA			
#	DELTA	RADIUS	LENGTH
1	12°45'16"	400.00'	89.04'

(B) BACKWATER VALVE IS REQUIRED ON THIS LOT.

NOTE: SEWER SERVICES HAVE BEEN DESIGNED WHICH WILL ALLOW THE SERVICE TO BE CONSTRUCTED PER E.I.D. STANDARD SOB. INVERT GRADES WILL BE SET AT 6.0" BELOW TOP BACK OF CURB ON ALL LOTS UNLESS OTHERWISE SHOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT THE SERVICE PER E.I.D. STANDARDS AND TO AVOID CONFLICTS WITH OTHER UTILITIES.

DRIVEWAY NOTE: DRIVEWAYS SHOWN ARE CONCEPTUAL ONLY. WIDTHS AND LOCATIONS ARE SUBJECT TO CHANGE.

THE HIGHLANDS UNIT NO. 4A S.D. G-64



QUANTITIES	
SEWER	
6" PVC SDR-26	395.96 LF
48" MANHOLE W/LINING	1 EA
GRAVITY SERVICE	15 EA
BACKWATER VALVE	6 EA
WATER	
4" PVC C900 DR18	130.80 LF
6" PVC C900 DR18	295.80 EA
FIRE HYDRANT ASSEMBLY	1 EA
2" B.O.V.	1 EA
SERVICES	17 EA
6" GATE VALVES	1 EA
4" GATE VALVES	1 EA

EXAGGERATED SCALE

NOTE: THERE SHALL BE A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN UTILITIES.

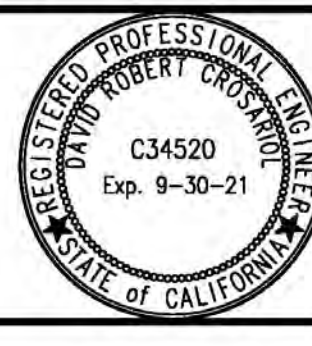
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: HORIZ. 1" = 20' VERT. 1" = 2'
DATE: JULY, 2020 **F.B. REF.**

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

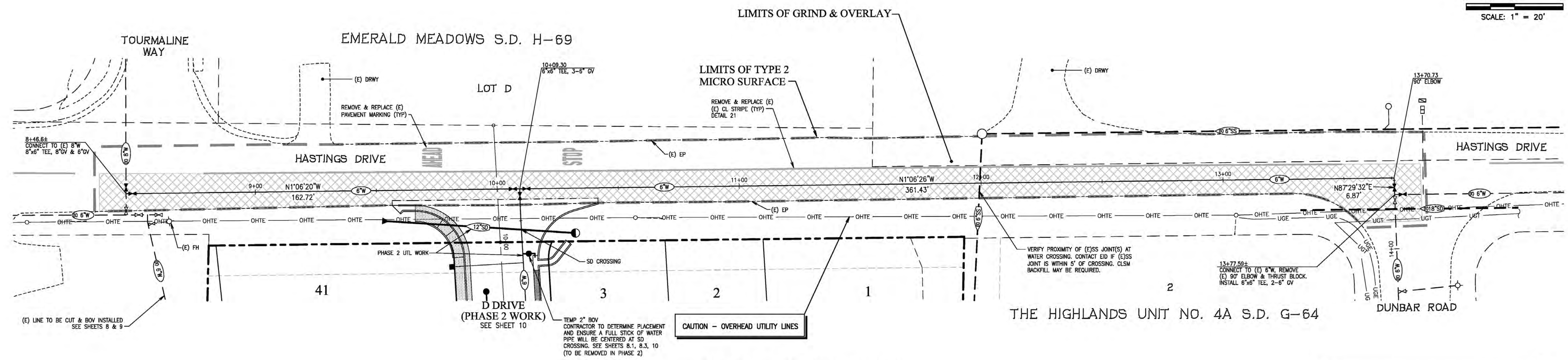
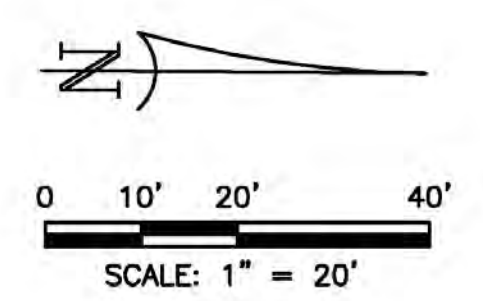
D. CROSARIOL
 DATE: 07/22/20



IMPROVEMENT PLANS FOR:
CAMERON RANCH
 PLAN & PROFILE E DRIVE & B DRIVE

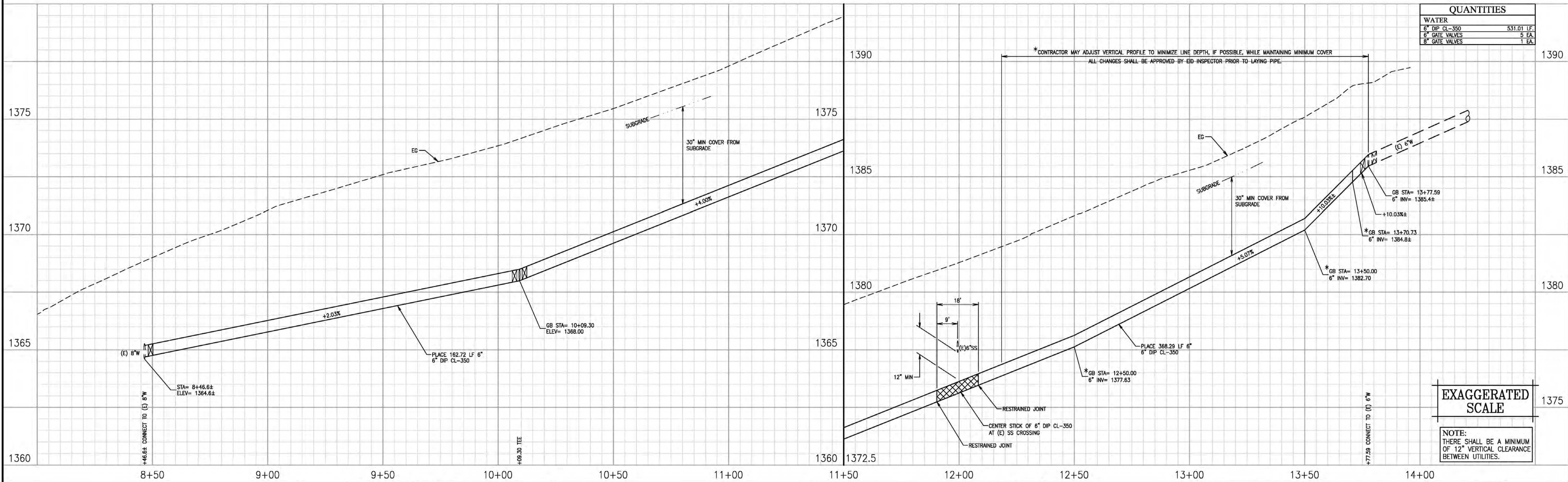
EL DORADO COUNTY

SHEET **13** OF **25**
 JOB NO. 19-129-001
 23-0739 G 16 OF 48



WATER LATERAL A (PHASE 1 WORK)

NOTE:
REMOVE & REPLACE (E) SURFACE IMPS PER DETAIL ON SHEET 5 (UTILITY TRENCH DETAIL IN EXISTING PAVEMENT). APPLY TYPE 2 MICRO SURFACE & RE-STRIPE AS SHOWN. TOP LIFT TO MATCH EXISTING PAVING (RUBBERIZED CHIPSEAL). CONTRACTOR SHALL COORDINATE WITH DOT FOR SPEC.



QUANTITIES	
WATER	
6" DIP CL-350	531.01 LF
6" GATE VALVES	5 EA
8" GATE VALVES	1 EA

EXAGGERATED SCALE

NOTE:
THERE SHALL BE A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN UTILITIES.

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: HORZ. 1" = 20' VERT. 1" = 2'
DATE: JULY, 2020 **F.B. REF.**

cta Engineering & Surveying

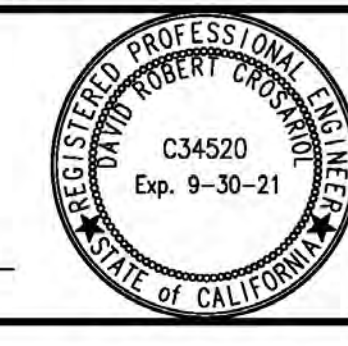
Civil Engineering • Land Surveying • Land Planning

3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

D. Crosariol

D. CROSARIOL **DATE** 07/22/20



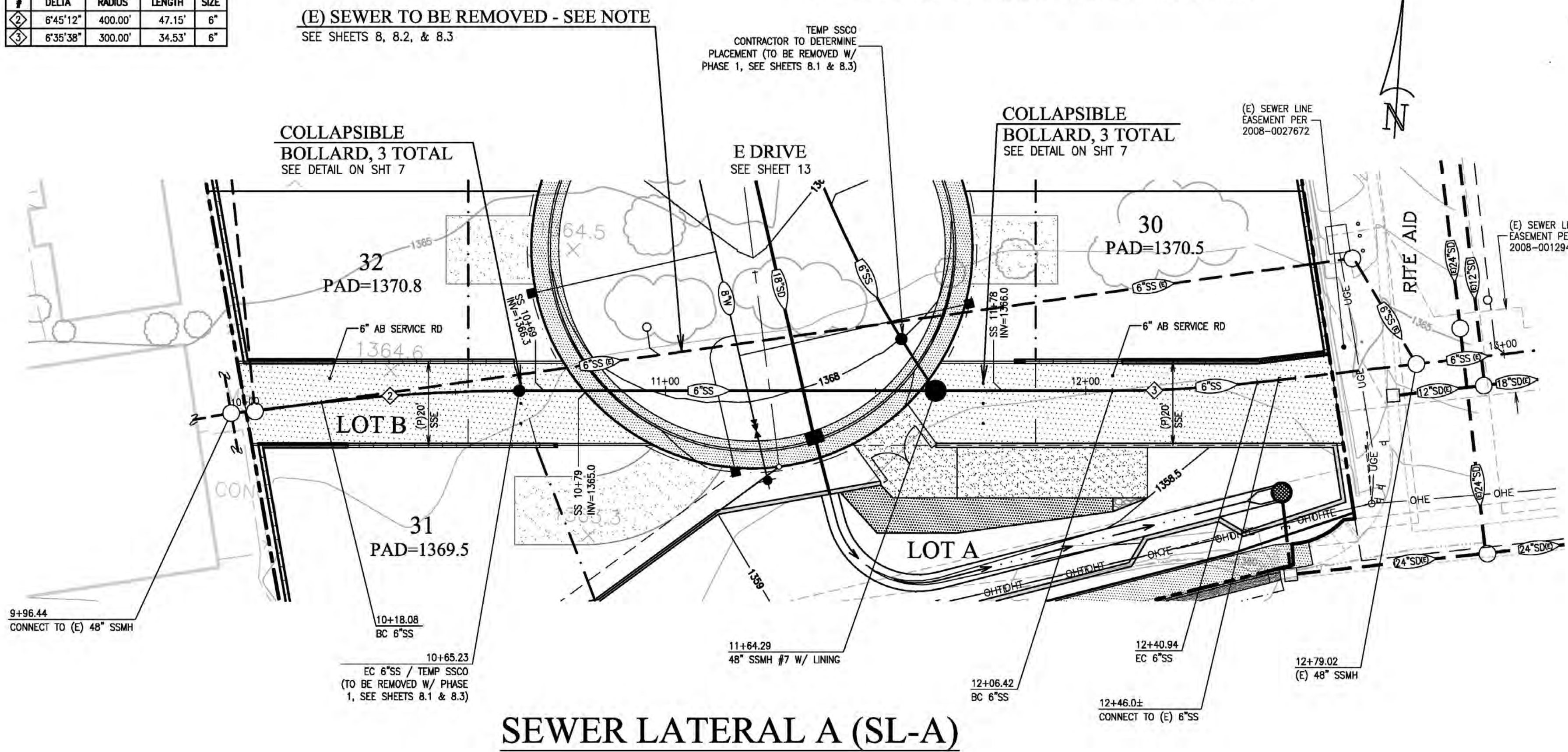
EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
 PLAN & PROFILE WATER LATERAL A

SHEET 14
OF 25
JOB NO. 19-129-001
 CALIFORNIA 23-0739 G 17 of 48

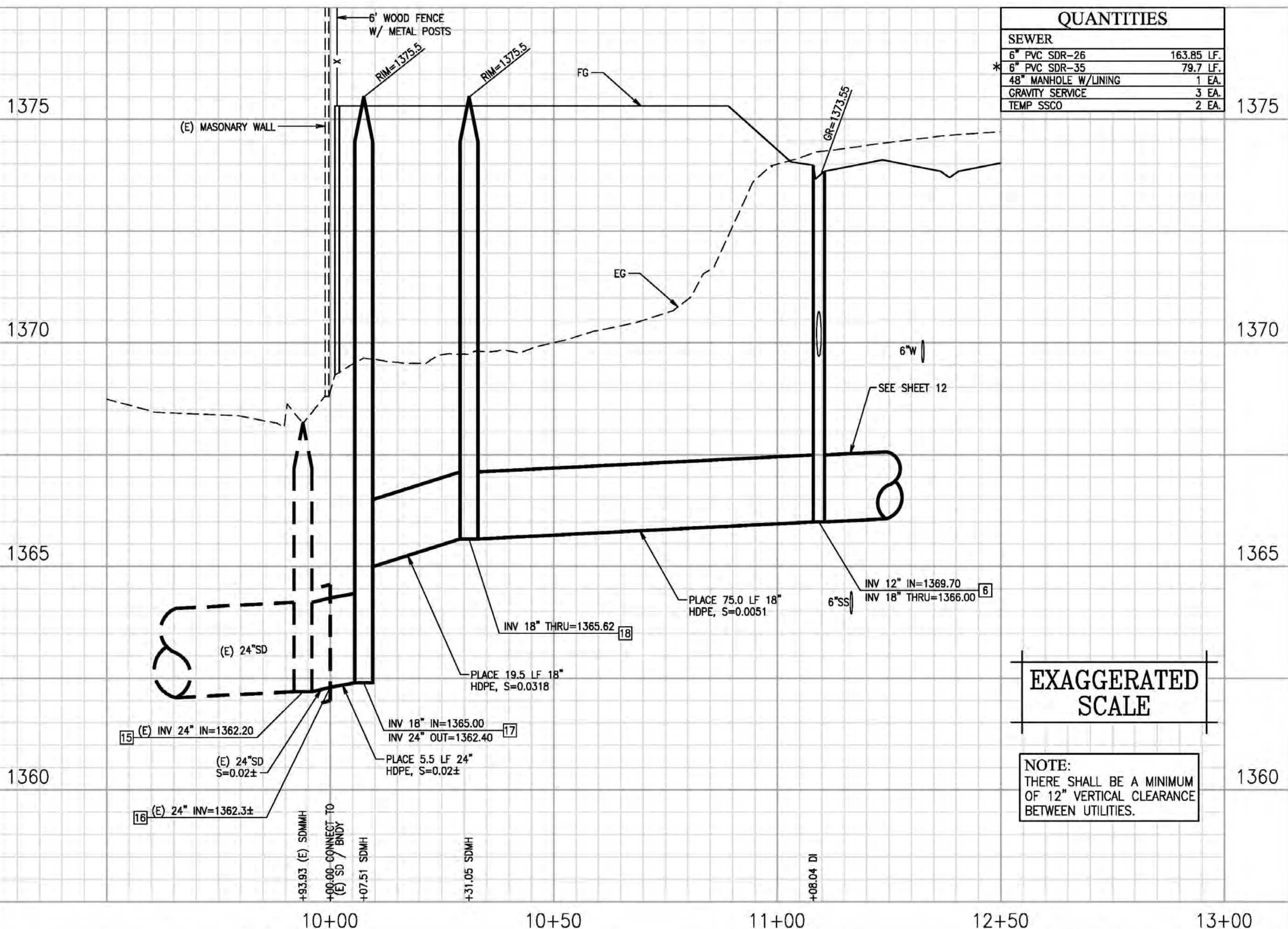
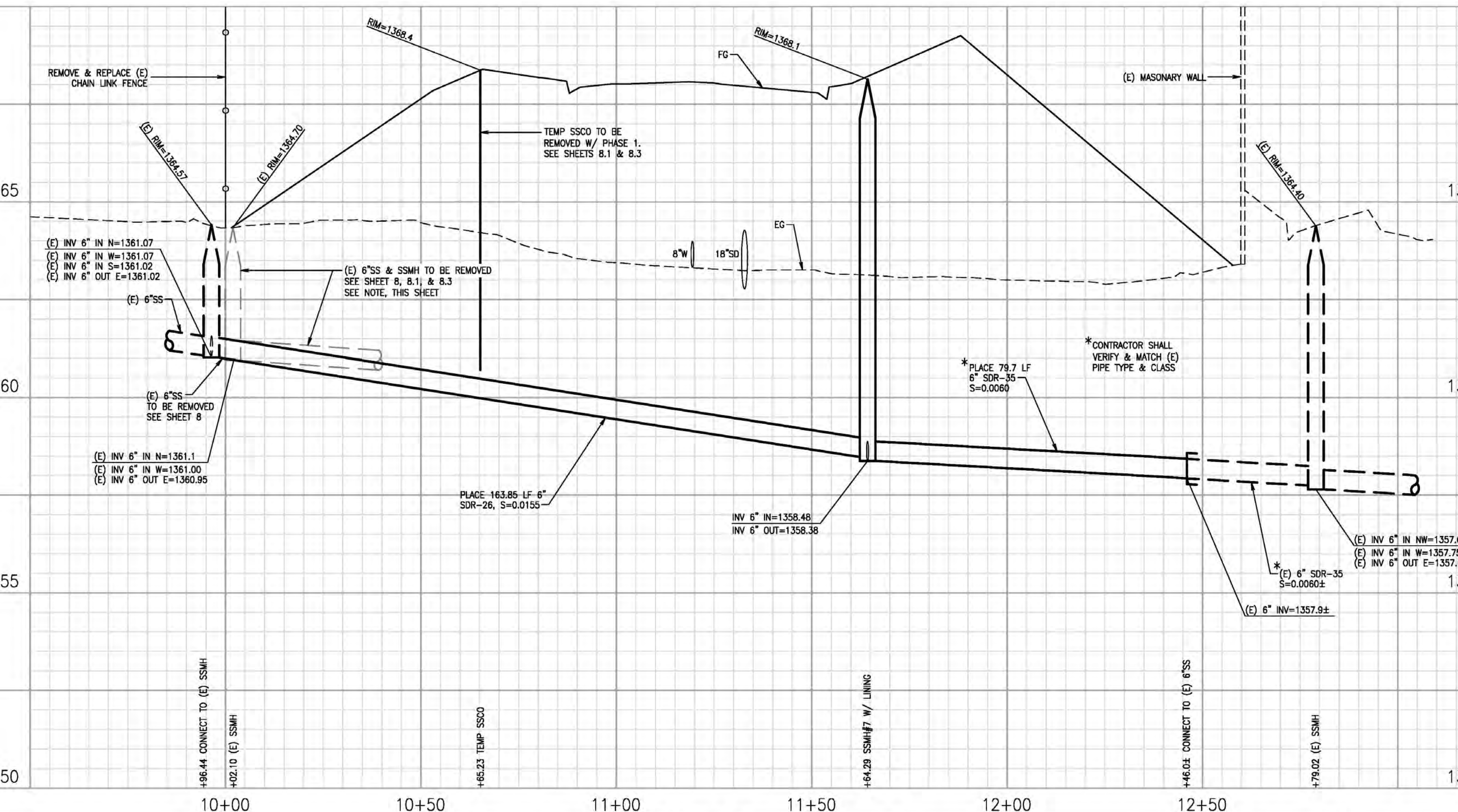
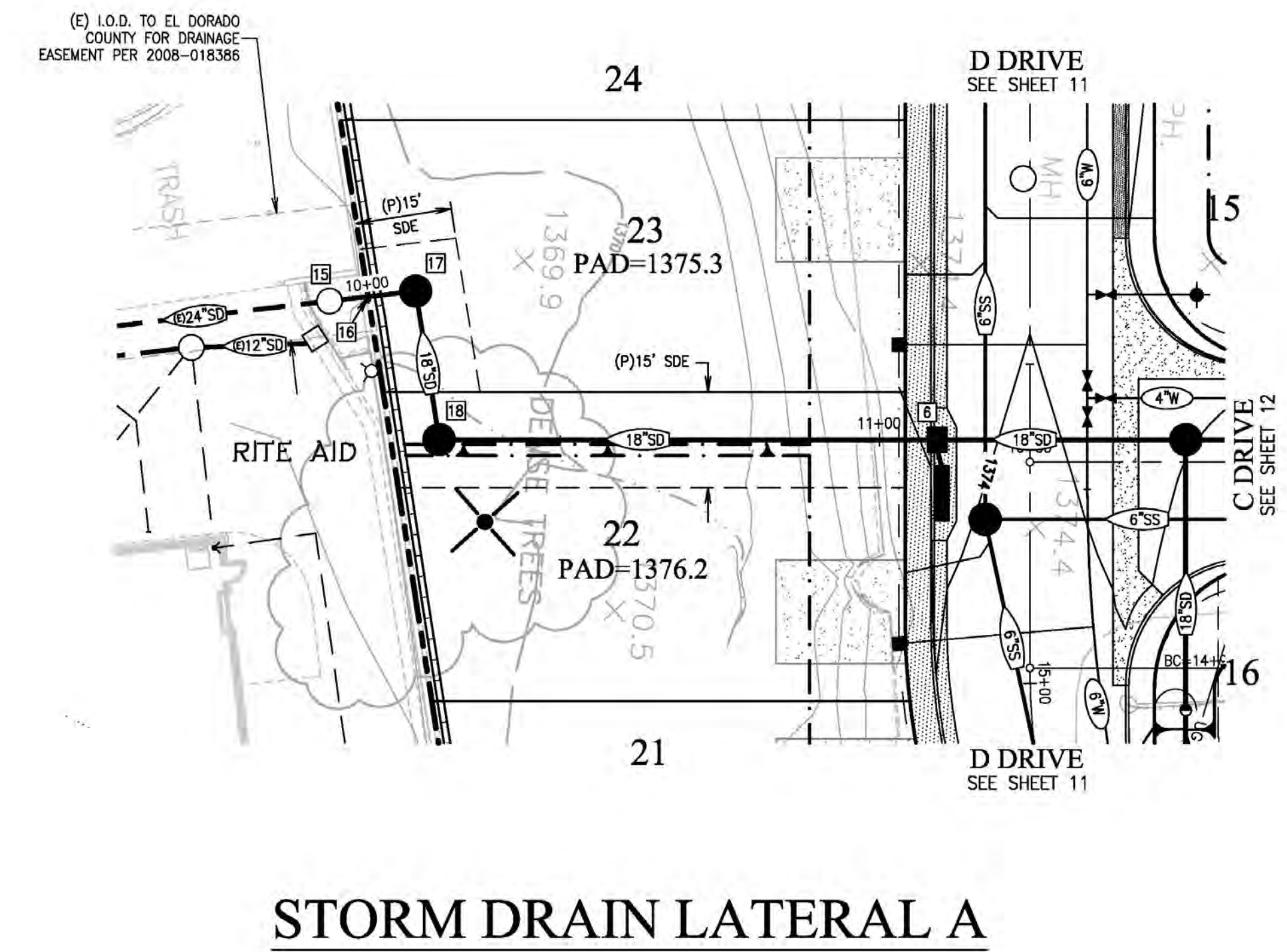
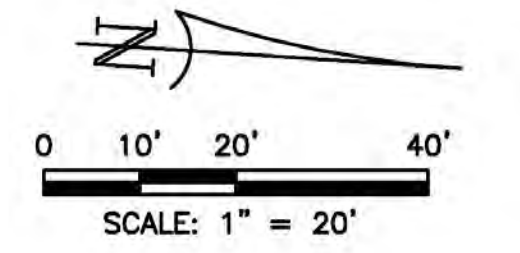
SANITARY SEWER PIPE CURVE DATA			
#	DELTA	RADIUS	LENGTH
1	6°45'12"	400.00'	47.15'
2	6°35'38"	300.00'	34.53'

NOTE: (E) SEWER SHALL NOT BE REMOVED UNTIL NEW REPLACEMENT IS IN AND ACCEPTED BY EID.



STORM DRAIN DATA

- 15 9+93.93 (E) GRATED INLET
- 16 10+00.00± CONNECT TO (E) 24"SD
- 17 10+07.51 48" SSMH
- 18 10+31.05 48" SSMH W/ ECCENTRIC CONE
- 19 11+08.04 (TBC) EDC TYPE B DI



QUANTITIES	
SEWER	
6" PVC SDR-26	163.85 LF
6" PVC SDR-35	79.7 LF
48" MANHOLE W/LINING	1 EA
GRAVITY SERVICE	3 EA
TEMP SSSO	2 EA

EXAGGERATED SCALE

NOTE: THERE SHALL BE A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN UTILITIES.

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
 DESIGNED BY: K. WIPF
 CHECKED BY: D. CROSARIOL
 SCALE: HORZ. 1" = 20' VERT. 1" = 2'
 DATE: JULY, 2020 F.B. REF.

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

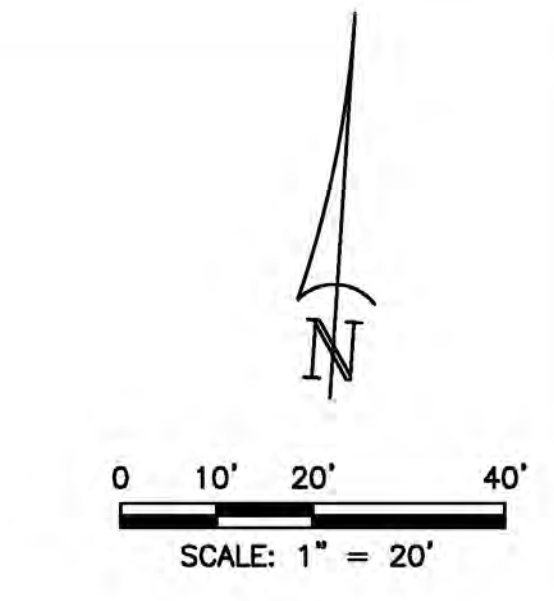
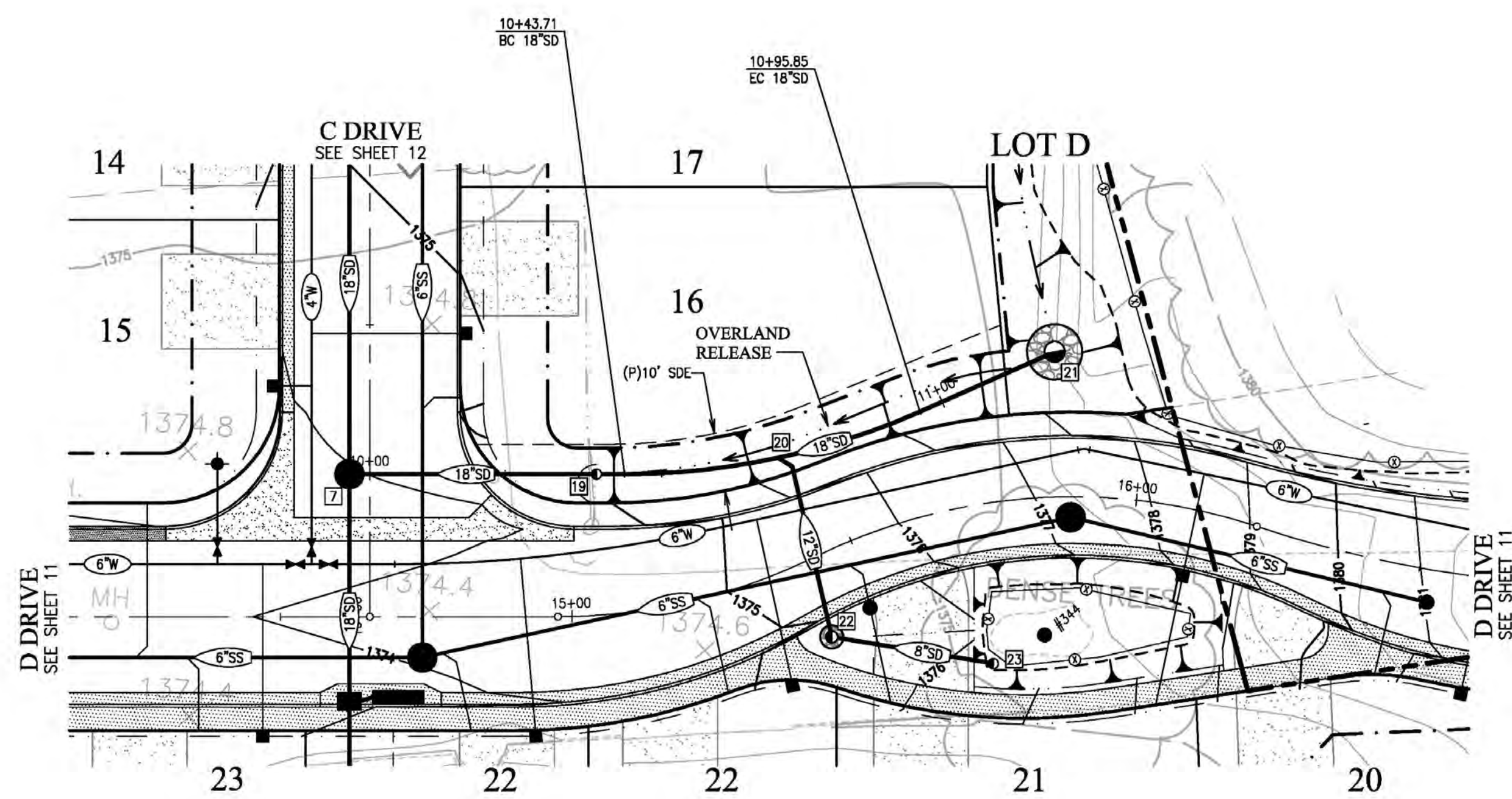
PREPARED UNDER THE DIRECTION OF:

 D. CROSARIOL DATE: 07/22/20



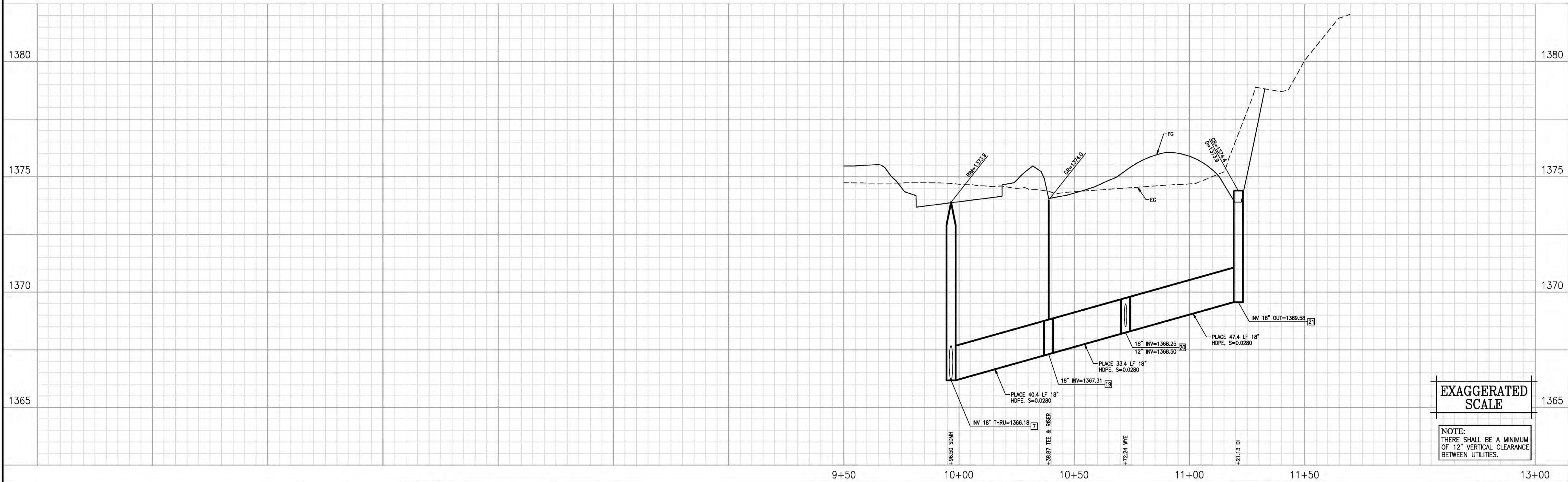
IMPROVEMENT PLANS FOR:
CAMERON RANCH
 PLAN & PROFILE SEWER LATERAL A
 & STORM DRAIN LATERAL A

SHEET 15 OF 25
 JOB NO. 19-129-001
 23-0739 G 18 of 48



- STORM DRAIN DATA**
- [7] 9+96.50
48" SDMH
 - [19] 10+38.87
18"x8" TEE, 8" HDPE RISER & 8" ATRIUM GRATE
 - [20] 10+72.24
18"x8" WYE
 - [21] 11+21.13
EGC GRATED INLET
PLACE RSP #3 BACKING 1" THICK FOR 3' AROUND INLET, MIN
 - [22] 10+72.24, 31.96' RT
NYLOPLAST 24" DRAIN BASIN W/ STD GRATE, OR APPROVED EQUAL
PLACE RSP 3" MINUS 4" THICK FOR 1' AROUND INLET, MIN
GR=1375.1, 12" OUT INV=1369.2
8" INV=1372.4
CONNECT TO WYE [20]
W/ 31 LF 12" HDPE
S=0.0226
 - [23] 10+91.44, 44.68' RT
8" PVC SCH 40 RISER W/ ATRIUM GRATE
PLACE RSP 3" MINUS 4" THICK FOR 1' AROUND INLET, MIN
GR=1375.1, 8" INV=1373.1
CONNECT TO D [22]
W/ 27 LF 8" PVC SCH 40
S=0.0259

STORM DRAIN LATERAL B



EXAGGERATED SCALE

NOTE:
THERE SHALL BE A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN UTILITIES.

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: HORZ. 1" = 20' VERT. 1" = 2'
DATE: JULY, 2020 **F.B. REF.**

cta Engineering & Surveying
 Civil Engineering ■ Land Surveying ■ Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

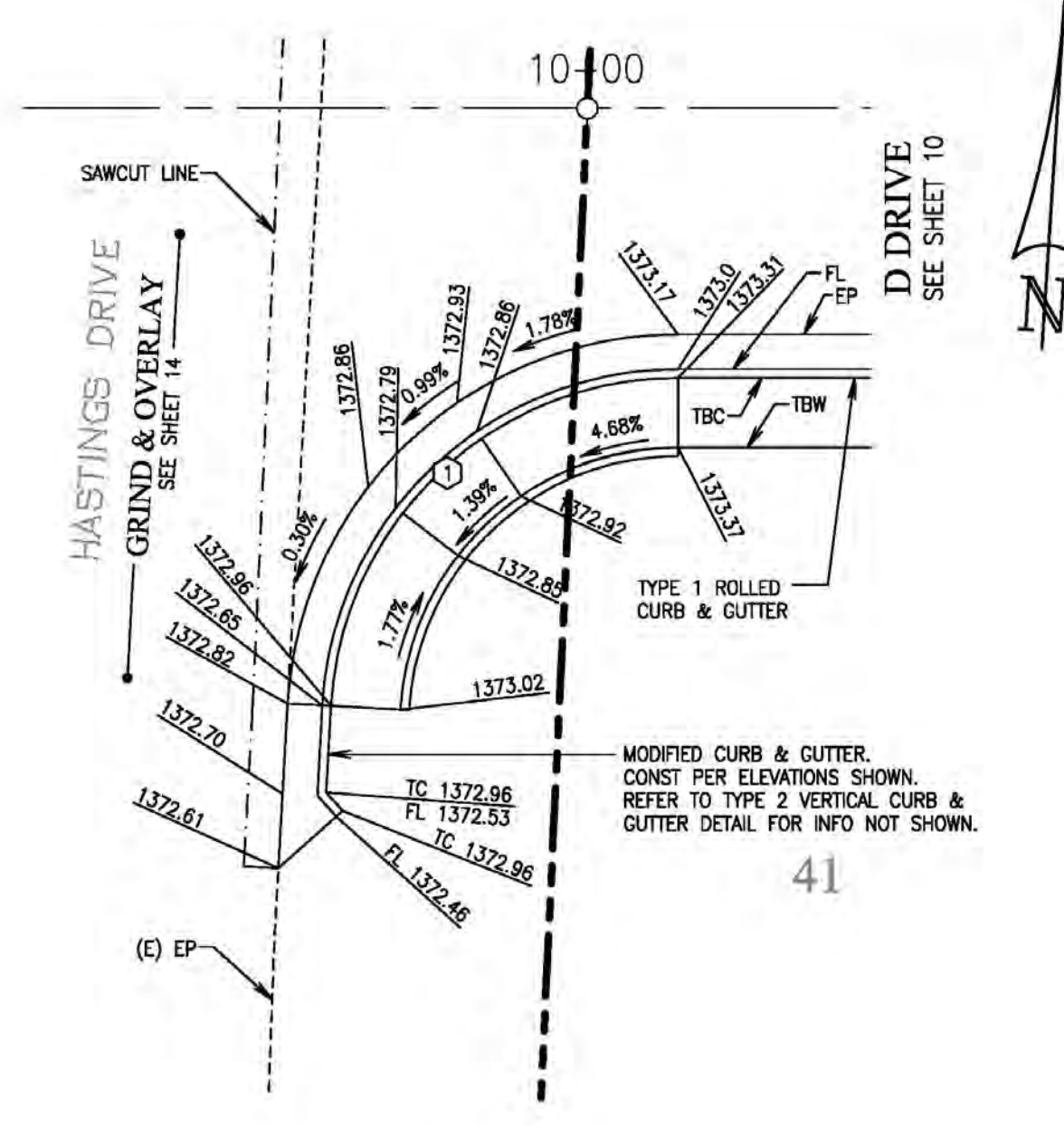
D. CROSARIOL DATE 07/22/20

REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 C34520
 Exp. 9-30-21
 STATE OF CALIFORNIA

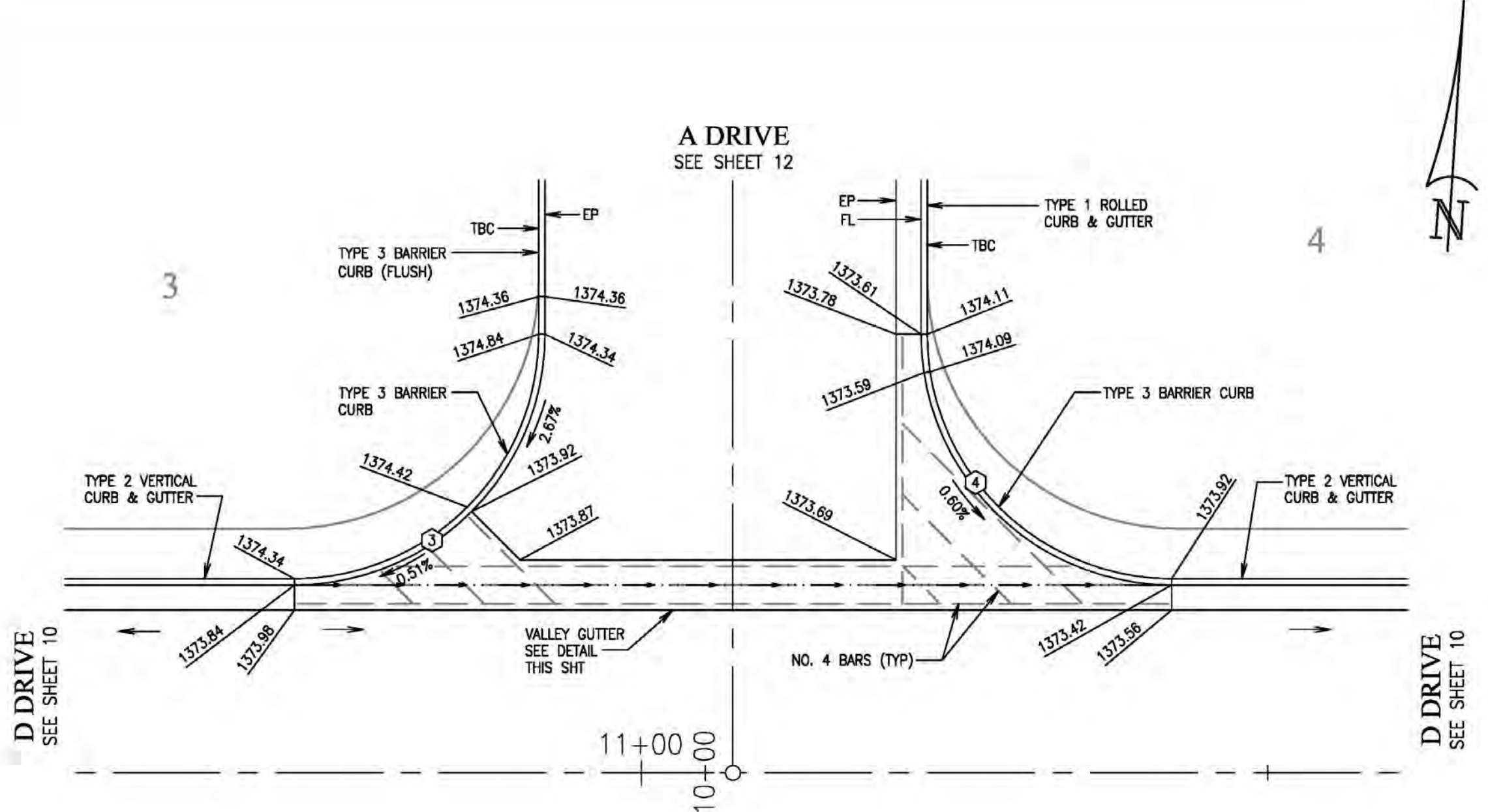
IMPROVEMENT PLANS FOR:
CAMERON RANCH
 STORM DRAIN LATERAL B

EL DORADO COUNTY

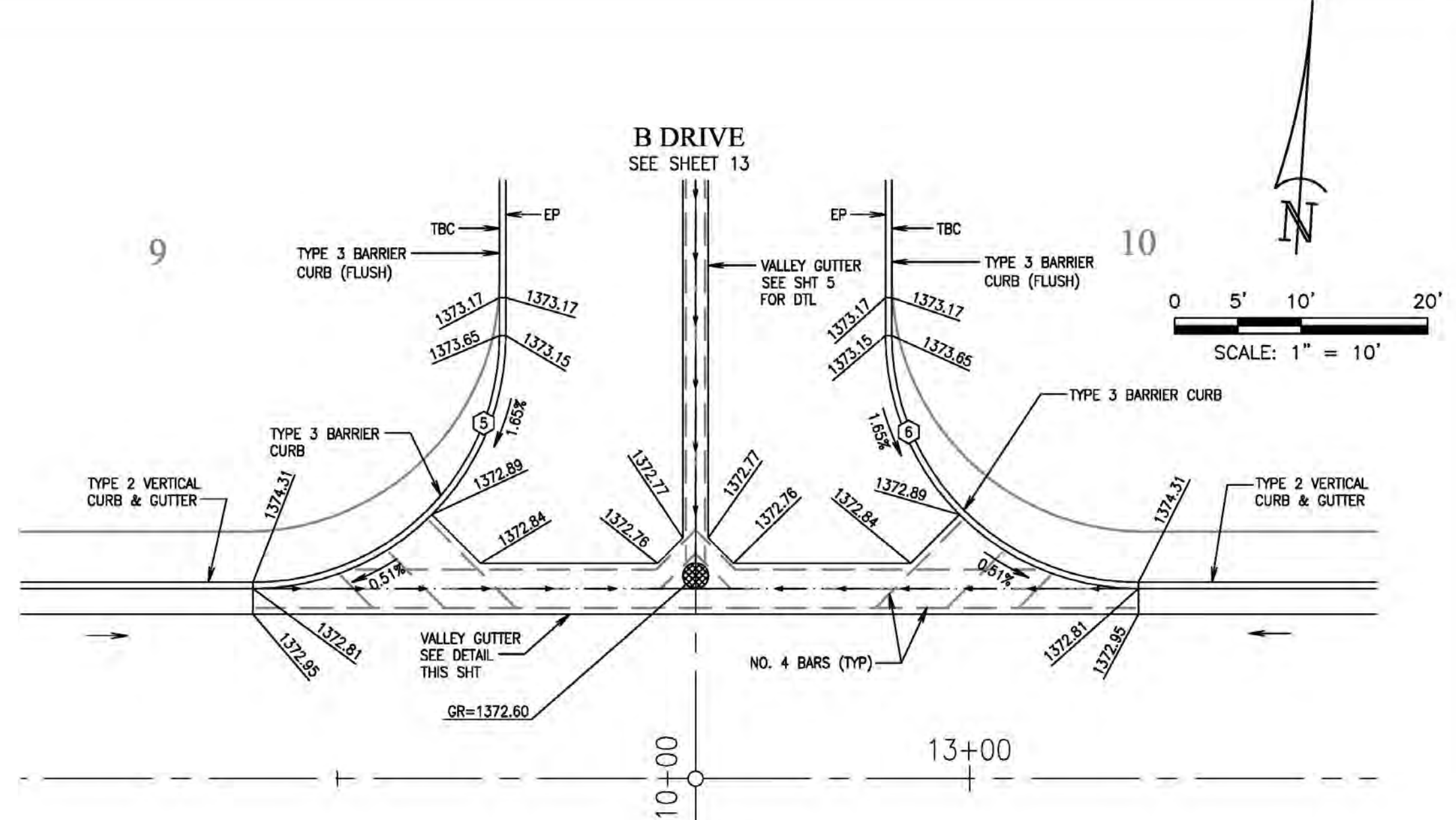
SHEET **16** OF **25**
 JOB NO. 19-129-001
 CALIFORNIA 23-0739 G 19 of 48



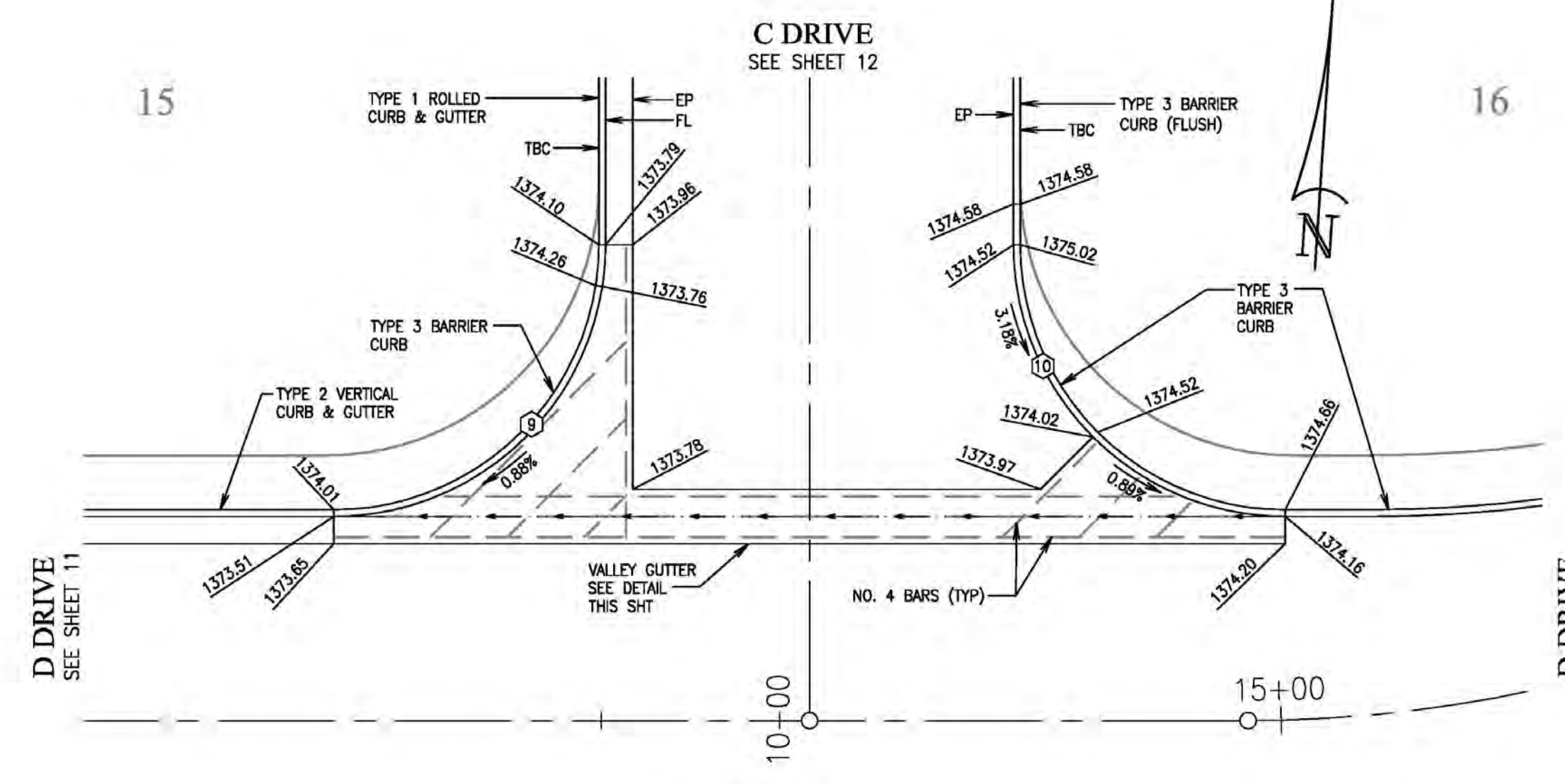
DETAIL 1
SCALE: 1" = 10'



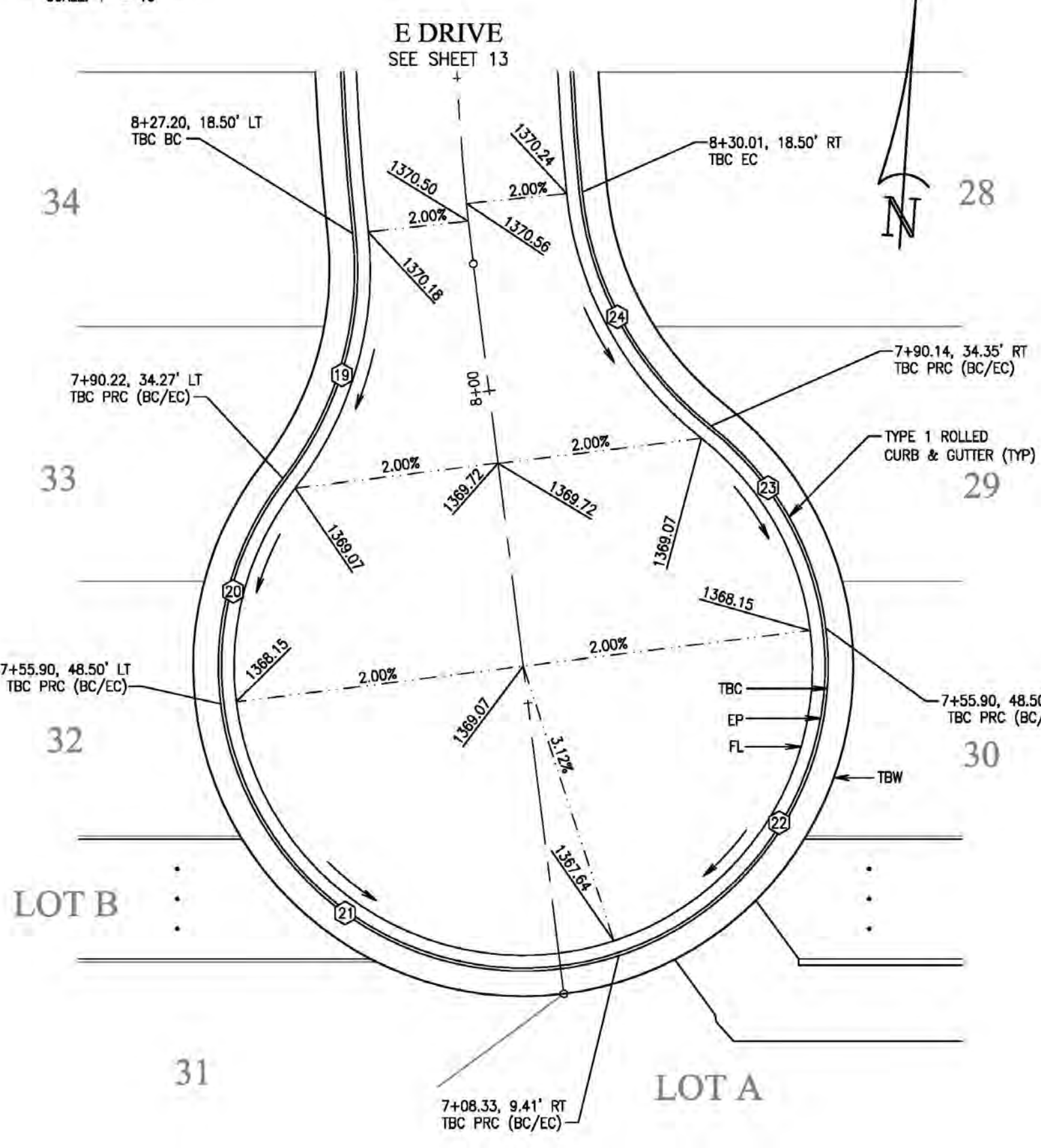
DETAIL 2
SCALE: 1" = 10'



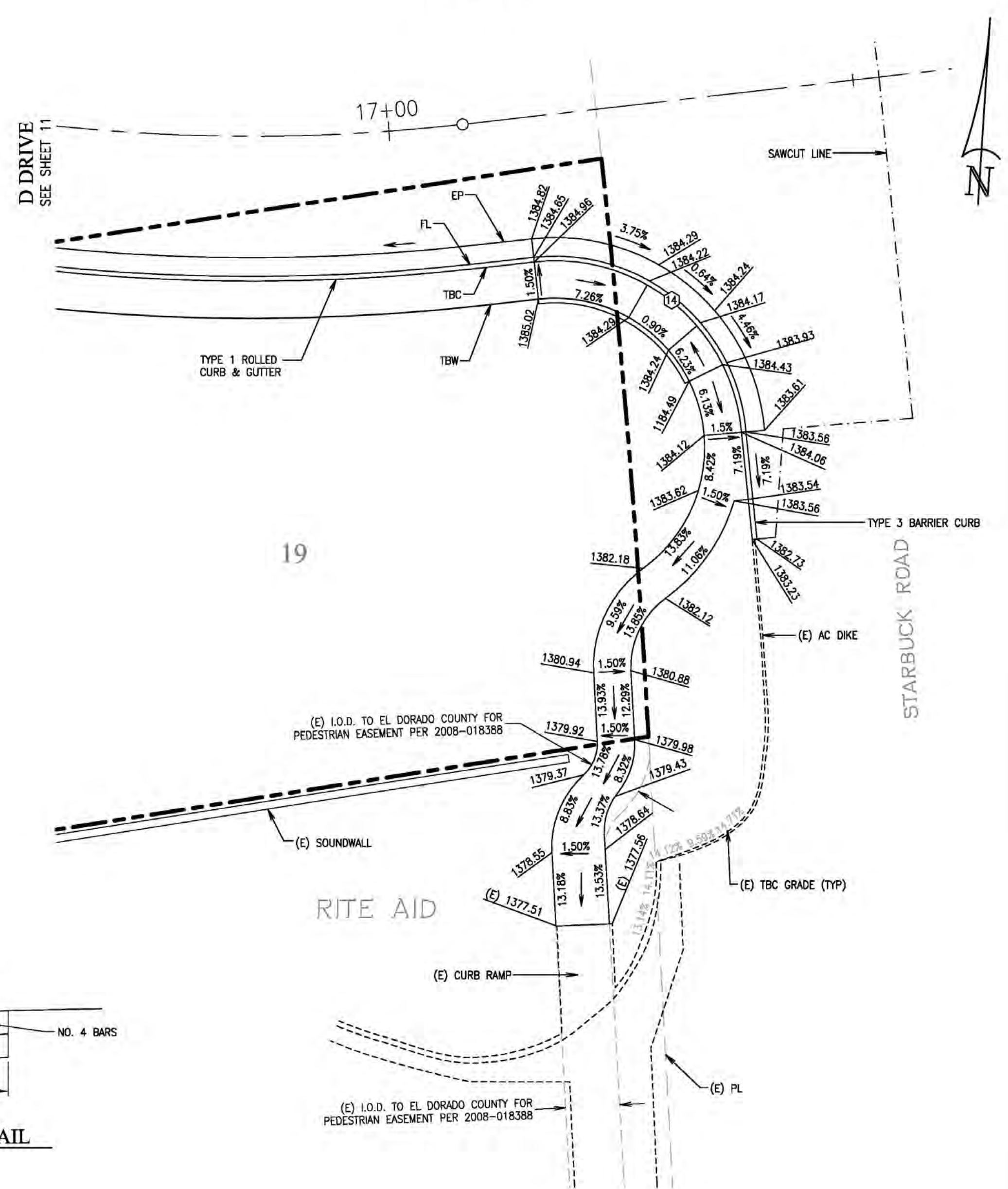
DETAIL 3
SCALE: 1" = 10'



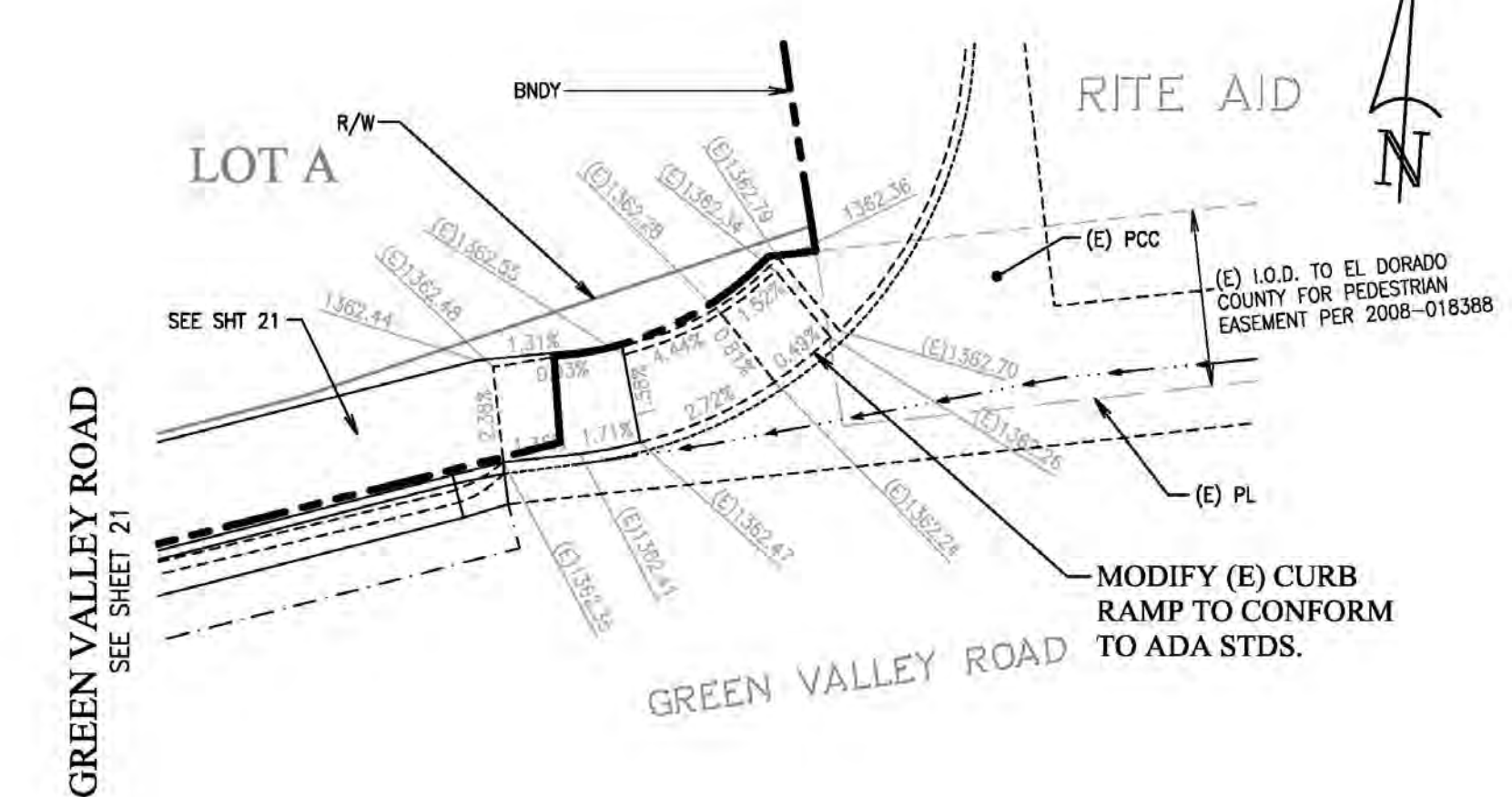
DETAIL 4
SCALE: 1" = 10'



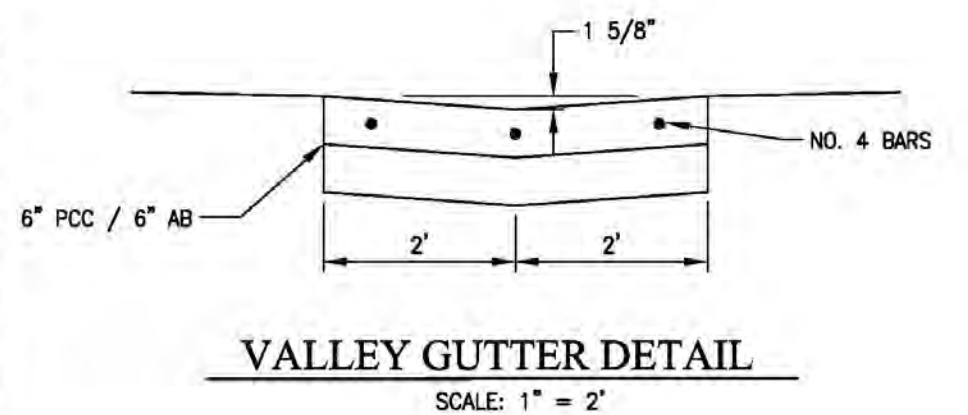
DETAIL 5
SCALE: 1" = 20'



DETAIL 6
SCALE: 1" = 10'



DETAIL 7
SCALE: 1" = 10'



VALLEY GUTTER DETAIL
SCALE: 1" = 2'

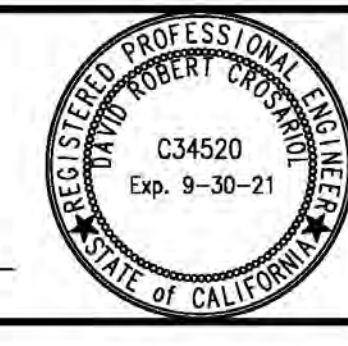
TBC DATA									
#	DELTA	RADIUS	LENGTH	SLOPE	BC EL.	1/4 PT EL.	1/2 PT EL.	3/4 PT EL.	EC EL.
1	86°47'25"	20.00'	30.30'						SEE DETAIL 1
2	90°00'00"	19.50'	30.63'						SEE DETAIL 2
3	90°00'00"	19.50'	30.63'						SEE DETAIL 2
4	90°00'00"	19.50'	30.63'						SEE DETAIL 3
5	90°00'00"	19.50'	30.63'						SEE DETAIL 3
6	90°00'00"	19.50'	30.63'						SEE DETAIL 3
7	90°00'00"	19.50'	30.63'						SEE DETAIL 4
8	90°00'00"	19.50'	30.63'						SEE DETAIL 4
9	90°00'00"	19.50'	30.63'						SEE DETAIL 4
10	90°00'00"	19.50'	30.63'						SEE DETAIL 4
11	91°47'15"	20.00'	32.04'						SEE DETAIL 6
12	44°03'39"	54.00'	41.53'	2.67%	1370.32	1370.04	1369.77	1369.49	1369.21
13	45°02'14"	48.50'	38.12'	2.41%	1369.21	1368.98	1368.75	1368.52	1368.29
14	101°11'13"	48.50'	85.65'	0.60%	1368.29	1368.16	1368.04	1367.91	1367.78
15	78°48'47"	48.50'	66.71'	0.76%	1367.78	1367.91	1368.04	1368.16	1368.29
16	44°54'28"	48.50'	38.01'	2.42%	1368.29	1368.52	1368.75	1368.98	1369.21
17	46°17'16"	54.00'	43.63'	2.68%	1369.21	1369.50	1369.80	1370.09	1370.38

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF	DESIGNED BY: K. WIPF	CHECKED BY: D. CROSARIOL
SCALE: AS SHOWN	DATE: JULY, 2020	F.B. REF.

cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:
[Signature]
D. CROSARIOL
DATE: 07/22/20



EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
SURFACE IMPROVEMENT DETAILS

SHEET 17 OF 25
JOB NO. 19-129-001
23-0739 G 20 of 48

THE HIGHLANDS UNIT NO. 4A S.D. G-64

* APPROX LOCATION OF (E) 3" SD OUTLET. CONTRACTOR SHALL CONNECT AND TIGHT PIPE DRAINAGE TO ROCK LINED DITCH AT 8" DR W/ 6" PIPE. PIPE SHALL HAVE 12" MIN COVER, 1% MIN SLOPE, AND BE ENTIRELY CONTAINED WITHIN THE DRAINAGE CASSEMENTS SHOWN. CLEANOUT(S) SHALL BE PROVIDED, AS NECESSARY, TO ALLOW FLUSHING OF THE LINE. IF ADDITIONAL OUTLETS ARE FOUND ALONG THE NORTHERN PROJECT BOUNDARY, CONTRACTOR SHALL PROVIDE SIMILAR FACILITIES TO ELIMINATE ALL UNCONTROLLED DISCHARGES OVER THE EXISTING CUT SLOPE. ANY WORK WITHIN (E) OAK CANOPY SHALL BE DONE UNDER THE GUIDANCE OF A LICENSED ARBORIST

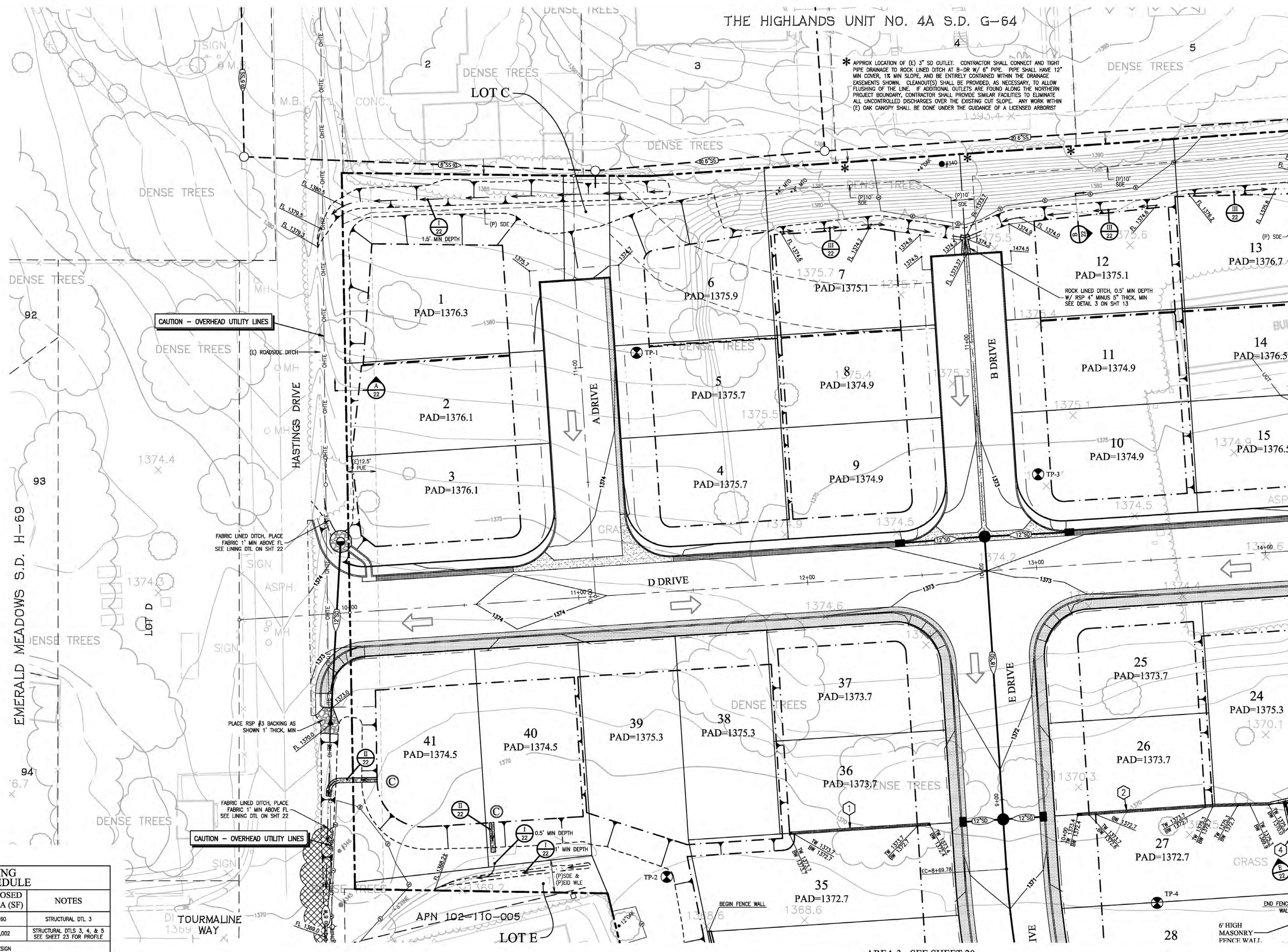
LEGEND

- TP-7 APPROX TEST PIT LOCATION
- TREE PROTECTIVE FENCING (4' MIN TALL)
- REAR DRAINING LOT
- OVERLAND RELEASE PATH
- TRIM (E) VEGETATION, SEE LINE OF SIGHT NOTE
- TREE TO BE REMOVED
- OAK TREE TAG NO.
- DRIP LINE
- TREE TRUNK

NOTE: SEE FRONT YARD UNDERCUT DETAIL ON SHEET 5

LINE OF SIGHT NOTE:
CONTRACTOR SHALL TRIM EXISTING VEGETATION AND LIMB UP EXISTING TREE(S) WITHIN THE AREAS IDENTIFIED TO ENSURE CLEAR LINE OF SIGHT. ALL LIMBING UP OF OAK TREES SHALL BE DONE UNDER THE GUIDANCE OF A LICENSED ARBORIST.

NOTE: SEE SHEETS 8.1 & 8.3 FOR PHASING OF GRADING



AREA 2 - SEE SHEET 19

AREA 3 - SEE SHEET 20

RETAINING WALL SCHEDULE

#	TYPE	LENGTH (LF)	EXPOSED AREA (SF)	NOTES
1	CMU	61.3	60	STRUCTURAL DTL 3
2	CMU	373.6	2,002	STRUCTURAL DTLS 3, 4, & 5 SEE SHEET 23 FOR PROFILE

SEE SHEETS S0.1 - S0.3 FOR STRUCTURAL DESIGN

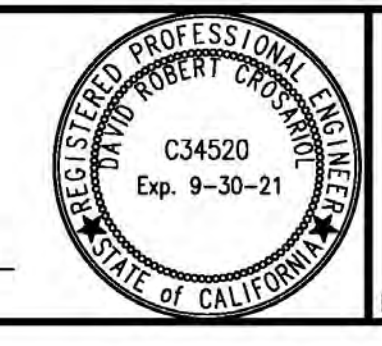
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: 1" = 20'
DATE: JULY, 2020 **F.B. REF.**

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaenr.net

PREPARED UNDER THE DIRECTION OF:

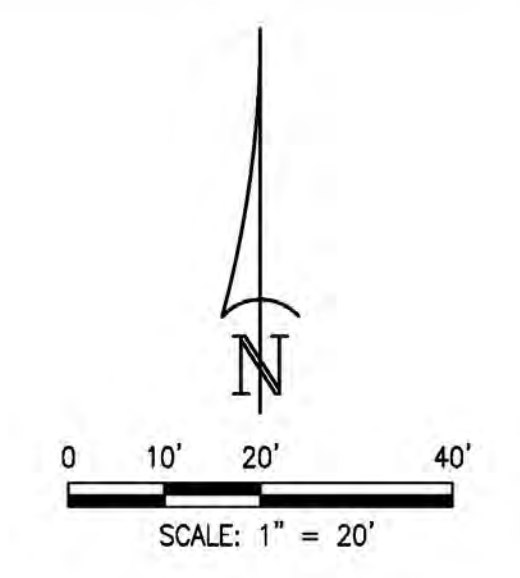
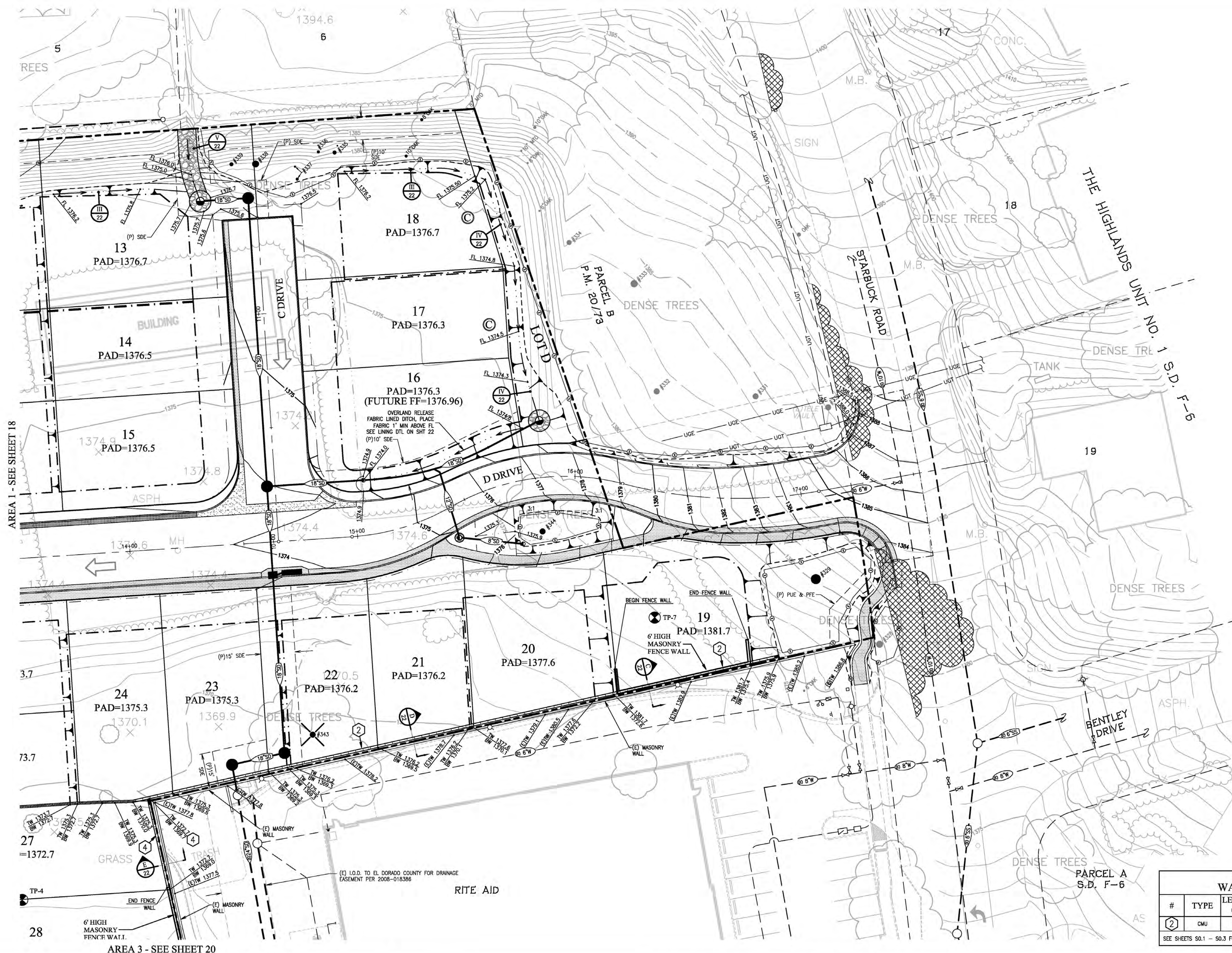
D. CROSARIOL **DATE:** 07/22/20



EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
 GRADING & DRAINAGE PLAN
 AREA 1

SHEET 18
OF 25
JOB NO. 19-129-001
 23-0739 G 21 of 48



NOTE: SEE FRONT YARD UNDERCUT DETAIL ON SHEET 5

LINE OF SIGHT NOTE:
 CONTRACTOR SHALL TRIM EXISTING VEGETATION AND LIMB UP EXISTING TREE(S) WITHIN THE AREAS IDENTIFIED TO ENSURE CLEAR LINE OF SIGHT. ALL LIMBING UP OF OAK TREES SHALL BE DONE UNDER THE GUIDANCE OF A LICENSED ARBORIST.

NOTE: SEE SHEETS 8.1 & 8.3 FOR PHASING OF GRADING

RETAINING WALL SCHEDULE				
#	TYPE	LENGTH (LF)	EXPOSED AREA (SF)	NOTES
②	CMU	373.6	2,002	STRUCTURAL DTLS 3, 4, & 5 SEE SHEET 23 FOR PROFILE

SEE SHEETS SO.1 - SO.3 FOR STRUCTURAL DESIGN

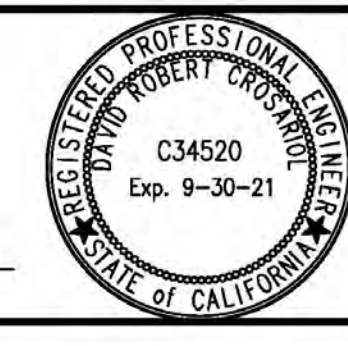
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
 DESIGNED BY: K. WIPF
 CHECKED BY: D. CROSARIOL
 SCALE: 1" = 20'
 DATE: JULY, 2020 F.B. REF.

cta Engineering & Surveying
 Civil Engineering ■ Land Surveying ■ Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaenr.com

PREPARED UNDER THE DIRECTION OF:

 D. CROSARIOL DATE: 07/22/20



EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
 GRADING & DRAINAGE PLAN
 AREA 2

SHEET 19 OF 25
 JOB NO. 19-129-001
 23-0739 G 22 of 48



NOTE: SEE SHEETS 8.1 & 8.3 FOR PHASING OF GRADING

LINE OF SIGHT NOTE:
CONTRACTOR SHALL TRIM EXISTING VEGETATION AND LIMB UP EXISTING TREE(S) WITHIN THE AREAS IDENTIFIED TO ENSURE CLEAR LINE OF SIGHT. ALL LIMBING UP OF OAK TREES SHALL BE DONE UNDER THE GUIDANCE OF A LICENSED ARBORIST.

LEGEND

- TP-7 APPROX TEST PIT LOCATION
 - TREE PROTECTIVE FENCING (4' MIN TALL)
 - REAR DRAINING LOT
 - ← OVERLAND RELEASE PATH
 - ▨ TRIM (E) VEGETATION, SEE LINE OF SIGHT NOTE
 - TREE TO BE REMOVED
 - OAK TREE TAG NO.
 - DRIP LINE
 - TREE TRUNK
- NOTE: SEE FRONT YARD UNDERCUT DETAIL ON SHEET 5

RETAINING WALL SCHEDULE				
#	TYPE	LENGTH (LF)	EXPOSED AREA (SF)	NOTES
1	CMU	61.3	60	STRUCTURAL DTL 3
2	CMU	373.6	2,002	STRUCTURAL DTLS 3, 4, & 5 SEE SHEET 23 FOR PROFILE
3	CMU	64.0	133	STRUCTURAL DTL 3
4	CMU	237.2	1,090	STRUCTURAL DTLS 4 & 5 SEE SHEET 23 FOR PROFILE
5	STRUCTURAL CONCRETE	380.1	2,864	STRUCTURAL DTLS 6 & 7 SEE SHEET 21 & 23
6	CMU	135.0	533	STRUCTURAL DTLS 2 & 3 SEE SHEET 23 FOR PROFILE
7	CMU	179.2	867	STRUCTURAL DTLS 2 & 3 SEE SHEET 23 FOR PROFILE
8	CMU	60.0	105	STRUCTURAL DTL 3
9				DELETED
10	ROCKERY	69.5	481	ROCKERY DTL 1 SEE SHEET 21

SEE SHEETS SO.1 - SO.3 FOR STRUCTURAL DESIGN

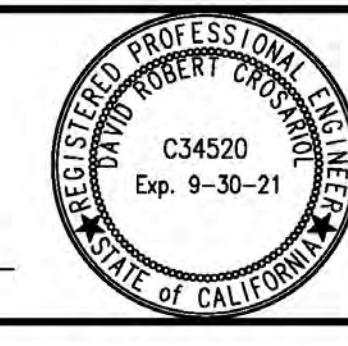
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
 DESIGNED BY: K. WIPF
 CHECKED BY: D. CROSARIOL
 SCALE: 1" = 20'
 DATE: JULY, 2020 F.B. REF.

cta Engineering & Surveying
 Civil Engineering • Land Surveying • Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

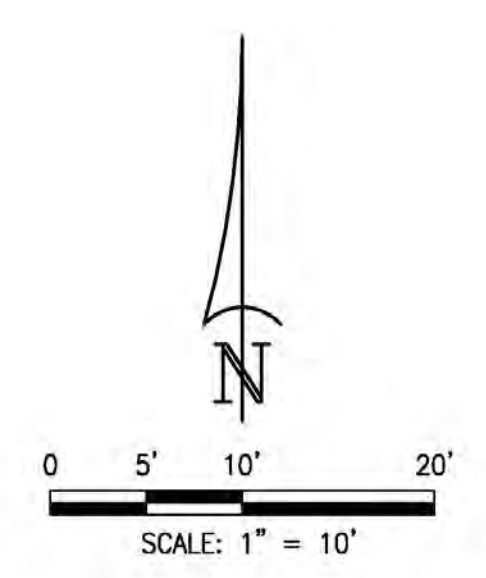
PREPARED UNDER THE DIRECTION OF:

 D. CROSARIOL DATE: 07/22/20



IMPROVEMENT PLANS FOR:
CAMERON RANCH
 GRADING & DRAINAGE PLAN
 AREA 3

SHEET 20 OF 25
 JOB NO. 19-129-001
 23-0739 G 23 of 48



LOT B

LOT A

APPROX FOOTING LOCATION (TYP)

31
PAD=1369.5
TP-5

CAUTION - OVERHEAD UTILITY LINES

CAUTION - UNDERGROUND UTILITY LINES

GREEN VALLEY ROAD

LOW FLOW CHANNEL
SEE DETAIL THIS SHEET

OUTLET STRUCTURE
SEE DETAIL THIS SHEET

SEE DETAIL 7
SHEET 17

STAGE (FT)	ELEVATION (FT)	STORAGE (CU-FT)
0	1358.0	0
1	1359.0	926
2	1360.0	4,205
3	1361.0	8,059
4	1362.0	12,007
5	1363.0	16,049
6	1364.0	20,187
7	1365.0	24,420
7.5	1365.5	26,573

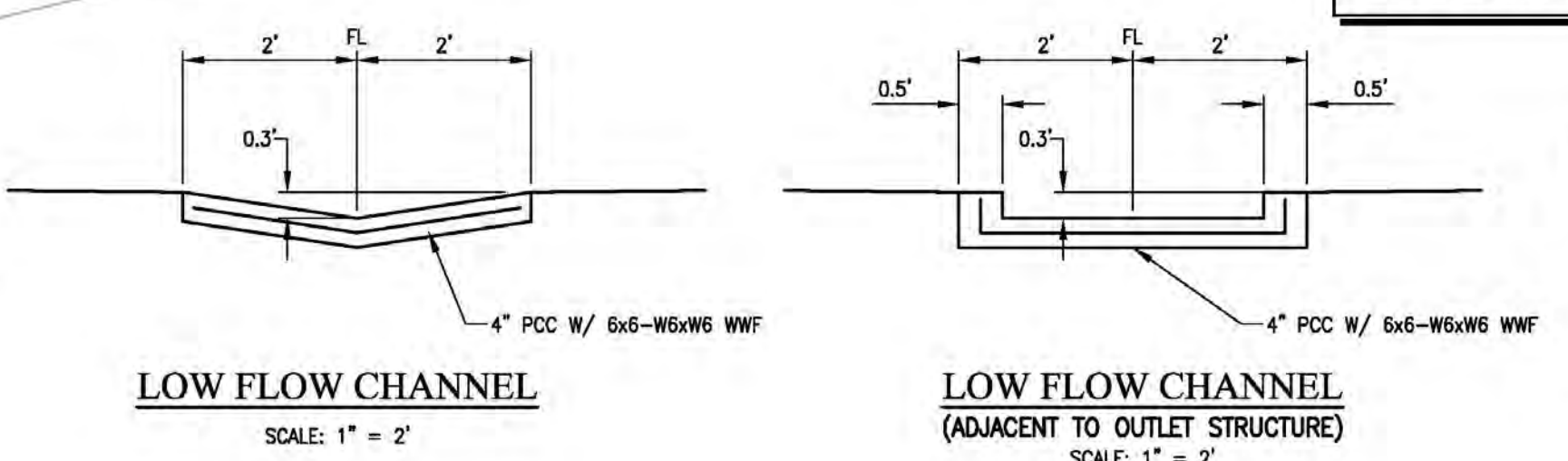
TM NOTE:
REFER TO TECHNICAL MEMO PREPARED BY
YOUNGDAHL CONSULTING GROUP TITLED:
"RECOMMENDATIONS FOR RETAINING WALLS AT
BIORETENTION ZONES"

POND FENCE HEIGHT NOTE:
TOP OF FENCE TO ADJ FG SHALL BE 6' MIN

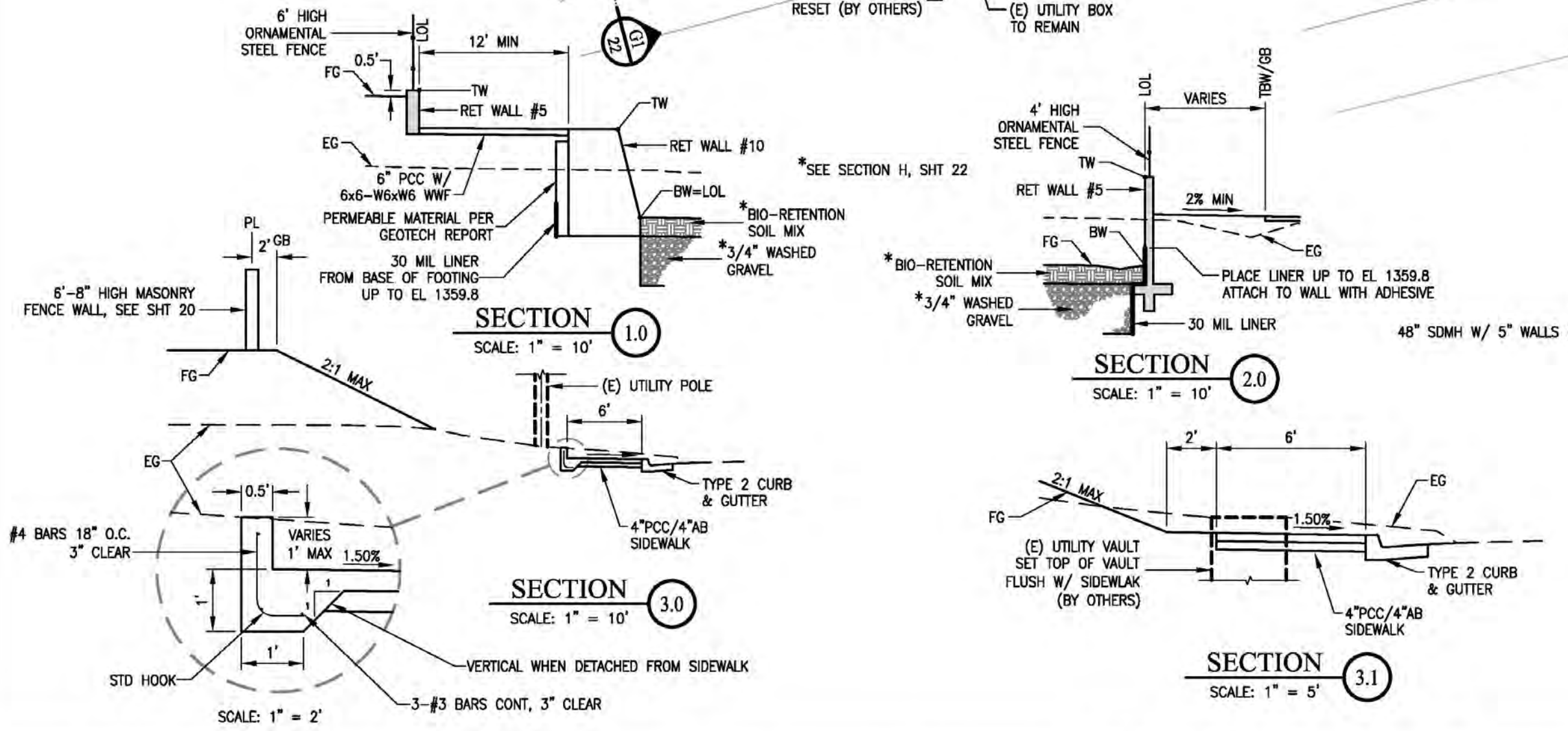
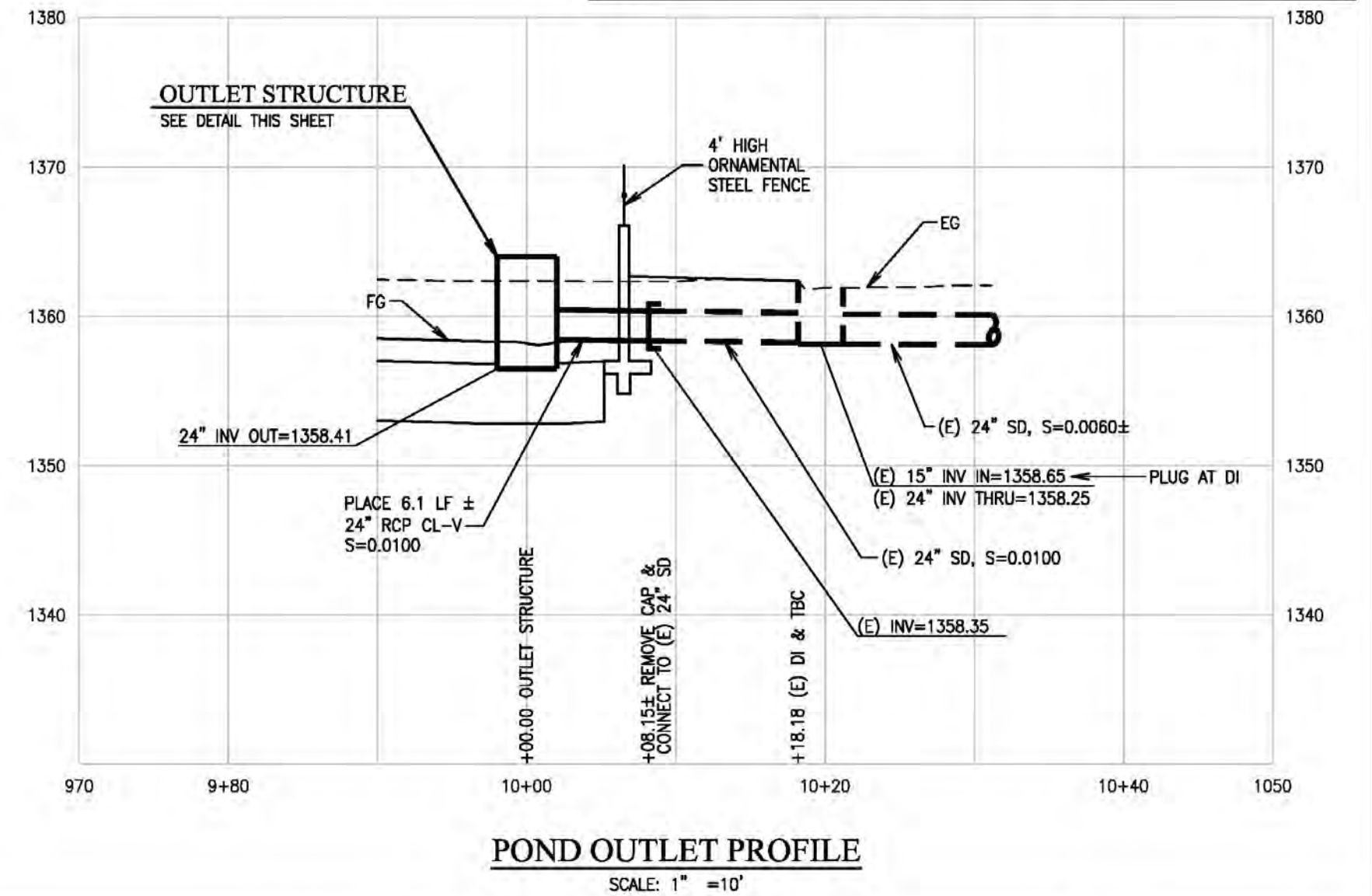
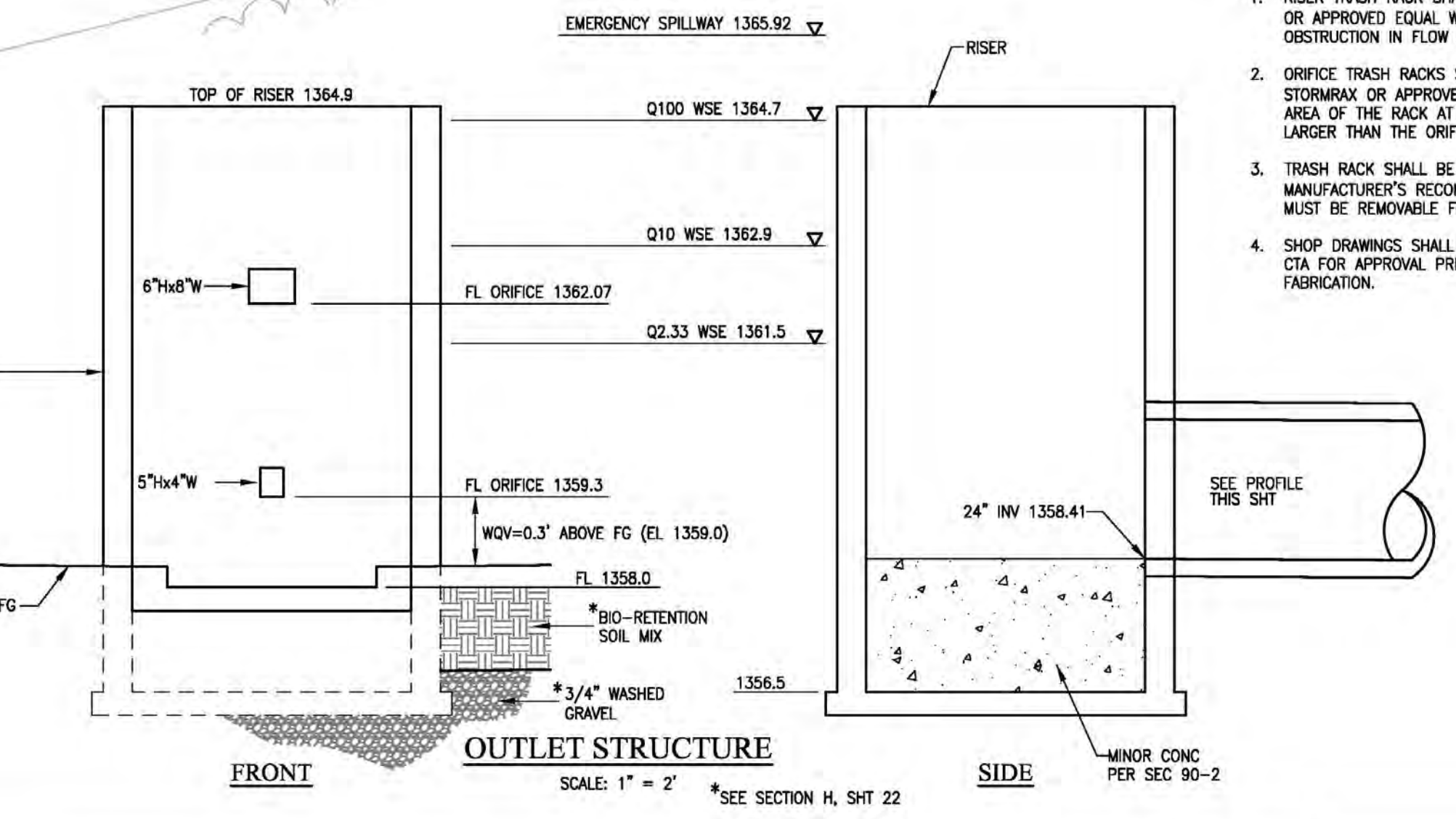
#	TYPE	LENGTH (LF)	EXPOSED AREA (SF)	NOTES
5	STRUCTURAL CONCRETE	380.1	2,864	STRUCTURAL DTLS 6, 7, & 9. SEE SHEET 21 & 23, & TM NOTE
9				DELETED
10	ROCKERY	69.5	481	ROCKERY DTL 1, SEE TM NOTE

SEE SHEETS S0.1 - S0.3 FOR STRUCTURAL DESIGN

9 STRUCTURAL DETAIL NUMBER - SEE SHEETS NOTED ABOVE



- TRASH RACK NOTES:
1. RISER TRASH RACK SHALL BE STORMRACK OR APPROVED EQUAL W/ 20X MAX GRADE OBSTRUCTION IN FLOW AREA.
 2. ORIFICE TRASH RACKS SHALL BE STORMRACK OR APPROVED EQUAL W/ THE AREA OF THE RACK AT LEAST TEN TIMES LARGER THAN THE ORIFICE.
 3. TRASH RACK SHALL BE FASTENED PER MANUFACTURER'S RECOMMENDATIONS & MUST BE REMOVABLE FOR MAINTENANCE.
 4. SHOP DRAWINGS SHALL BE SUBMITTED TO CTA FOR APPROVAL PRIOR TO FABRICATION.



NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: 1" = 10'
DATE: JULY, 2020 F.B. REF.

cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaenr.net

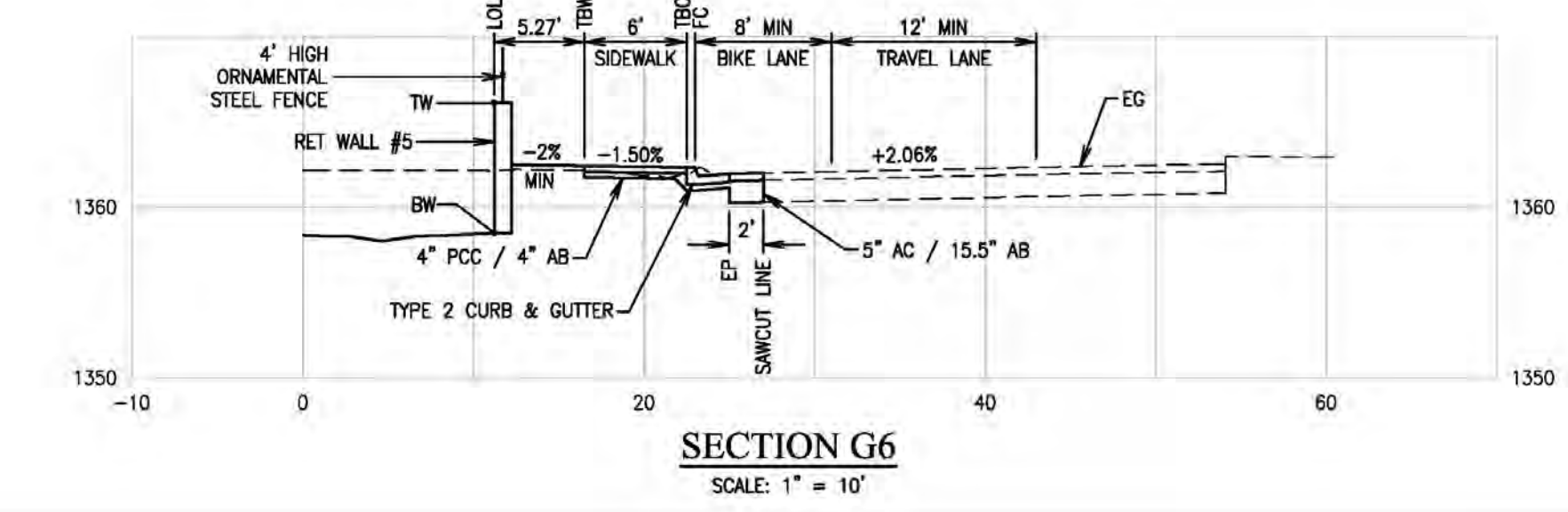
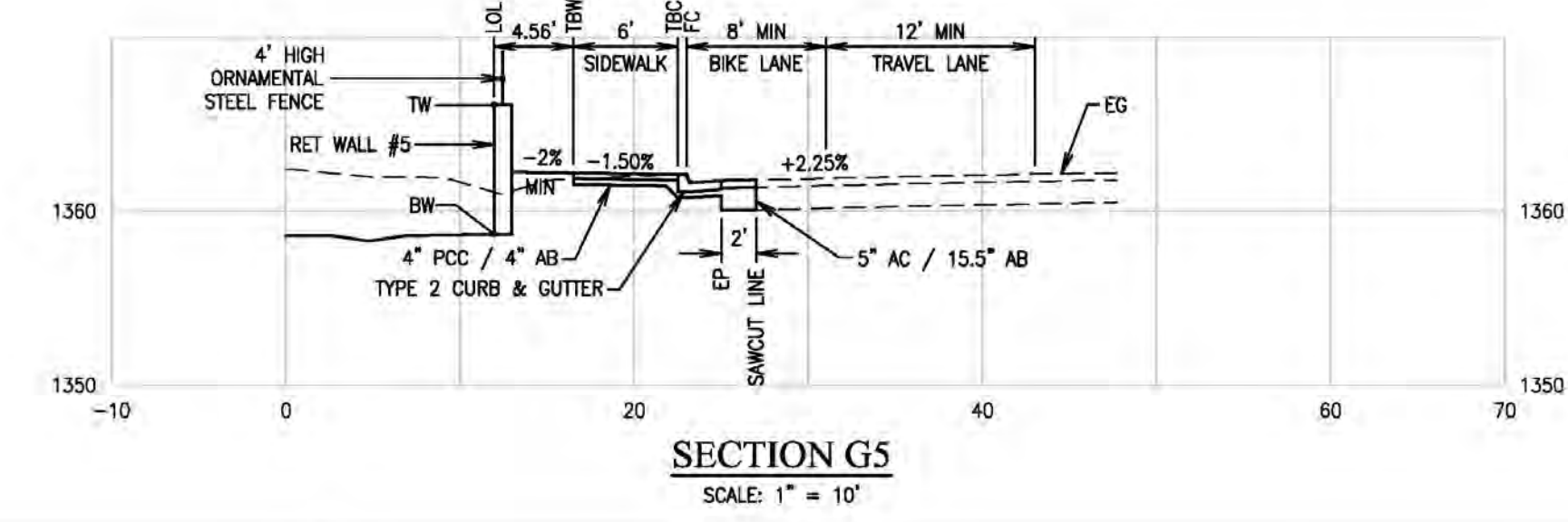
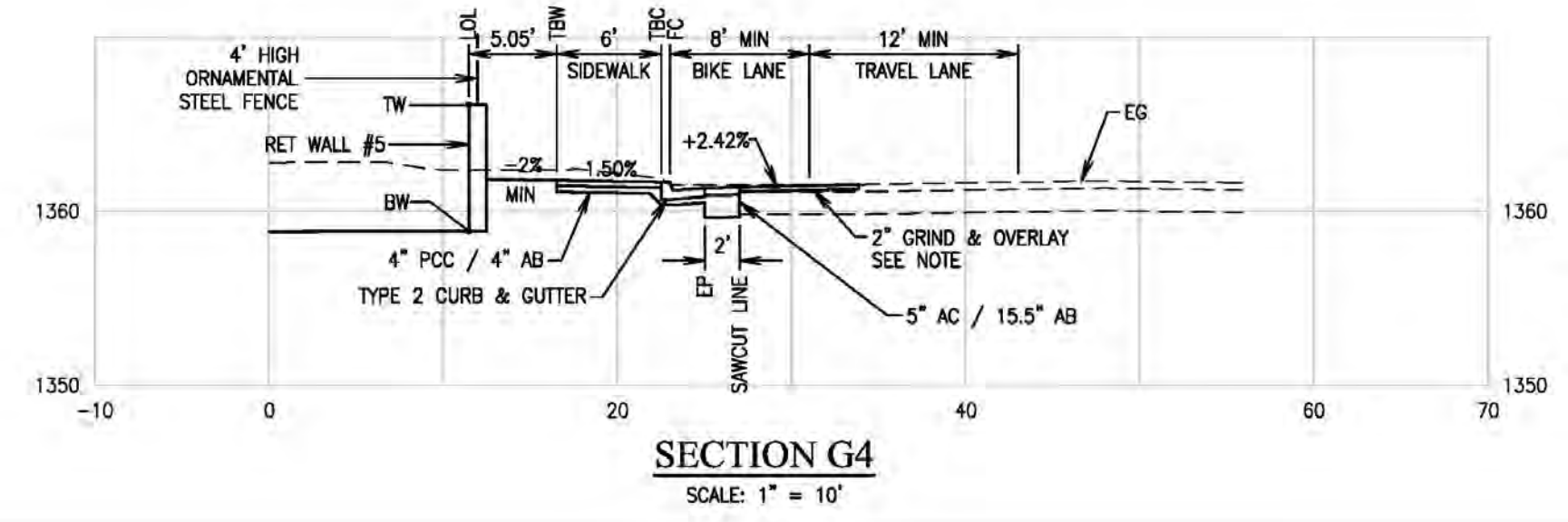
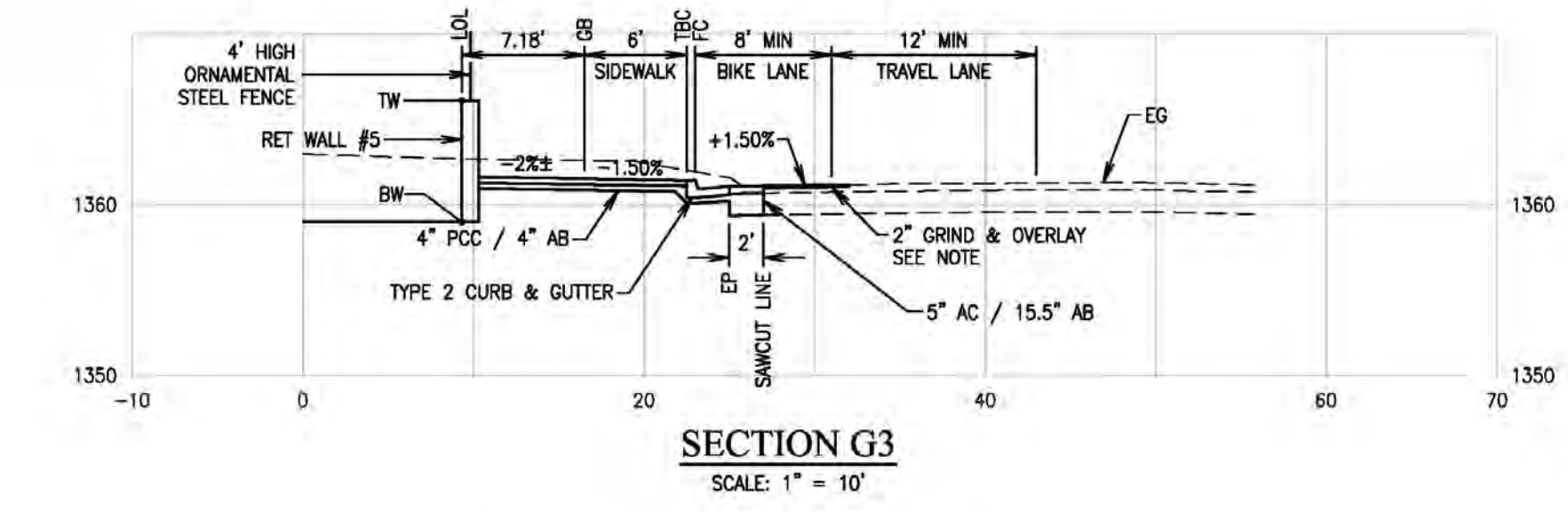
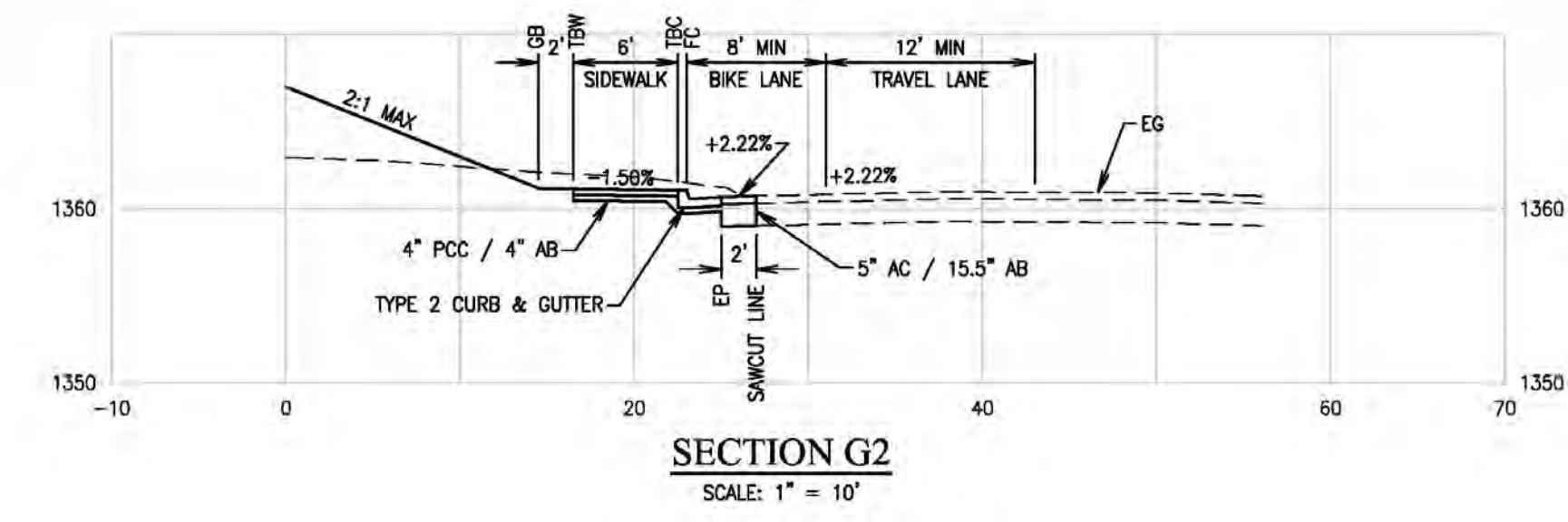
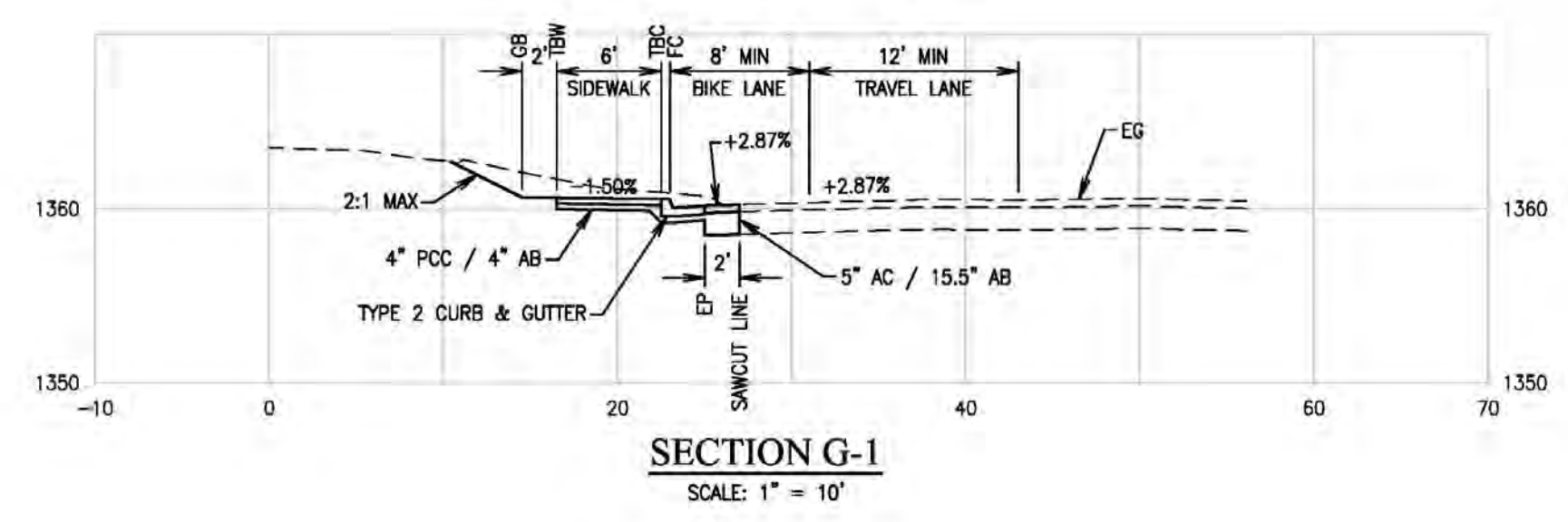
PREPARED UNDER THE DIRECTION OF:
[Signature]
D. CROSARIOL
DATE: 07/22/20

PROFESSIONAL ENGINEER
C34520
Exp. 9-30-21
STATE OF CALIFORNIA

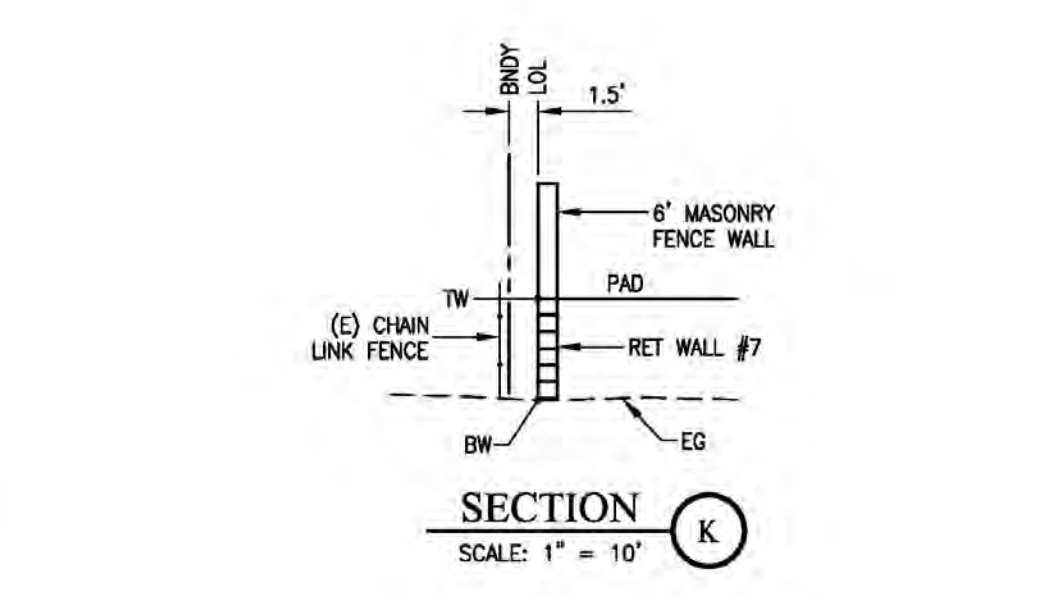
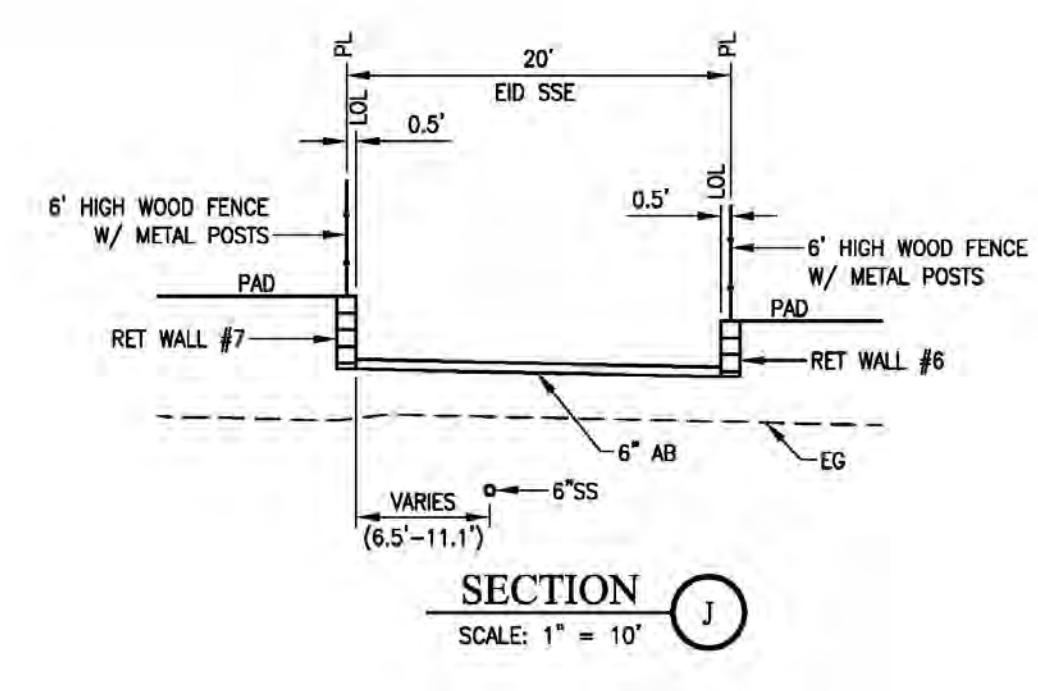
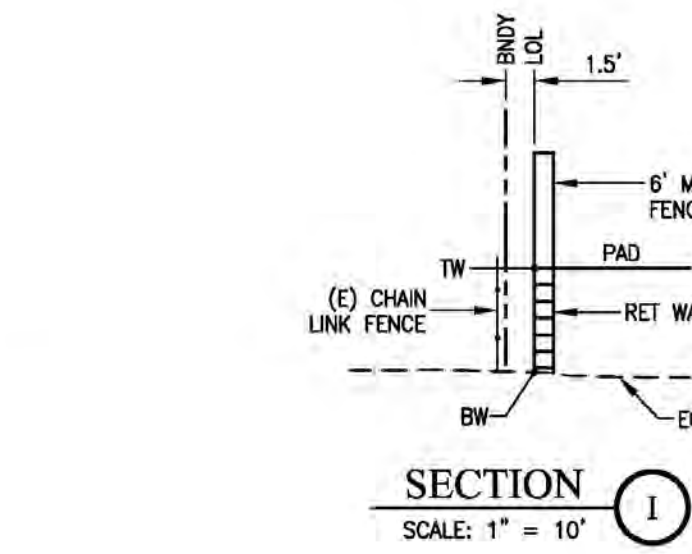
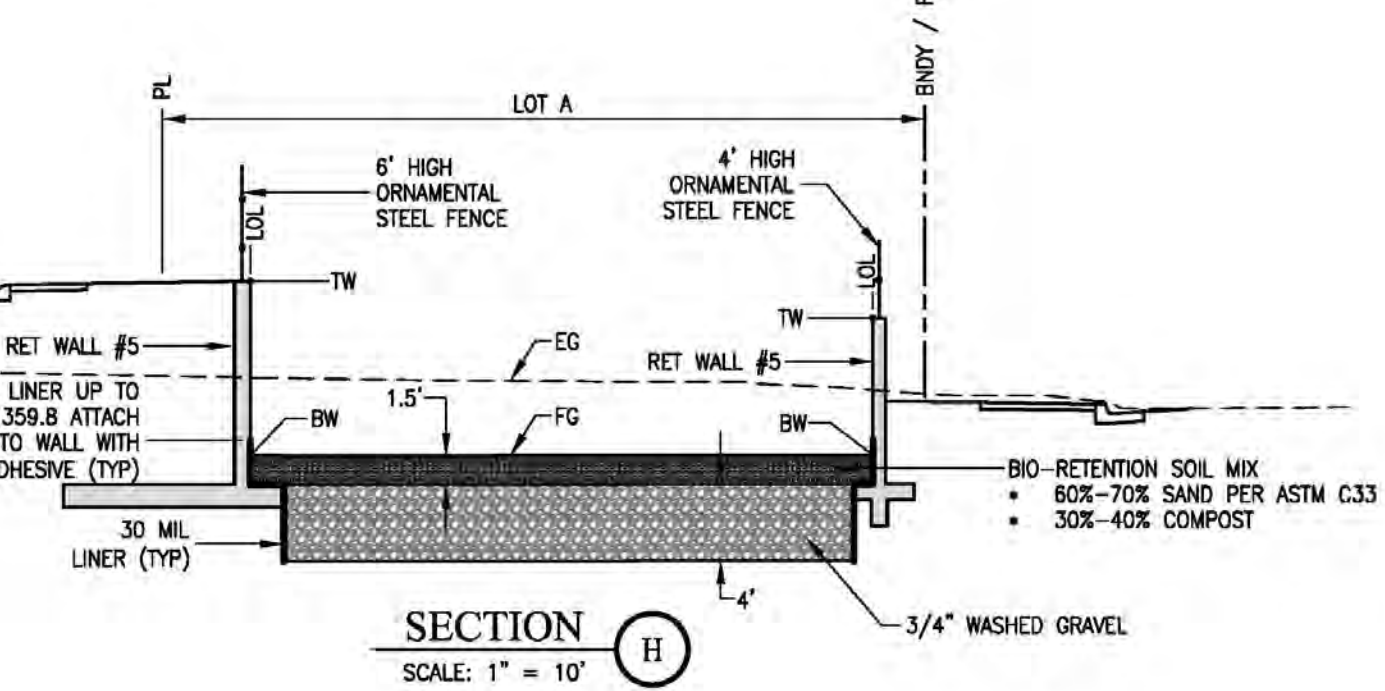
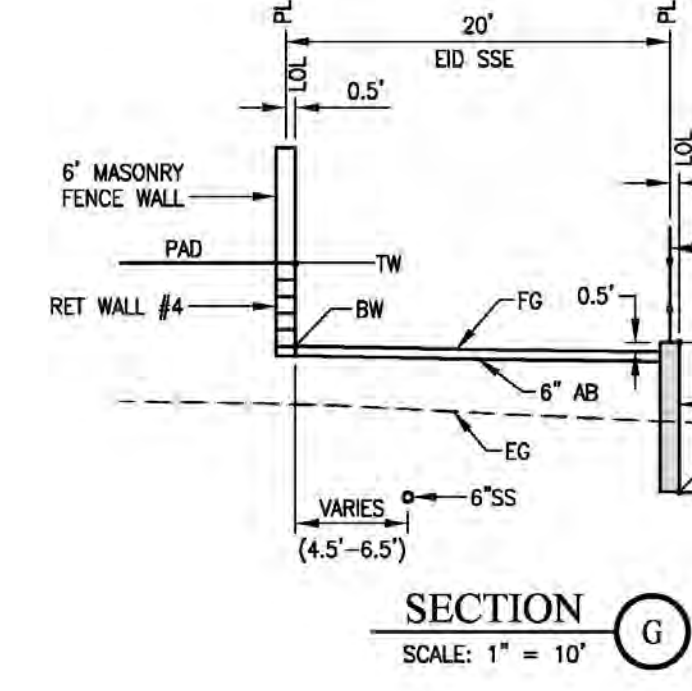
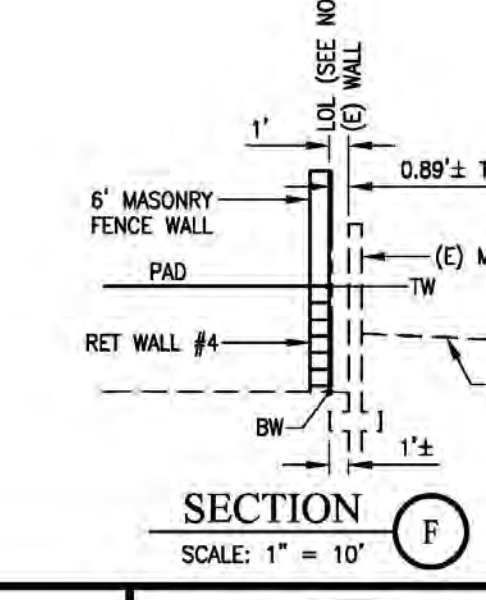
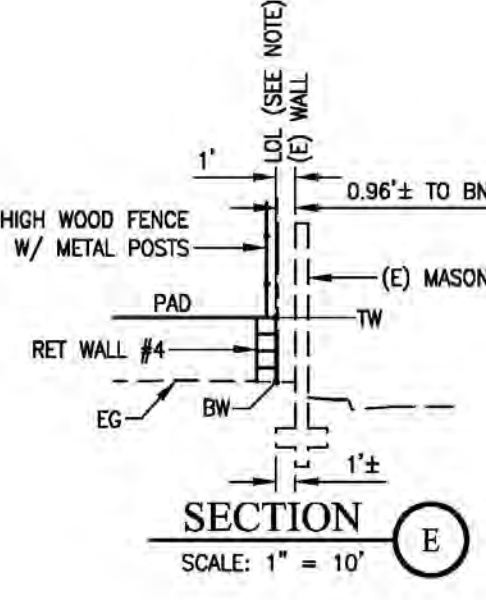
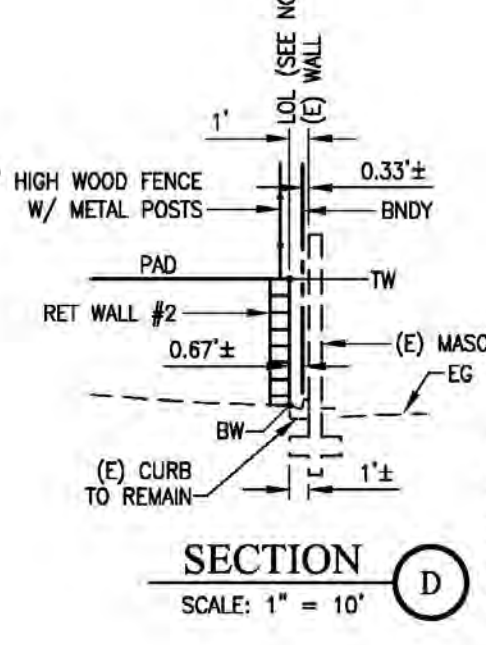
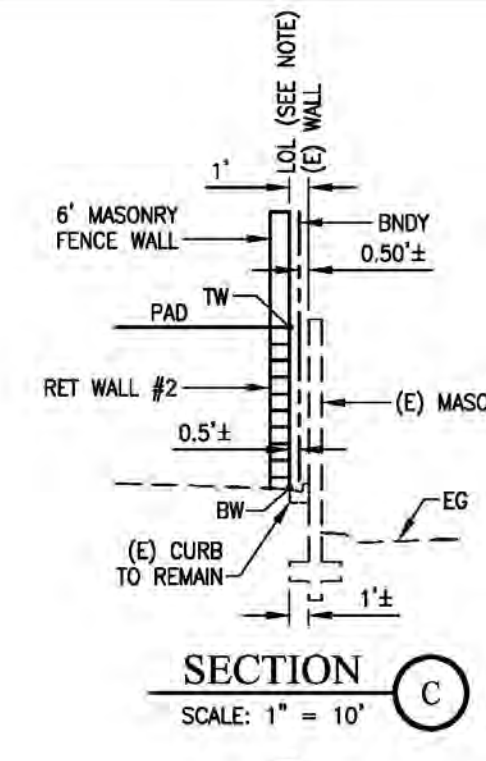
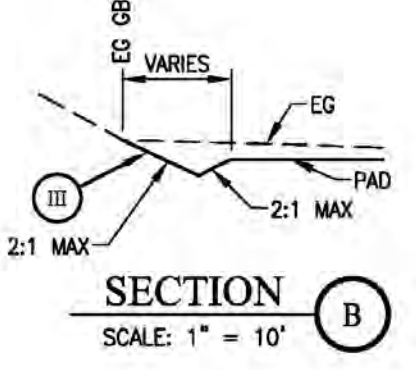
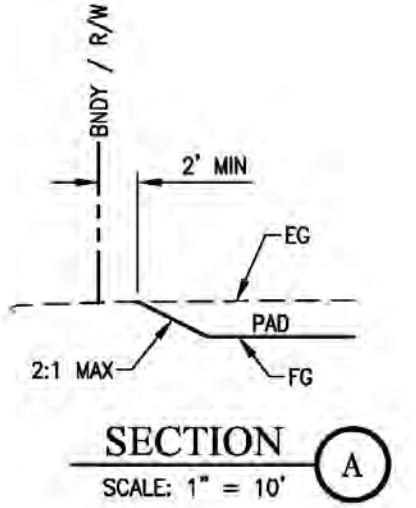
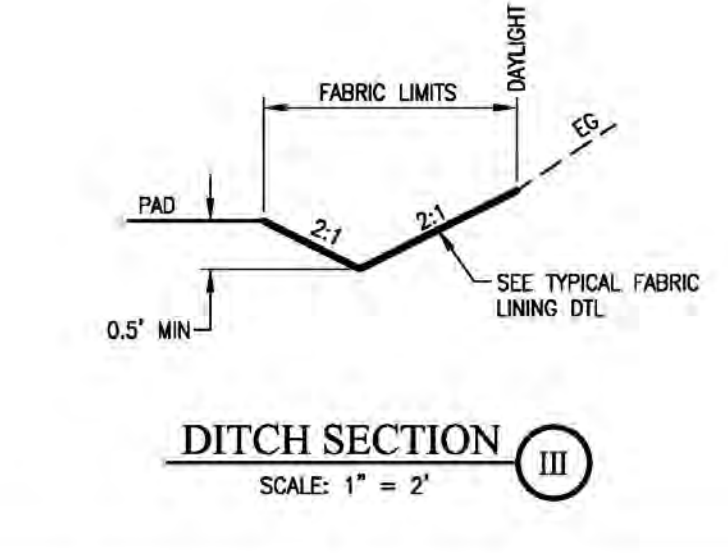
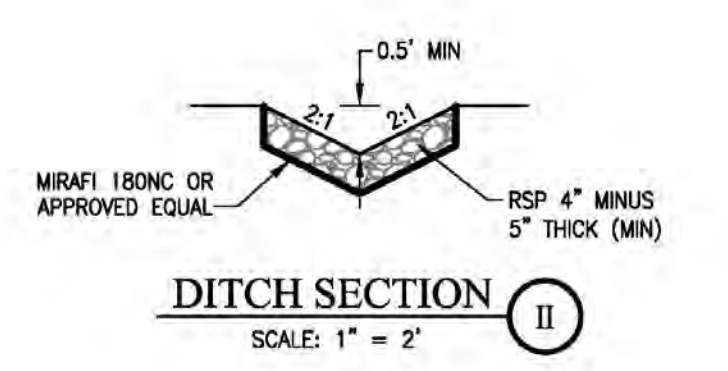
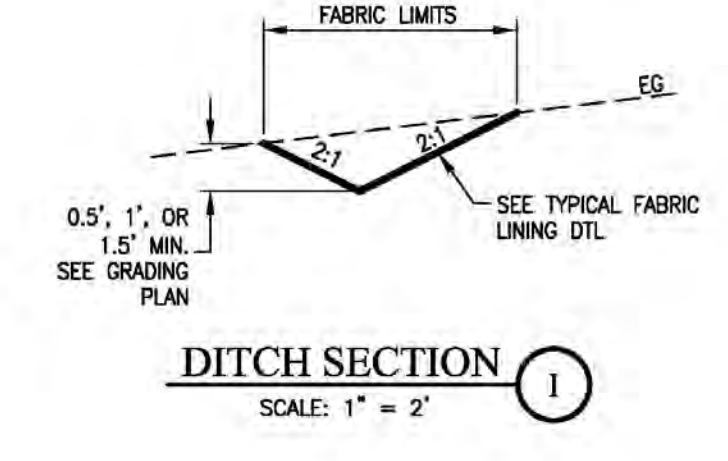
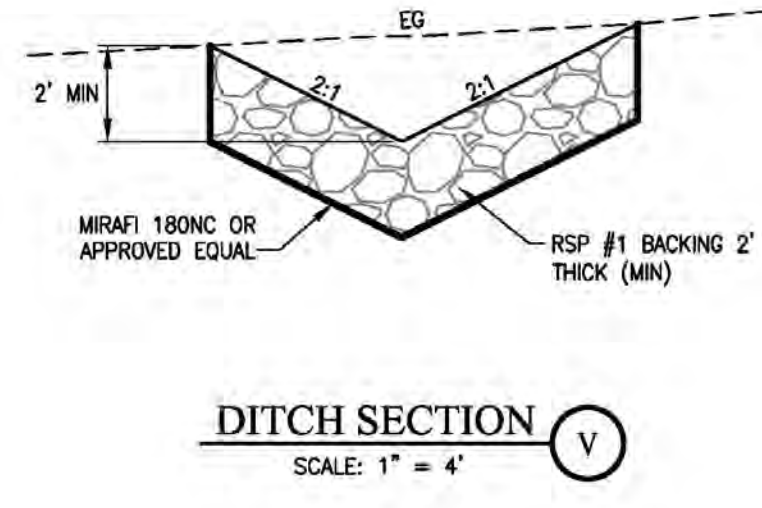
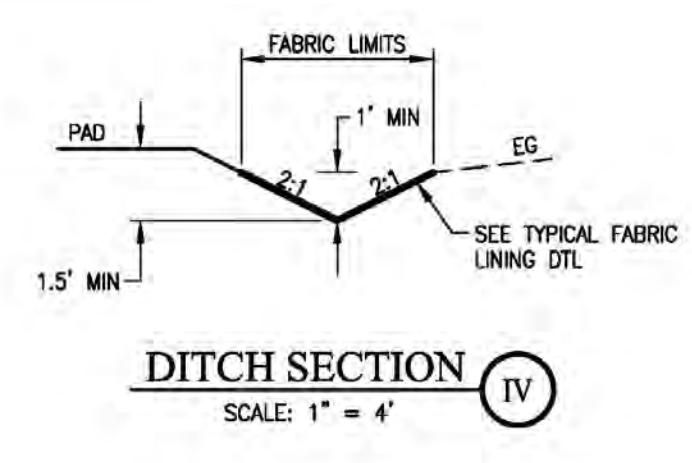
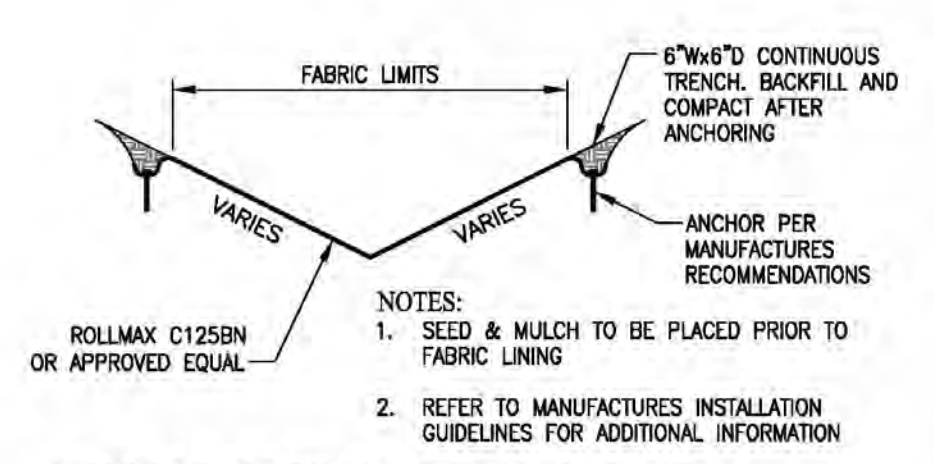
IMPROVEMENT PLANS FOR:
CAMERON RANCH
DETENTION / WATER QUALITY POND &
GREEN VALLEY ROAD FRONTAGE

SHEET 21 OF 25
JOB NO. 19-129-001
23-0739 G 24 of 48

- GREEN VALLEY ROAD NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING PAVEMENT SECTION WHERE GRIND & OVERLAY IS PROPOSED. MINIMUM STRUCTURAL SECTION FOR OVR IS 5" AC / 15.5" AB. WHERE PROPOSED GRINDING WOULD RESULT IN A LESSER THICKNESS, CONTRACTOR SHALL REMOVE AND REPLACE.
 - EXISTING STRIPING SHALL BE REMOVED AND REPLACED WITH THERMOPLASTIC STRIPING AND MARKINGS. LOCATIONS & LIMITS SHALL MATCH EXISTING. SEE SHEET 25.
 - TYPE 2 MICRO SURFACE SHALL BE APPLIED IN-LIEU OF FOG SEAL. SEE SHEET 25 FOR LIMITS.
 - PRIOR TO COMMENCING WORK ON OVR, THE CONTRACTOR SHALL SUBMIT A TRAFFIC HANDLING PLAN TO DOT FOR APPROVAL.
 - SAWCUTS MUST BE FULL DEPTH OF (E) AC.



DITCH NOTE:
ALL DITCH SLOPES SHALL BE 1% MIN UNLESS OTHERWISE SHOWN



NOTE:
SEE SHEETS 18 THRU 21 FOR TOP OF WALL (TW) AND BOTTOM OF WALL (BW) ELEVATIONS

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: AS SHOWN
DATE: JULY, 2020
F.B. REF.

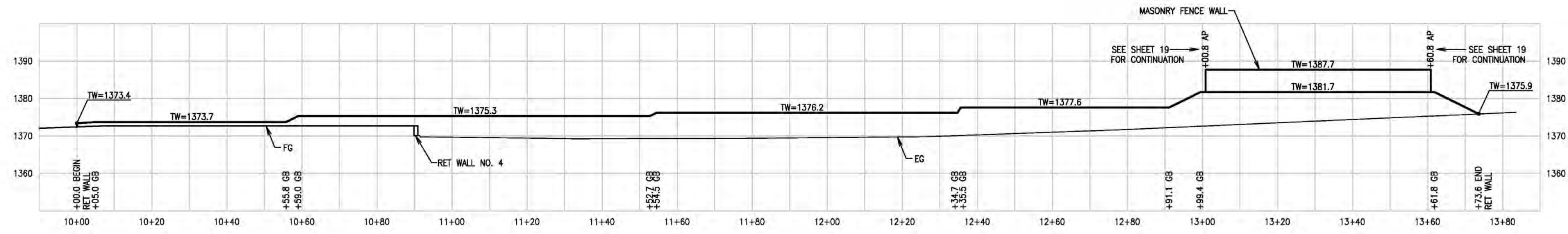
cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:
D. CROSARIOL
DATE: 07/22/20

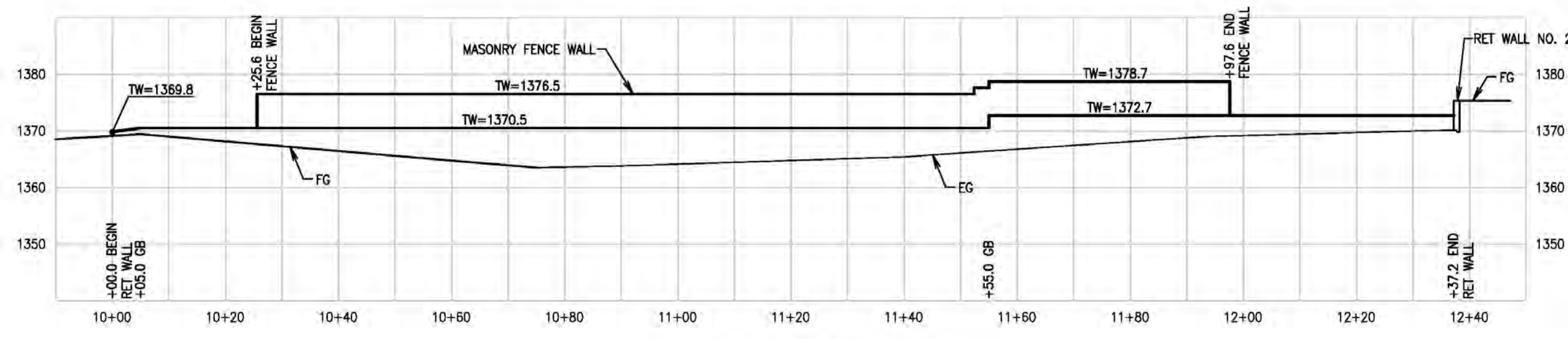


EL DORADO COUNTY

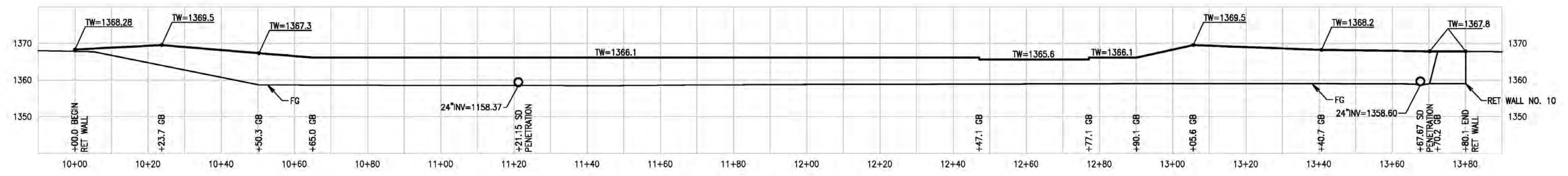
IMPROVEMENT PLANS FOR:
CAMERON RANCH
GRADING DETAILS & SECTIONS



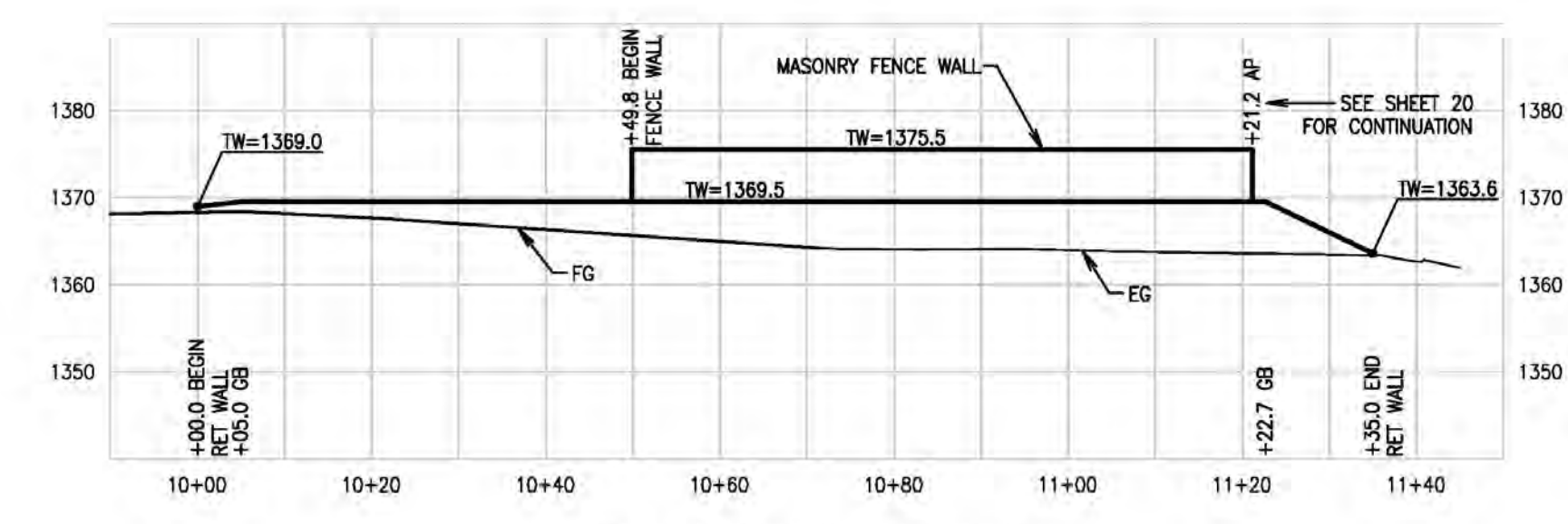
RETAINING WALL NO. 2
SCALE: 1" = 20'



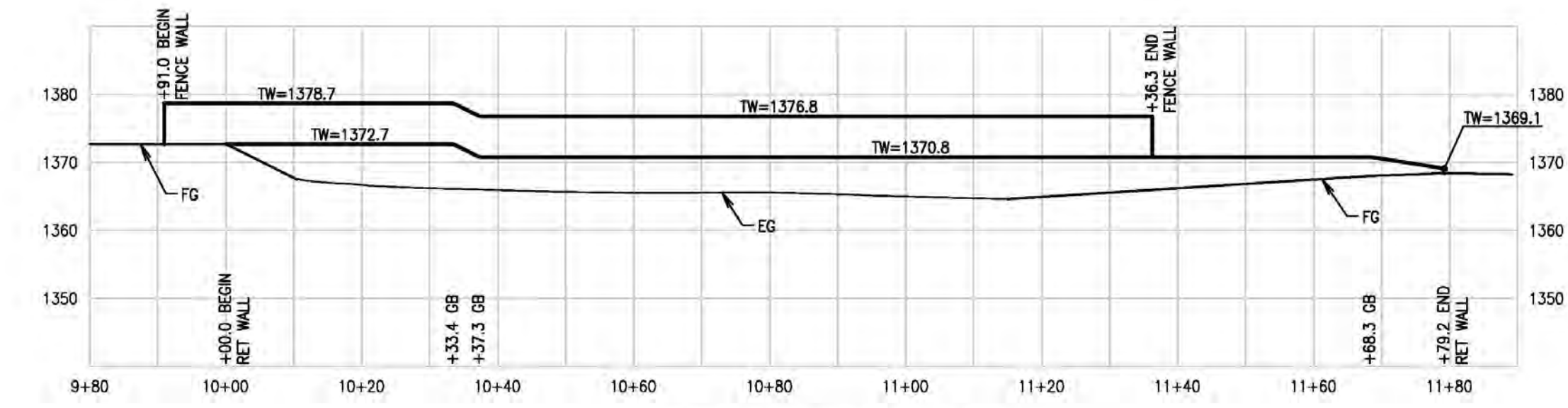
RETAINING WALL NO. 4
SCALE: 1" = 20'



RETAINING WALL NO. 5
SCALE: 1" = 20'



RETAINING WALL NO. 6
SCALE: 1" = 20'



RETAINING WALL NO. 7
SCALE: 1" = 20'

RETAINING WALL NOTE:
TOP OF WALL ELEVATIONS SHOWN REPRESENT EXISTING/ PROPOSED FG. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO STEP THE TOP OF WALL AND ADJUST ANGLE POINT (AP) / GRADE BREAK (GB) STATIONS BASED ON THE TYPE OF PRODUCT USED, IF NECESSARY.

REVISION BLK.	DRAWN BY: STAFF
	DESIGNED BY: K. WIPF
	CHECKED BY: D. CROSARIOL
	SCALE: 1" = 20'
	DATE: JULY, 2020
	F.B. REF.

NUMBER	DESCRIPTION	BY	DATE

cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

PREPARED UNDER THE DIRECTION OF:
[Signature]
D. CROSARIOL
DATE: 07/22/20

REGISTERED PROFESSIONAL ENGINEER
DWM ROBERT CROSARIOL
C34520
Exp. 9-30-21
STATE OF CALIFORNIA

IMPROVEMENT PLANS FOR:
CAMERON RANCH
RETAINING WALL PROFILES

EL DORADO COUNTY
CALIFORNIA

SHEET
23
OF
25
JOB NO. 19-129-001
23-0739 G 26 OF 48



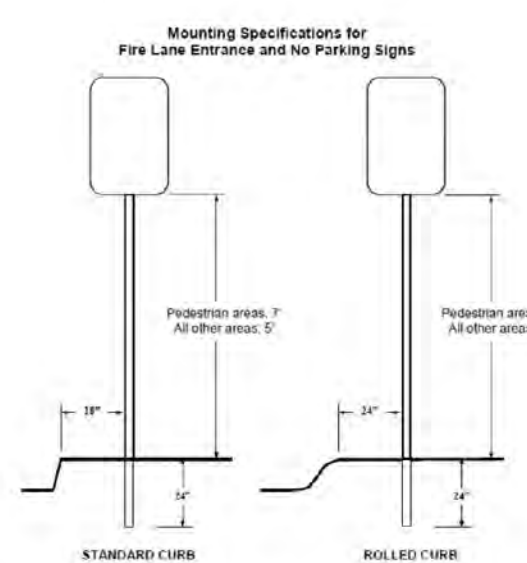
Sd. #B-004 Page 4 of 6 No Parking - Fire Lane Rev. 7/20/2017

8.3.2. Option 2 - No Parking - Fire Lane Signs

- 8.3.2.1.1. Size: Minimum 12" wide x 18" high
- 8.3.2.1.2. Design: Letters shall be red on white.
- 8.3.2.1.3. The message shall be centered on a 12" by 18" sign blank and shall be oriented with the long axis vertical.
- 8.3.2.1.4. The sign face shall have a red rounded border 1/2" wide centered 1/2" from the sign edge.
- 8.3.2.1.5. Height Above Grade: 7 feet to bottom of sign
- 8.3.2.1.6. Post: The post shall be a galvanized steel square post, pre-punched, measuring 2" square by 10'0" long. There shall be a 2 1/8" square by 30" long galvanized steel square, pre-punched with 3/8" holes on 1" centers, anchor inserted into a 2 1/2" by 18" long square, pre-punched, galvanized steel sleeve forming a two-piece anchor. The sleeve and the breakaway anchor shall be driven into the ground so that only 1" to 2" of the top is sticking out of the ground. The sleeve and breakaway anchor are then driven into the ground with a sledgehammer. The post is then inserted into the anchor and sleeve and an angle bolt secured in place.
- 8.3.2.1.7. Signs shall be spaced as approved by the fire code official and at a minimum 50' apart to a maximum of 100' apart.
- 8.3.2.1.8. Signs shall look like the following:



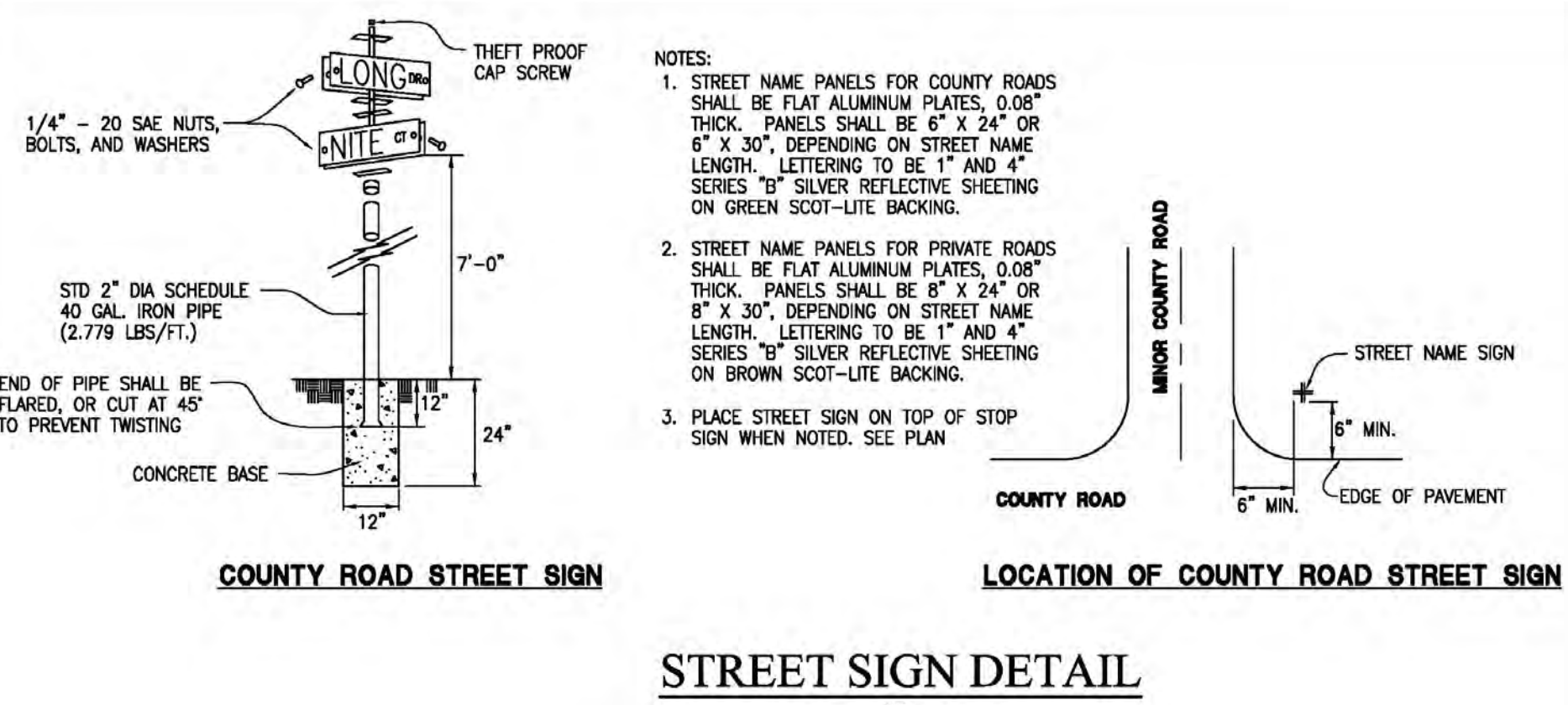
Sd. #B-004 Page 5 of 6 No Parking - Fire Lane Rev. 7/20/2017



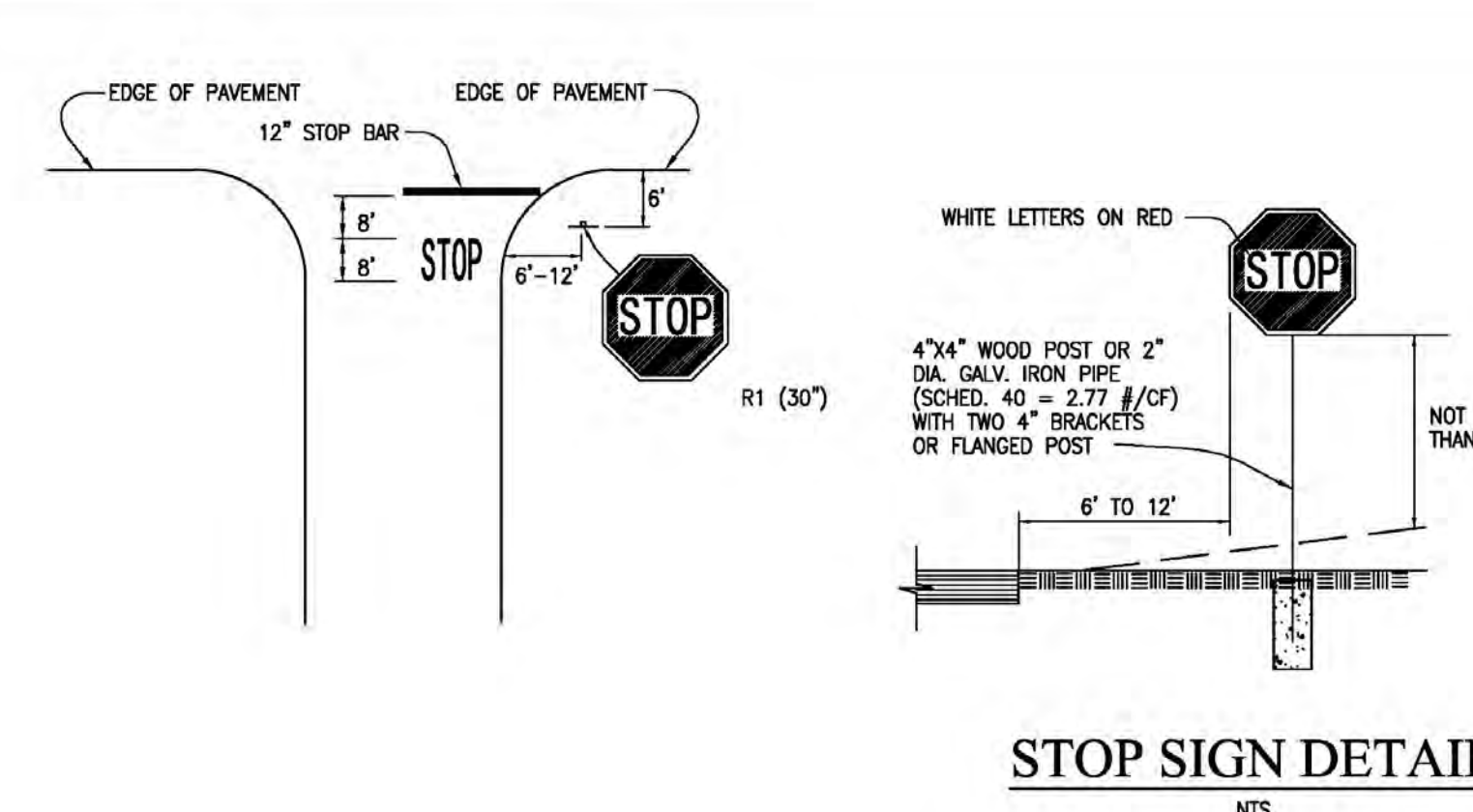
8.3.3. This sign must be present at each entrance to the subdivision



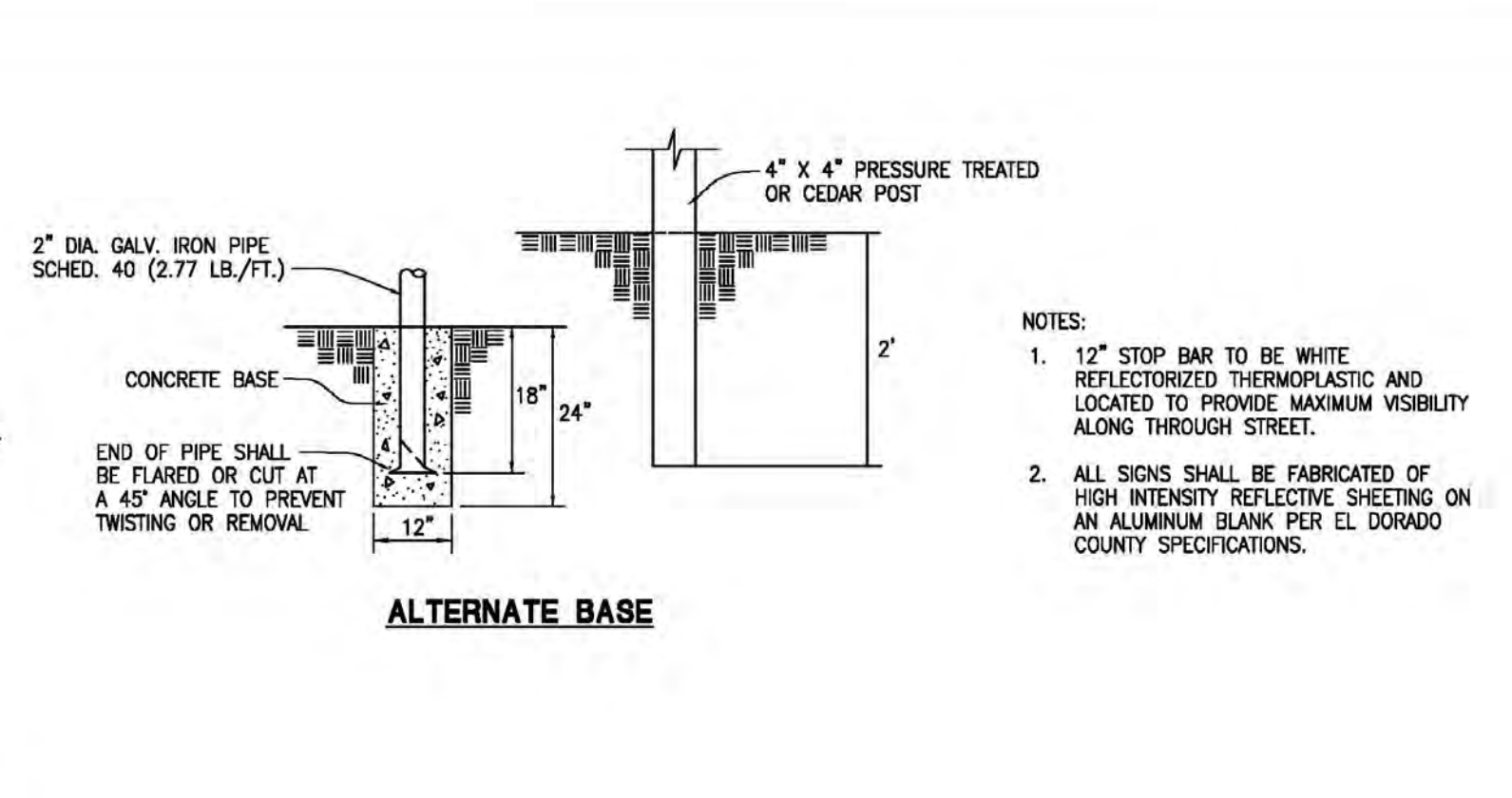
Sd. #B-004 Page 6 of 6 No Parking - Fire Lane Rev. 7/20/2017



STREET SIGN DETAIL

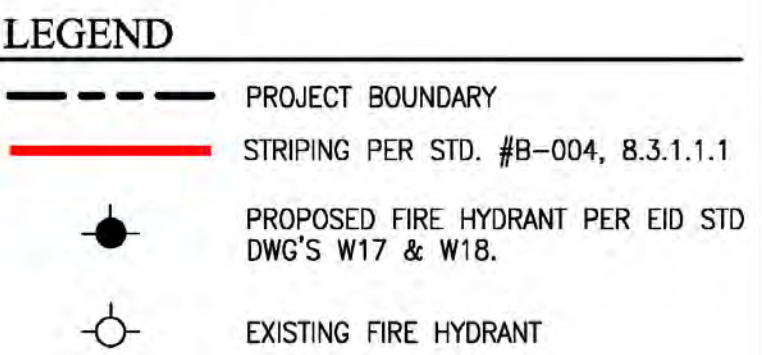
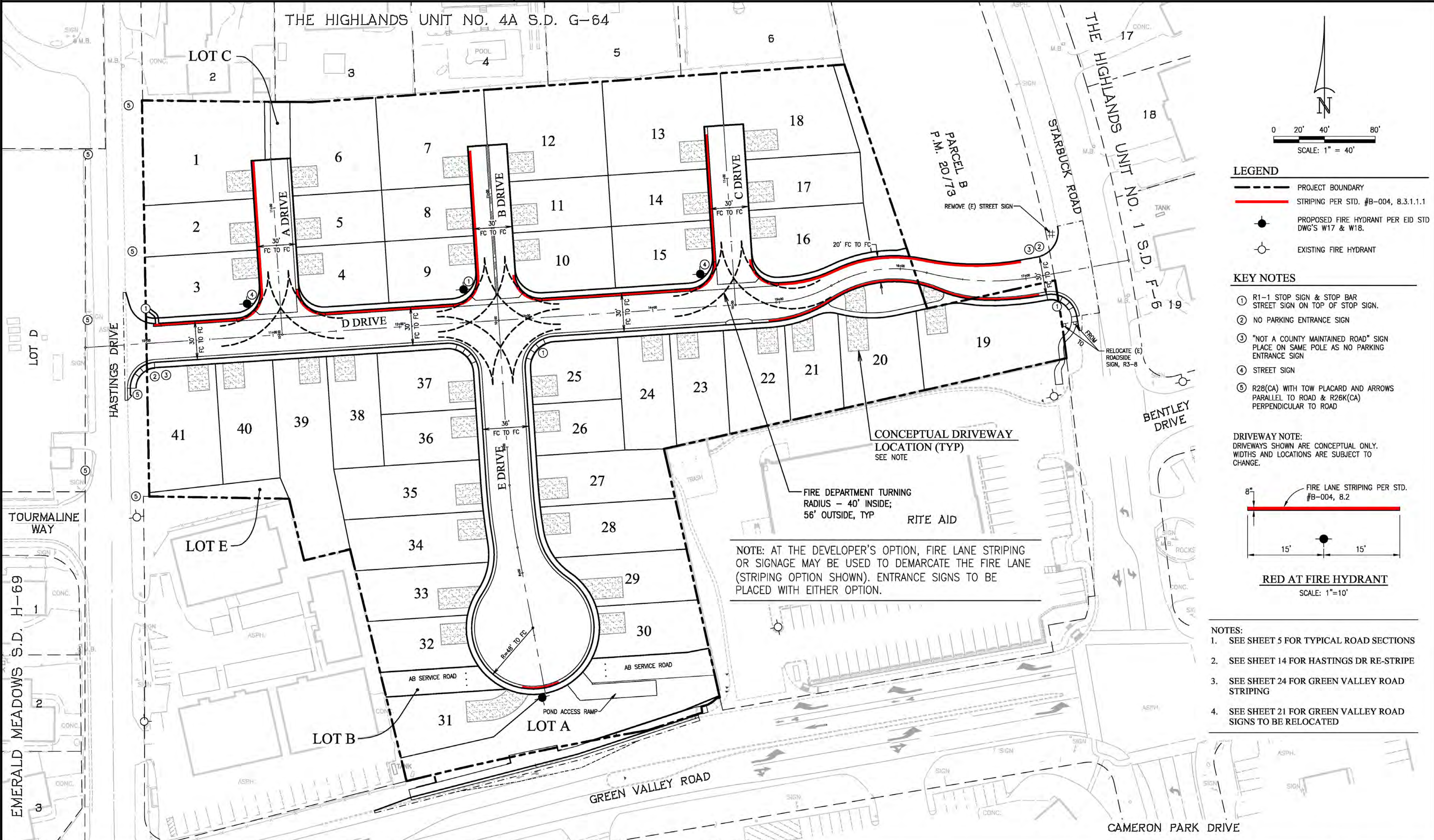


STOP SIGN DETAIL



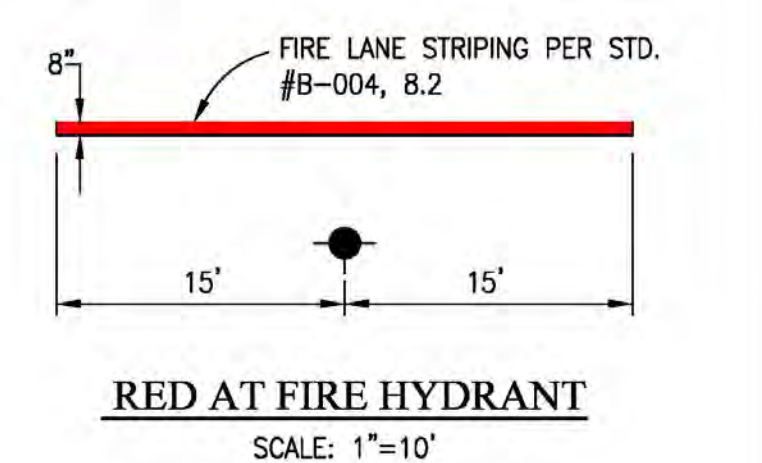
ALTERNATE BASE

- NOTES:
- 12" STOP BAR TO BE WHITE REFLECTORIZED THERMOPLASTIC AND LOCATED TO PROVIDE MAXIMUM VISIBILITY ALONG THROUGH STREET.
 - ALL SIGNS SHALL BE FABRICATED OF HIGH INTENSITY REFLECTIVE SHEETING ON AN ALUMINUM BLANK PER EL DORADO COUNTY SPECIFICATIONS.



- KEY NOTES
1. R1-1 STOP SIGN & STOP BAR STREET SIGN ON TOP OF STOP SIGN.
 2. NO PARKING ENTRANCE SIGN
 3. "NOT A COUNTY MAINTAINED ROAD" SIGN PLACE ON SAME POLE AS NO PARKING ENTRANCE SIGN
 4. STREET SIGN
 5. R28(CA) WITH TOW PLACARD AND ARROWS PARALLEL TO ROAD & R26(CA) PERPENDICULAR TO ROAD

DRIVEWAY NOTE:
DRIVEWAYS SHOWN ARE CONCEPTUAL ONLY. WIDTHS AND LOCATIONS ARE SUBJECT TO CHANGE.



- NOTES:
- SEE SHEET 5 FOR TYPICAL ROAD SECTIONS
 - SEE SHEET 14 FOR HASTINGS DR RE-STRIPING
 - SEE SHEET 24 FOR GREEN VALLEY ROAD STRIPING
 - SEE SHEET 21 FOR GREEN VALLEY ROAD SIGNS TO BE RELOCATED

NUMBER	DESCRIPTION	BY	DATE

DRAWN BY:	STAFF
DESIGNED BY:	K. WIPF
CHECKED BY:	D. CROSARIOL
SCALE:	1" = 40'
DATE:	JULY, 2020
F.B. REF.	

cta Engineering & Surveying
Civil Engineering • Land Surveying • Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 • F (916) 638-2479 • www.ctaes.net

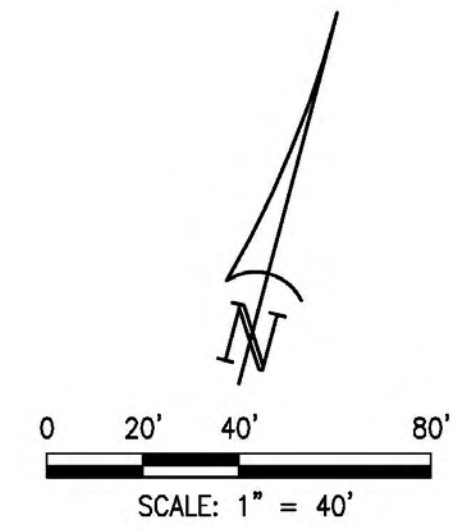
PREPARED UNDER THE DIRECTION OF:
[Signature]
D. CROSARIOL
DATE: 07/22/20

REGISTERED PROFESSIONAL ENGINEER
EXERCISING THE PROFESSION OF CIVIL ENGINEERING
C34520
Exp. 9-30-21
STATE OF CALIFORNIA

IMPROVEMENT PLANS FOR:
CAMERON RANCH
FIRE DEPT SPEC PLAN/
SIGNING & STRIPING PLAN

EL DORADO COUNTY

SHEET 24 OF 25
JOB NO. 19-129-001
23-0739 G 27 of 48



LEGEND

- TYPE IV ARROW
- BIKE LANE SYMBOL W/ PERSON & BIKE LANE ARROW

NOTE

1. LANE WIDTHS SHOWN ARE FROM CENTER OF STRIPE TO CENTER OF STRIPE OR EP.
2. (E) STRIPPING & MARKINGS IN CONFLICT SHALL BE REMOVED BY GRINDING.

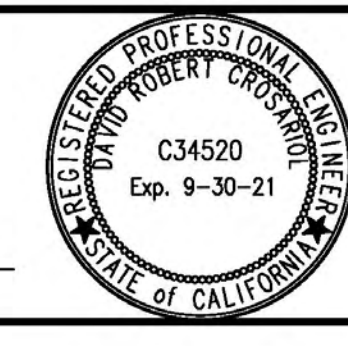
NUMBER	DESCRIPTION	BY	DATE

DRAWN BY: STAFF
DESIGNED BY: K. WIPF
CHECKED BY: D. CROSARIOL
SCALE: 1" = 40'
DATE: JULY, 2020
F.B. REF.

cta Engineering & Surveying
 Civil Engineering ■ Land Surveying ■ Land Planning
 3233 Monier Circle, Rancho Cordova, CA 95742
 T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

PREPARED UNDER THE DIRECTION OF:

D. CROSARIOL DATE 07/22/20



EL DORADO COUNTY

IMPROVEMENT PLANS FOR:
CAMERON RANCH
 GREEN VALLEY ROAD STRIPING PLAN

SHEET	25
OF	25
JOB NO.	19-129-001
CALIFORNIA	23-0739 G 28 of 48

GENERAL STRUCTURAL NOTES

- BASIS FOR DESIGN**
- BUILDING CODE: CALIFORNIA BUILDING CODE 2019
 - SOIL PARAMETERS:
 - ACTIVE PRESSURE: 40 PCF
 - SOIL WEIGHT: 120 PCF
 - SOIL BEARING CAPACITY: 2000 PSF
 - PASSIVE PRESSURE: 3000 PCF
 - FRICITION COEFFICIENT: 0.35
 - SEISMIC DESIGN:
 - SS(0.2 SECOND): 0.421
 - SI(1.0 SECOND): 0.210
 - SITE CLASS: 1
 - S05 (SHORT PERIOD): 0.411
 - SD1 (1-SECOND PERIOD): NULL
 - WIND DESIGN:
 - WIND SPEED: 91 MPH
 - RISK CATEGORY: 1
 - EXTERIOR PRESSURE COEFFICIENT (C_e): 1.4
 - WIND EXPOSURE: C
 - FOUNDATION DESIGN AND SOIL PARAMETERS PER RECOMMENDATIONS BY YOUNGHAUS CONSULTING GROUP, INC., REPORT NO. E07133/04, DATED NOVEMBER 2019.

GENERAL REQUIREMENTS

- THESE DOCUMENTS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND SKILL ORDINARILY EXERCISED UNDER SIMILAR CONDITIONS BY PROFESSIONAL CONSULTANTS PRACTICING IN THE FIELD AT THE SAME TIME IN THE SAME OR SIMILAR LOCALITY. THEY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKMEN WHO HAVE A THOROUGH KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND INDUSTRY ACCEPTED STANDARD GOOD PRACTICE, AS NOTED EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- ENGINEER SHALL NOT AT ANY TIME SUPERVISE, DIRECT OR HAVE CONTROL OVER CONTRACTOR'S WORK, NOR SHALL ENGINEER HAVE AUTHORITY OVER OR RESPONSIBILITY FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION SELECTED OR USED BY CONTRACTOR, FOR SECURITY OR SAFETY AT THE SITE NOR FOR SAFETY PRECAUTIONS AND PROGRAMS INCIDENT TO CONTRACTOR'S WORK.
- ALL INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENTS, BUILDING CODES OR BY THESE PLANS SHALL BE PROVIDED BY THE BUILDING DEPARTMENT OR BY AN APPROVED INDEPENDENT INSPECTION COMPANY.
- ALTHOUGH NOT NECESSARILY INDICATED AT A SPECIFIC LOCATION ON THE DRAWINGS, TYPICAL DETAILS AND NOTES SHALL APPLY. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY.
- WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH REFERENCE SHALL BE THE LATEST EDITION OR ADDENDA.
- RETAINING WALLS SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION, UNO PLANS/DETAILS. A NON-SURCHARGED/NON-STACKED CONFIGURATION EXISTS WHEN UPPER STRUCTURES ARE A MIN DISTANCE FROM THE RETAINING WALL (HEIGHT) AWAY, MEASURED FROM BACK FACE OF RETAINING WALL, UNLESS DEFINED OTHERWISE BY APPROVED GEOTECHNICAL REPORT.

FOUNDATION

- SITE PREPARATION AND GRADING REQUIREMENTS FROM THE GEOTECHNICAL REPORT AND ANY ADDENDUMS ALONG W/ ANY TESTS, INSPECTIONS, FIELD OBSERVATIONS, OR APPROVAL FROM THE GEOTECHNICAL ENGINEER RECOMMENDED BY THE GEOTECHNICAL REPORT SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF FOUNDATIONS. IF NO GEOTECHNICAL REPORT IS SUBMITTED, SITE PREPARATION AND GRADING SHALL BE PER CBC SECTION 1804.
 - W/IN THE TIME OF CONSTRUCTION AND W/IN THE LIFETIME OF THE WALL, THE OWNER MUST ENSURE THAT ALL SURFICIAL DRAINAGE IS DIRECTED AWAY FROM THE WALL SYSTEM.
 - FOUNDATION INSPECTION PRIOR TO PLACEMENT OF CONCRETE INCLUDES: FOOTING STEEL LOCATION AT GRADE, AND SIZE/DEPTH AND CLEANLINESS OF FOUNDATION. ADDITIONAL SPECIAL INSPECTION AS REQUIRED BY JURISDICTION.
 - FOOTING SHALL BE LEVEL, STEP FOOTING, AS REQ'D, WHERE GROUND SLOPES, HEIGHT OF STEP SHALL BE EQUAL TO HEIGHT OF CMU COURSE.
- CONCRETE**
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE (F'_c) SHALL BE 2500 PSF. CONCRETE MIX SHALL BE DESIGNED BY AN APPROVED LABORATORY. CONCRETE SHALL BE NORMAL WEIGHT OF 145 PCF USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33.
 - MAXIMUM SLUMP SHALL BE 5 INCHES. WATER SHALL BE CLEAN AND POTABLE.
 - USE TYPE V PORTLAND CEMENT, AS REQ'D BY OWNER, JURISDICTION, OR SOILS ENGINEER, CONFORMING TO ASTM C150
 - A MAXIMUM OF 90 MINUTES MAY ELAPSE BETWEEN CONCRETE AND/OR GROUT BATCHING AND FIELD PLACEMENT.
 - CONCRETE QUALITY, MIXING, WEATHER PROTECTION AND PLACING SHALL CONFORM TO CBC SECTION 1905.
- BACKFILL**
- BACKFILL MATERIAL AND PLACEMENT SHALL BE IN ACCORDANCE W/ RECOMMENDATIONS BY THE GEOTECHNICAL ENGINEER OR CBC SECTION 1804 IF GEOTECHNICAL REPORT NOT SUBMITTED.
 - BACKFILL SHALL NOT BE PLACED AGAINST WALLS BELOW GRADE OR ATOP FOUNDATIONS UNTIL GROUT AND CONCRETE HAVE REACHED DESIGN STRENGTH.
 - RETAINING WALL SYSTEM IS NOT DESIGNED TO WITHSTAND HYDROSTATIC PRESSURE. DRAINAGE SYSTEM SHALL BE PROVIDED TO PREVENT BUILD UP OF HYDROSTATIC PRESSURE. IN ADDITION, DRAINAGE SYSTEM SHALL NOT ADVERSELY AFFECT THE INTEGRITY OF THE RETAINING SYSTEM.

REINFORCING

- REINFORCING STEEL SHALL CONFORM TO ASTM A615. WELDABLE REINFORCING STEEL SHALL CONFORM TO ASTM A706. REINFORCING SHALL BE GRADE 60.
- LATEST ACI DETAILING MANUAL, ACI 318 AND CRSI MANUAL OF STANDARD PRACTICE APPLY TO REINFORCING SPLICING, DETAILING, BENDING, AND PLACEMENT.
- REFER TO TYPICAL WALL INTERSECTION DETAIL FOR REINFORCING REQUIREMENTS AT WALL AND FOOTING INTERSECTIONS.

REINFORCING (CONT)

- REFER TO LAP SCHEDULE FOR MINIMUM O.C. SPACING, LAP SPACE LENGTHS IN CONCRETE AND HOOD LENGTHS, NO WELDING (TRACK, SPOT ETC.) OF REINFORCING ALLOWED. STAGGER SPICES A MINIMUM OF (1) LAP LENGTH.
- ALL REINFORCEMENT SHALL BE BENT COLD. NO FIELD BENDING OF BARS IS ALLOWED UNLESS APPROVED BY THE ENGINEER.
- SUPPORT REINFORCEMENT ADEQUATELY TO SECURE REINFORCEMENT AGAINST DISPLACEMENT DURING CONCRETE PLACEMENT AT THE FOOTING AND GROUT PLACEMENT IN THE CMU.
- PROVIDE VERTICAL REINFORCING BARS, W/ HOOKS INTO FOOTING PER APPLICABLE DETAIL SECTION, IN GROUTED CELLS AT ALL WALL INTERSECTIONS, CORNERS, WALL ENDS, AND EACH SIDE OF HORIZONTAL JOINTS. EXTEND ALL VERTICAL REINFORCING TO FOUNDATION EITHER CONTINUOUS OR WITH SUFFICIENT LAP REQUIREMENTS, AS INDICATED PER APPLICABLE DETAIL SECTIONS.
- HORIZONTAL REINFORCING SHALL BE 9 GAGE DIAMETER WIRE AND CONFORM TO ASTM A82 LADDER TYPE, 9 GAGE DIAMETER, LAP JOINT REINFORCING ONE FULL CROSS SQUARE (6" MIN LAP). HORIZONTAL REINFORCING SHALL BE HOT-DIPPED GALVANIZED OR APPROVED EQUIVALENT.

CONVENTIONAL MASONRY

- HOLLOW, NORMAL-WEIGHT, LOAD BEARING PRECISION CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C 90. MINIMUM COMPRESSIVE STRENGTH OF CMU SHALL BE 2000 PSI. ALL BLOCKS SHALL BE PLACED IN RUNNING BOND CONSTRUCTION, UNO W/ ALL VERTICAL CELLS IN ALIGNMENT.
- GROUT SHALL CONFORM TO ASTM C476. MINIMUM GROUT COMPRESSIVE STRENGTH EQUALS OR EXCEEDS F'_m BUT NOT LESS THAN 2000 PSI. HOLD DOWN GROUT 1-1/2" BELOW TOP OF BLOCK AT GROUT LIFT JOINTS.
- MORTAR SHALL CONFORM TO ASTM C270 & CBC 2103, TYPE S, 2000 PSI MIN. MORTAR MUST BE A MIN 4 HOURS OLD PRIOR TO INITIAL TENSIONING.
- NET AREA COMPRESSIVE STRENGTH OF MASONRY SHALL BE (F'_m) 2000 PSI MIN, PER THE UNIT STRENGTH METHOD, FOR POST-TENSIONED MASONRY DESIGN AND 1500 PSI MIN, PER THE UNIT STRENGTH METHOD, FOR CONVENTIONAL MASONRY DESIGN.
- THICKNESS OF BED JOINTS SHALL NOT EXCEED 5/8".
- GROUT SOLID ALL REBAR REINFORCING CELLS AND ALL CELLS BELOW GRADE UNLESS NOTED OTHERWISE.
- MASONRY CONSTRUCTION, INCLUDING BUT NOT LIMITED TO PREPARATION, ERECTION, CONSTRUCTION AND FINISHING, SHALL COMPLY WITH CBC SECTION 2104 AND W/ ACI 530.1.
- DAMP-PROOF ALL CMU IN CONTACT W/ SOIL PER CBC SECTION 1805.
- TONGUE AND GROOVE CMU MAY BE USED AT FENCE WALLS.

PROTO II

- PROTO II HARDWARE IS DEFINED AS: TENSION RODS, BEARING PLATES, COUPLERS, NUTS, ALL THREAD, DITI, PLASTIC SADDLES. ALL OF THIS HARDWARE SHALL BE SUPPLIED BY ONLY AN APPROVED PROTO II LICENSED TO THE CERTIFIED INSTALLER. POST TENSION RODS SHALL BE 7/16" DIAMETER W/ 1/2" ROLL THREADS CONFORMING TO ASTM A641 (F_y=60 KSI) AND HAVE STEEL CHEMISTRY SO THAT BENDING AND THREADING CAN BE ACCOMPLISHED W/OUT DAMAGE TO THE POST TENSION ROD. AREA OF TENSION RODS=1503 SQ IN. BEARING PLATES ARE 1/4" THICK (F_y=50 KSI). SEE DETAIL TYPICAL TOP OF PROTO II WALL FOR WIDTHS. 1/2" COUPLERS SHALL BE PER ASTM A563 GRADE A, AND THE COUPLER NUT MUST FULLY ENGAGE THE UPPER AND LOWER ROD, FULLY ENGAGED AS DEFINED AS 1/2" MIN INTO COUPLER. 1/2" NUTS ARE TO BE GRADE B PER ASTM A305. 1/2" ALL THREADS PER ASTM A307, GRADE 60. DITI IS MFR'D ASTM F959. PLASTIC REBAR SADDLES ARE NON-STRUCTURAL.
- A PROTO II DITI SHALL BE INSTALLED AT EVERY TENSION ROD BETWEEN THE BEARING PLATE AND NUT W/ THE DITI "TABS" FACING UP AGAINST THE BOTTOM OF THE NUT. THE SPECIAL DEPUTY INSPECTION REQUIRED AT TIME OF FINAL TENSIONING BY A DEPUTY INSPECTOR SHALL VERIFY FINAL TENSIONING TO 6,000 LBS BY 1 OF 2 METHODS: METHOD 1: VISUAL INSPECTION OF DITI. TABS FACING UP AND COLLAPSED AGAINST NUT W/ NO LIGHT LEAKAGE BETWEEN THE PROTO II DITI AND BOTTOM OF NUT. METHOD 2: USE OF A CALIBRATED TORQUE WRENCH TORQUED TO 55 FT-LBS. (DITI MUST STILL BE PLACED WITH METHOD 2. NO VISUAL INSPECTION OF DITI REQUIRED WHEN USING METHOD 2). INSPECTOR SHALL OBSERVE THE USE OF THREAD LUBRICANT, THE POSITION OF PLATE ON BLOCK, AND INTEGRITY OF MORTAR JOINTS. IN ADDITION, THE INSTALLER SHALL PROVIDE A SIGNED REPORT TO ALL APPROPRIATE PARTIES. PROTO II MASONRY DESIGN IS BASED ON THIS SPECIAL INSPECTION.

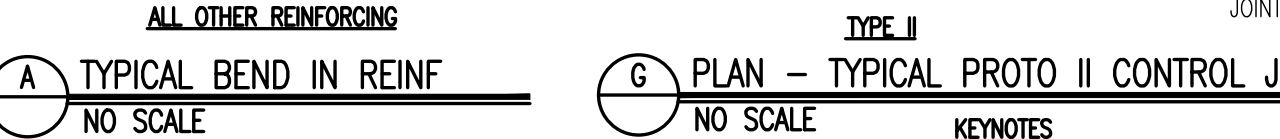
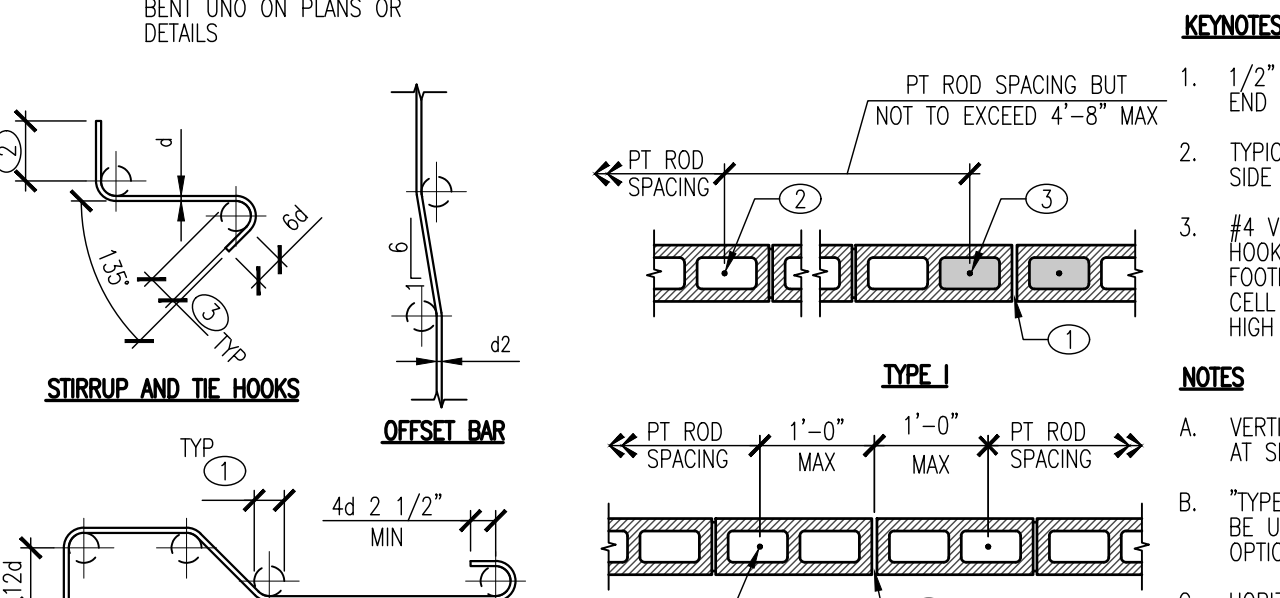
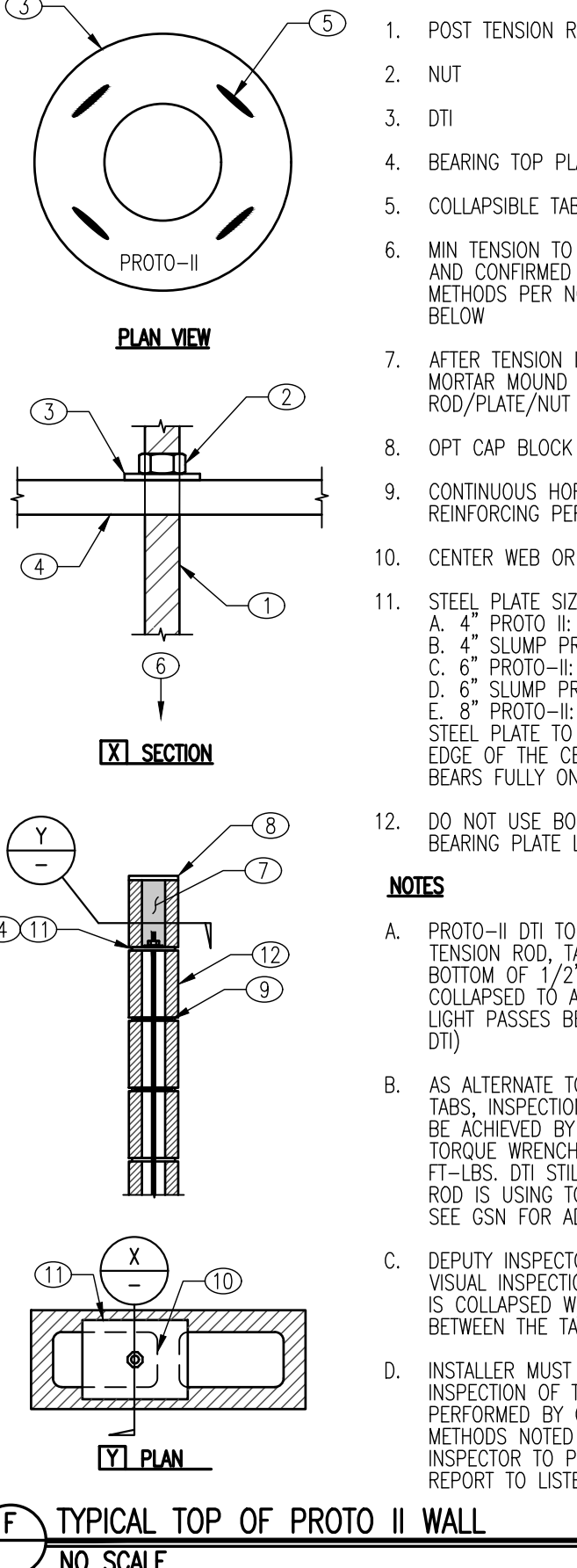
CONCRETE CONT PERIODIC

- INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS AND CONNECTIONS, SHALL BE VERIFIED TO ENSURE COMPLIANCE.
- SAMPLING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS.
- INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.
- INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
- VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.
- INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.

- KEYNOTES**
- STEP IN FOOTING ELEVATION PER PLAN
 - WIDTH EQUAL TO FOOTING THICKNESS OR 18", WHICHEVER IS GREATER
 - SLOPE REINFORCING AT STEP TO WITHSTAND HYDROSTATIC PRESSURE.
 - LINE OF FINISH GRADE
-
- C TYPICAL STEP IN FOOTING**
NO SCALE

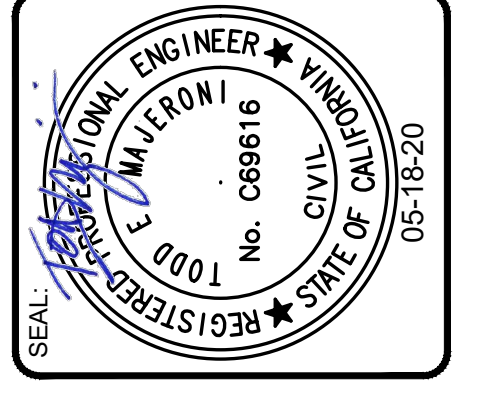
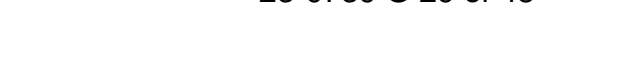
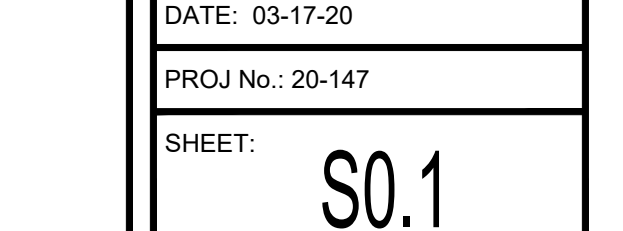
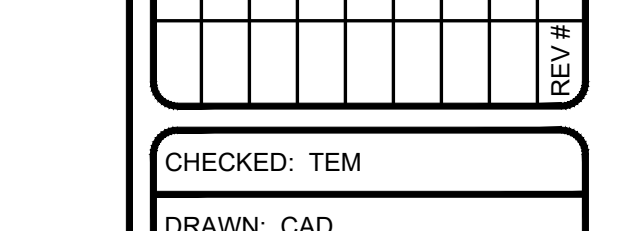
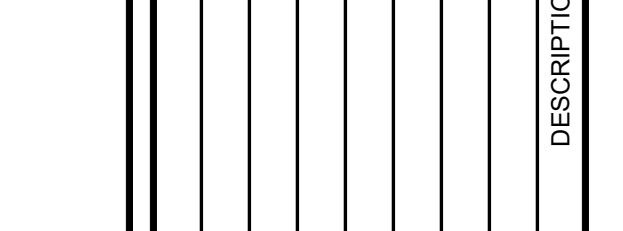
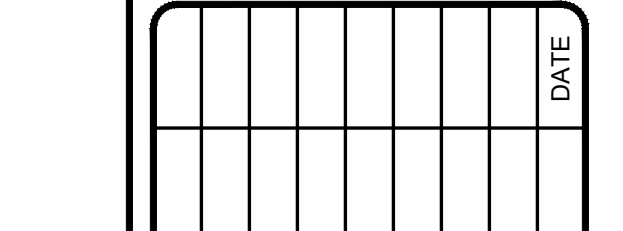
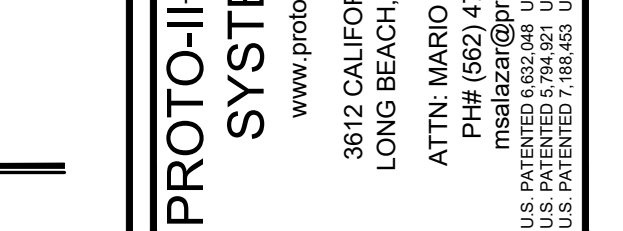
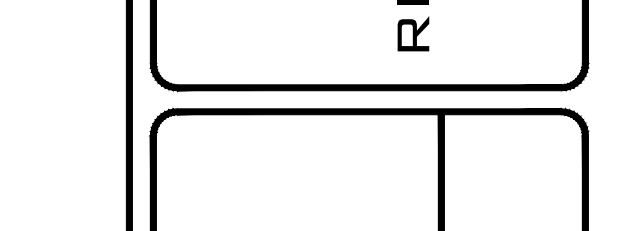
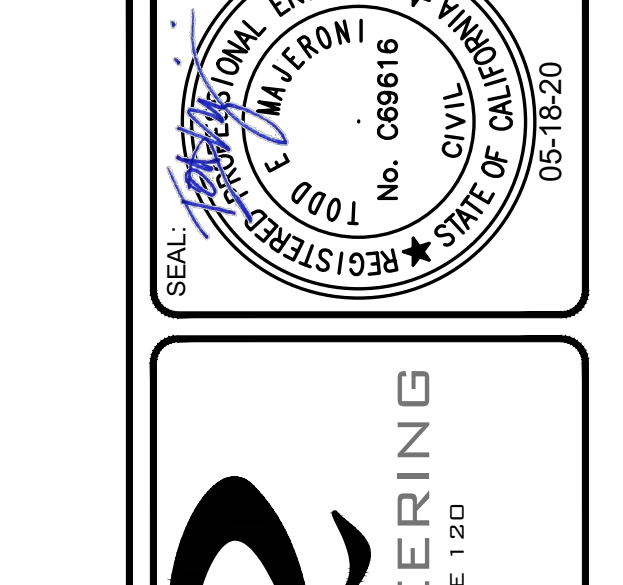
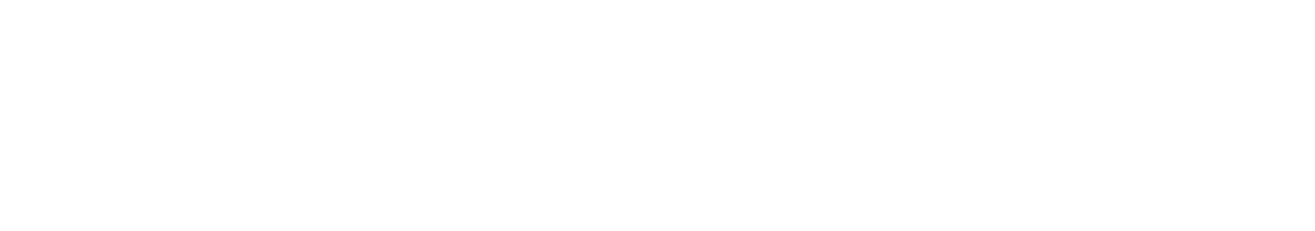
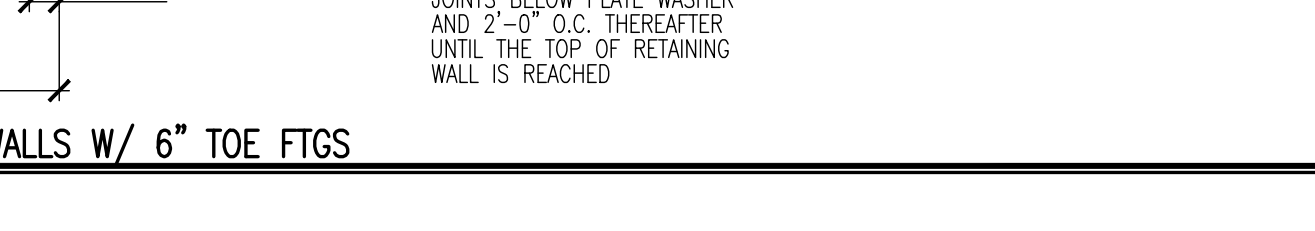
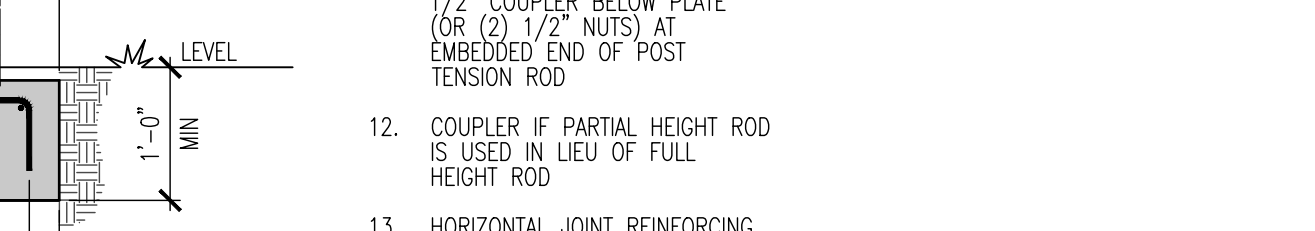
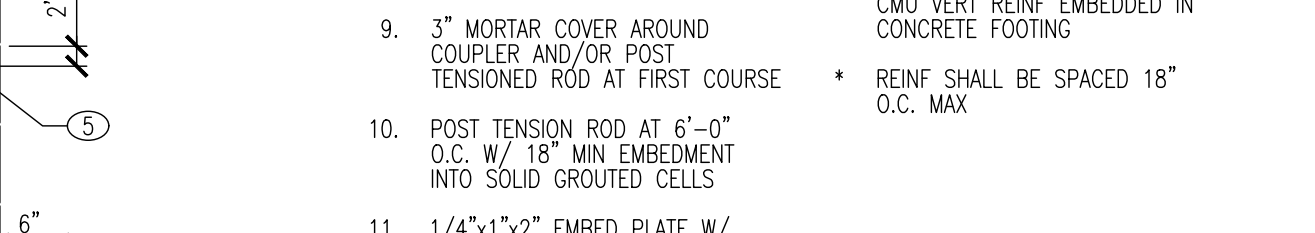
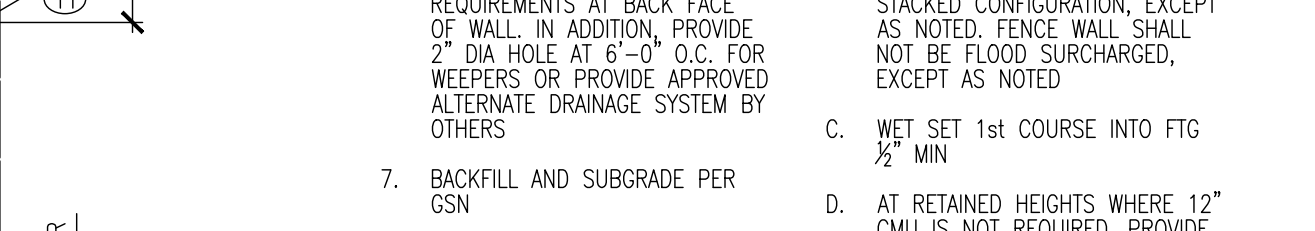
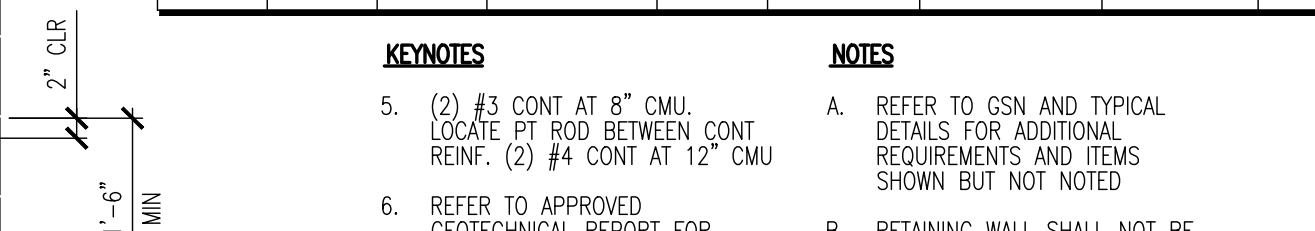
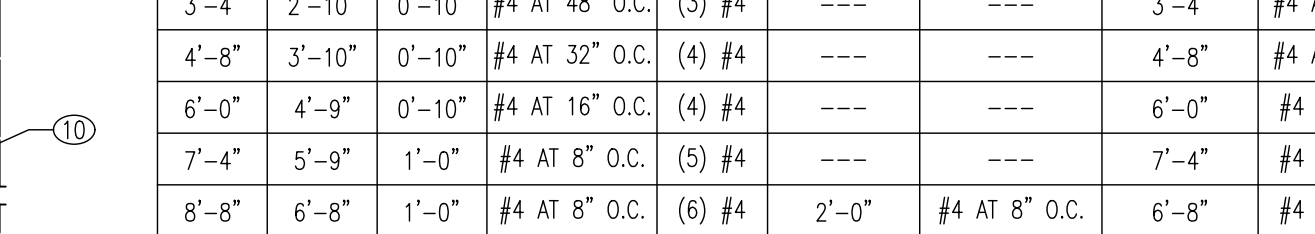
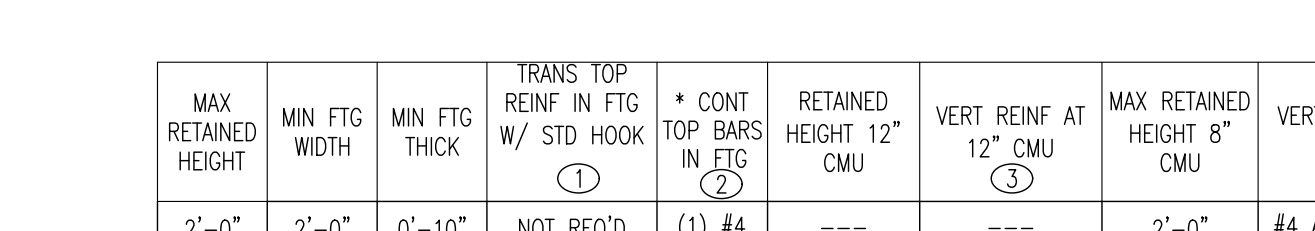
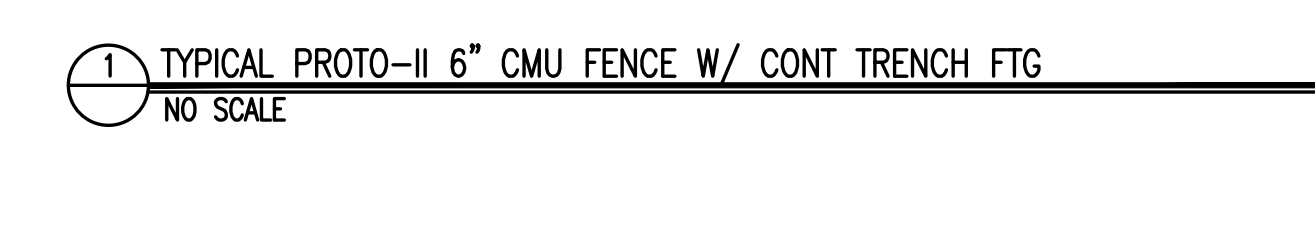
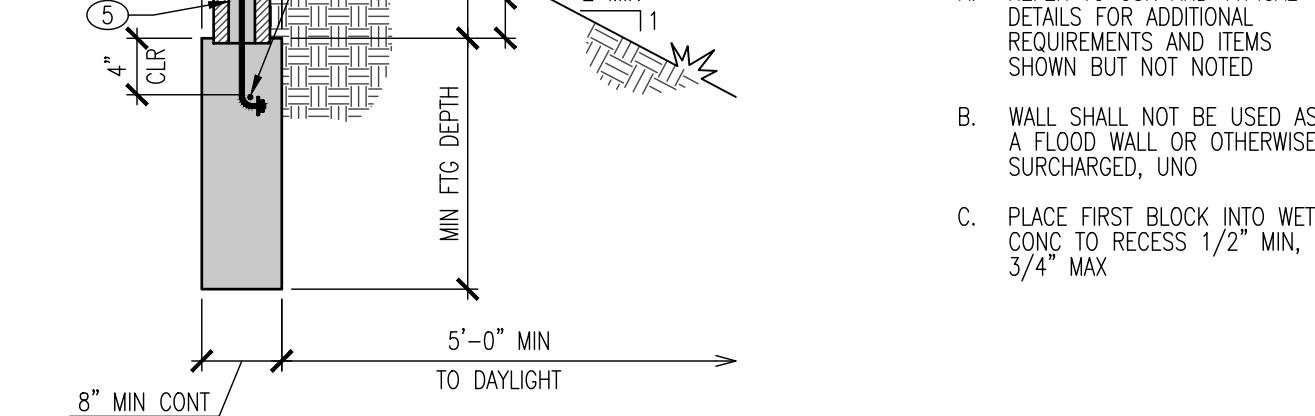
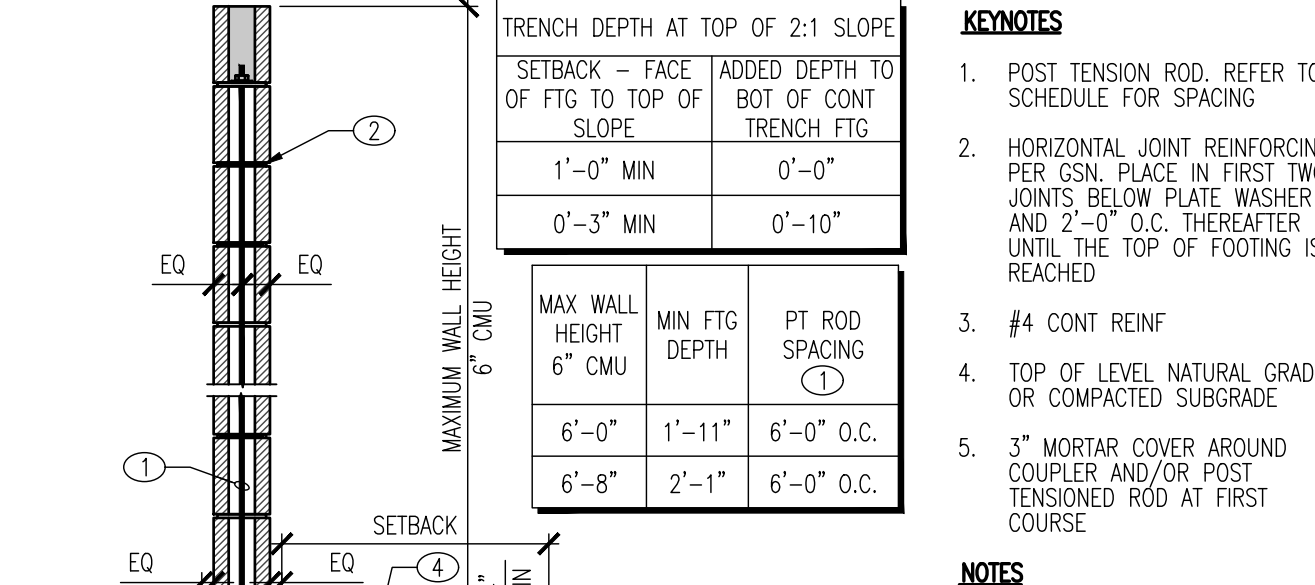
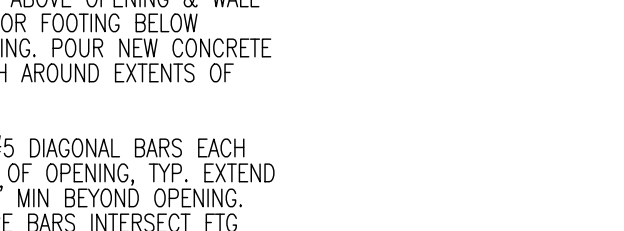
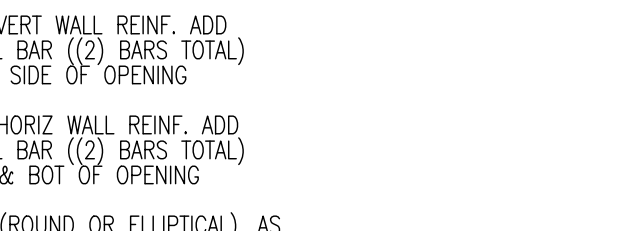
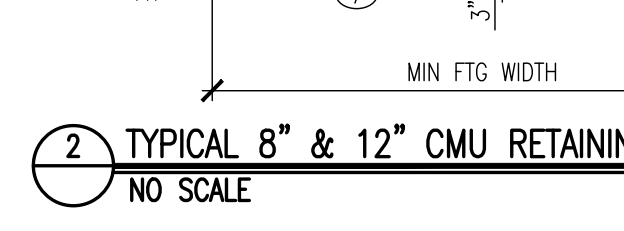
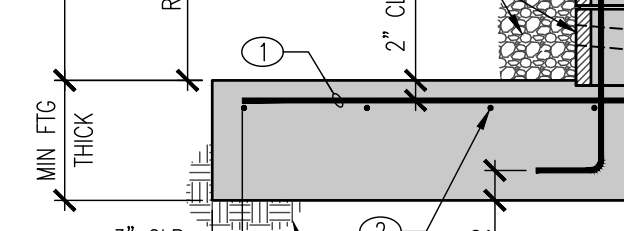
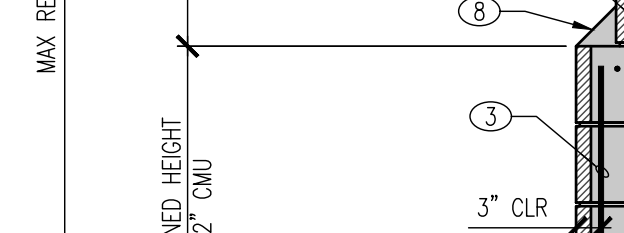
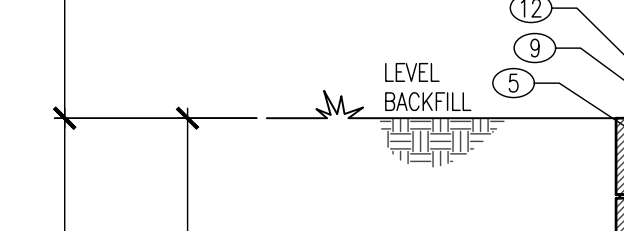
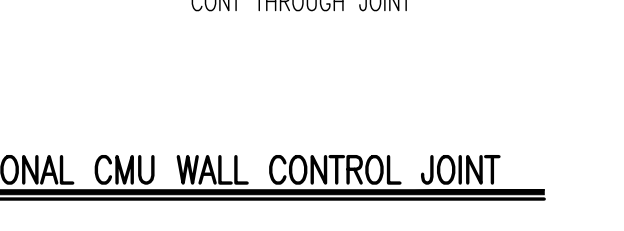
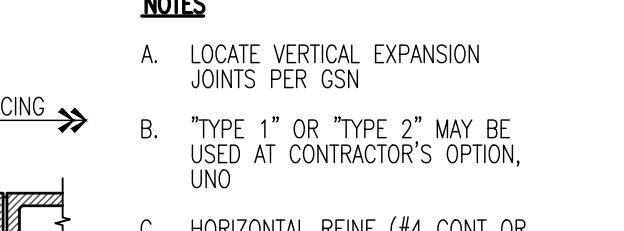
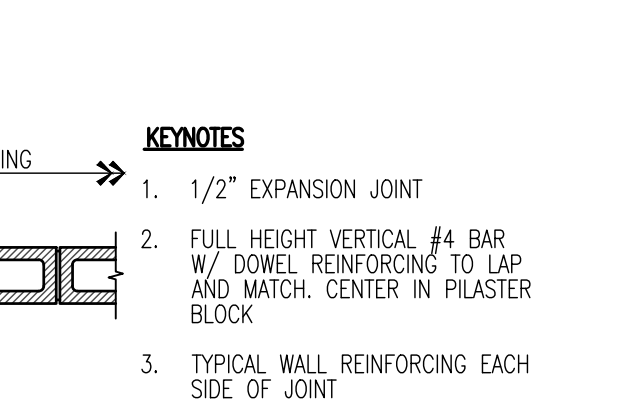
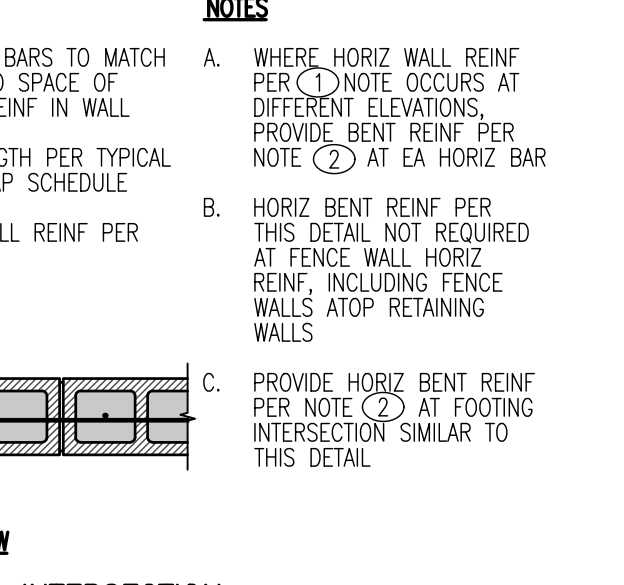
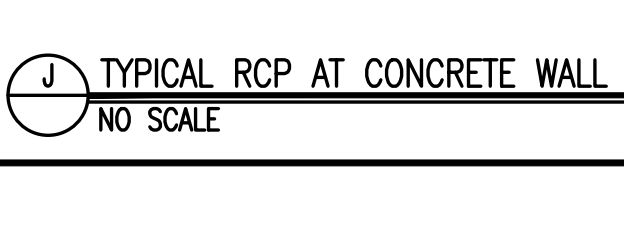
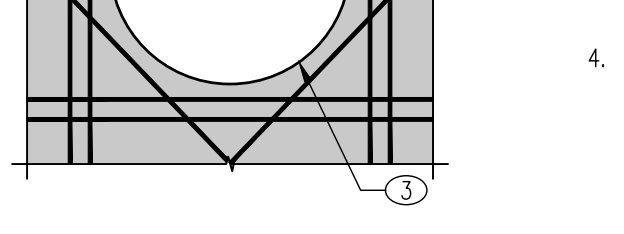
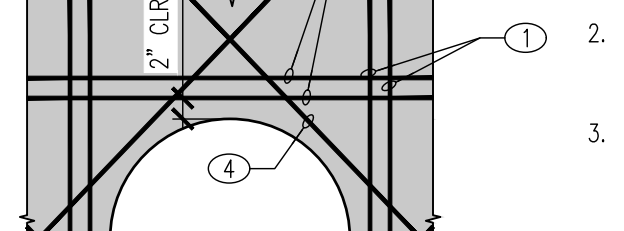
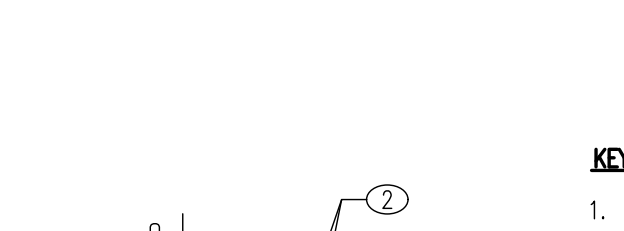
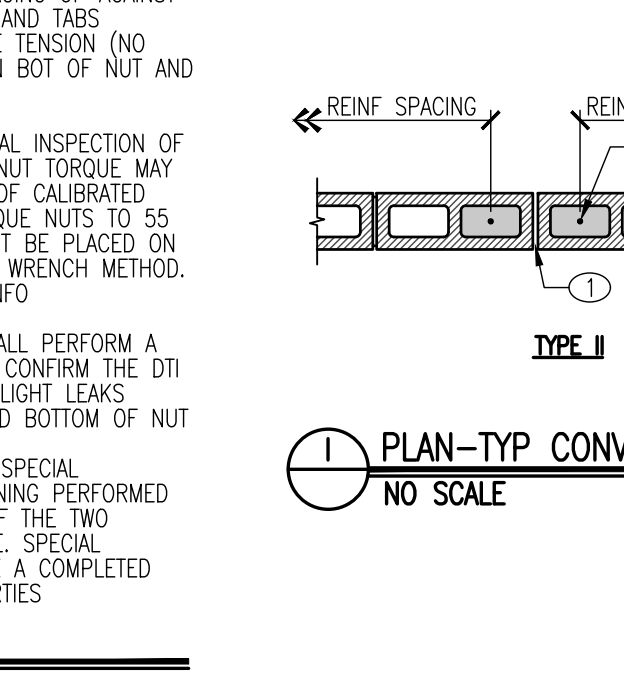
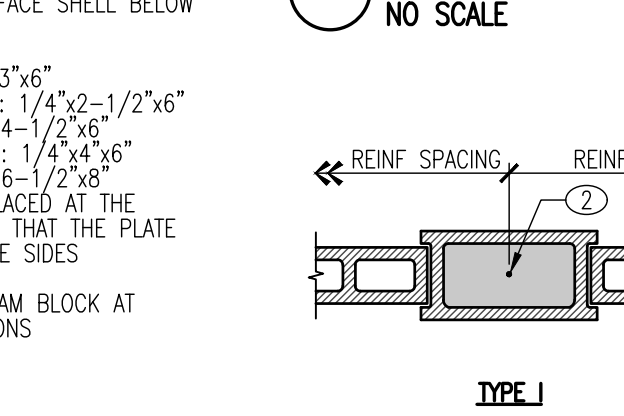
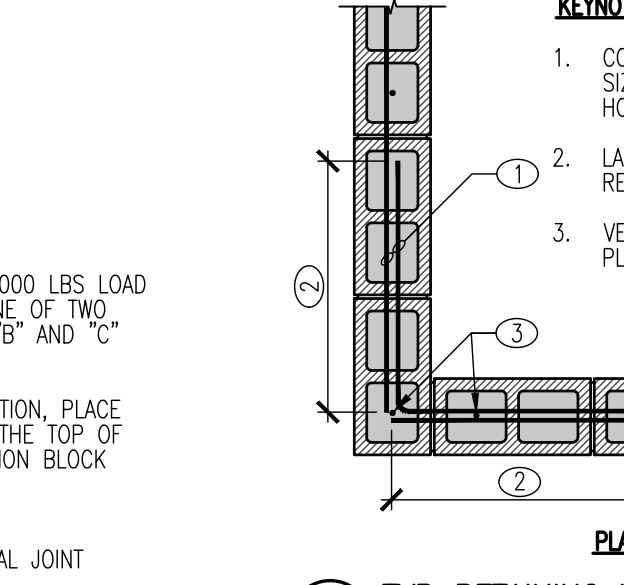
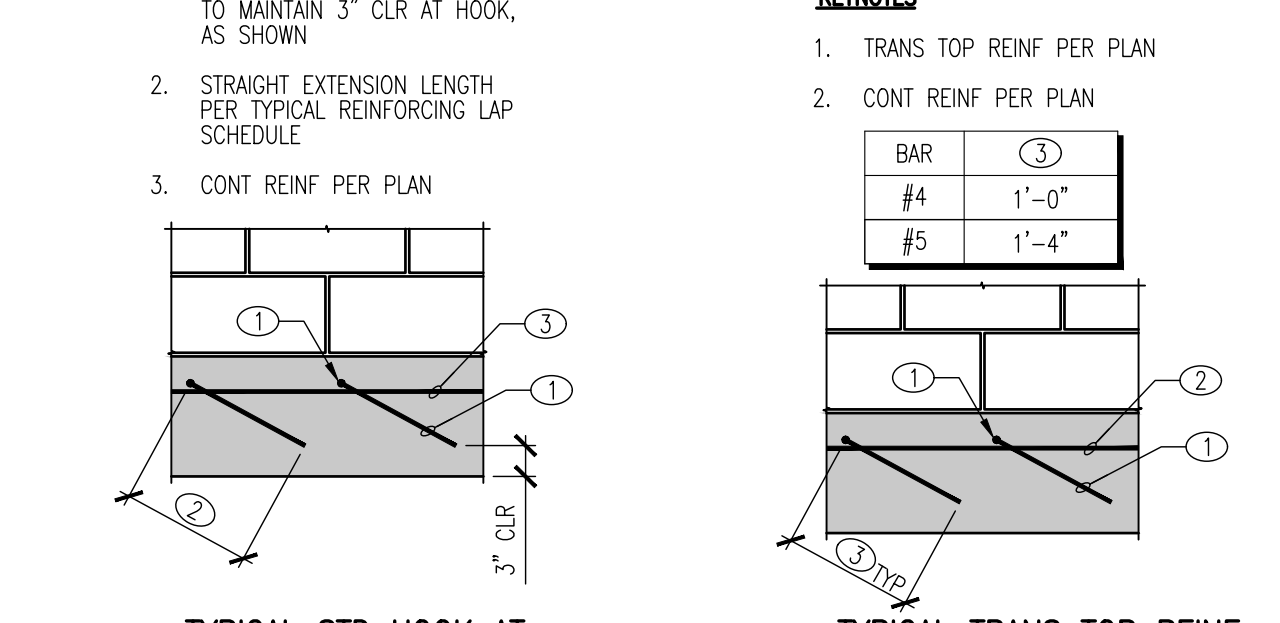
STANDARD ABBREVIATIONS

- | | |
|----------|--|
| ACI | AMERICAN CONCRETE INSTITUTE |
| AISC | AMERICAN INSTITUTE OF STEEL CONSTRUCTION |
| ANSI | AMERICAN NATIONAL STANDARDS INSTITUTE |
| ALTA | ALTERNATE |
| ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIALS |
| CBC | CALIFORNIA BUILDING CODE |
| CL | CENTERLINE |
| CLR | CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| CONC | CONCRETE |
| CONT | CONTINUOUS |
| DIA OR Ø | DIAMETER |
| DTI | DIRECT TENSION INDICATOR |
| EQ | EQUAL |
| EW | EACH WAY |
| FTG | FOOTING |
| GSN | GENERAL STRUCTURAL NOTES |
| ICC | INTERNATIONAL CODE COUNCIL |
| INFO | INFORMATION |
| LBS | POUNDS |
| MFR | MANUFACTURER |
| MAX | MAXIMUM |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| NTS | NOT TO SCALE |
| O.C. | ON-CENTER |
| PLF | POUNDS PER LINEAR FOOT |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| REF | REINFORCING |
| REQ'D | REQUIRED |
| SEM | SIMILAR |
| SPEC | SPECIFICATION |
| SQ | SQUARE |
| STD | STANDARD |
| TAB | TOP AND BOTTOM TRANSVERSE |
| TYP | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| VERT | VERTICAL |
| W/O | WITHOUT |
-
- E TYPICAL TRANS TOP REINF HOOK AT NO-TOE FTGS**
NO SCALE



CONCRETE (F'_c=2500 PSI) MASONRY (F'_m=1500 PSI)

BAR SIZE	90-DEGREE HOOK EXTENSION LENGTH (1)	LAP	LAP FOR TOP BARS (2)	LAP IN MASONRY W/ 2" CLR	LAP IN MASONRY W/ 3" CLR
#3	4-1/2"	1'-3"	1'-7"	1'-3"	1'-3"
#4	6"	1'-8"	2'-1"	2'-2"	1'-9"
#5	7-1/2"	2'-0"	2'-8"	3'-4"	2'-3"
#6	9"	2'-5"	3'-2"	3"	4'-2"
#7	10-1/2"	3'-10"	5'-0"	3"	5'-3"
#8	12"	4'-11"	6'-5"	3"	3"



MIRROCK ENGINEERING
9080 W. CHEYENNE AVE., SUITE 120
LAS VEGAS, NV 89129
PHONE: (702) 888-9331
FAX: (702) 908-9339

CAMERON RANCH
GREEN VALLEY RD & STARBUCK RD
EL DORADO COUNTY, CA

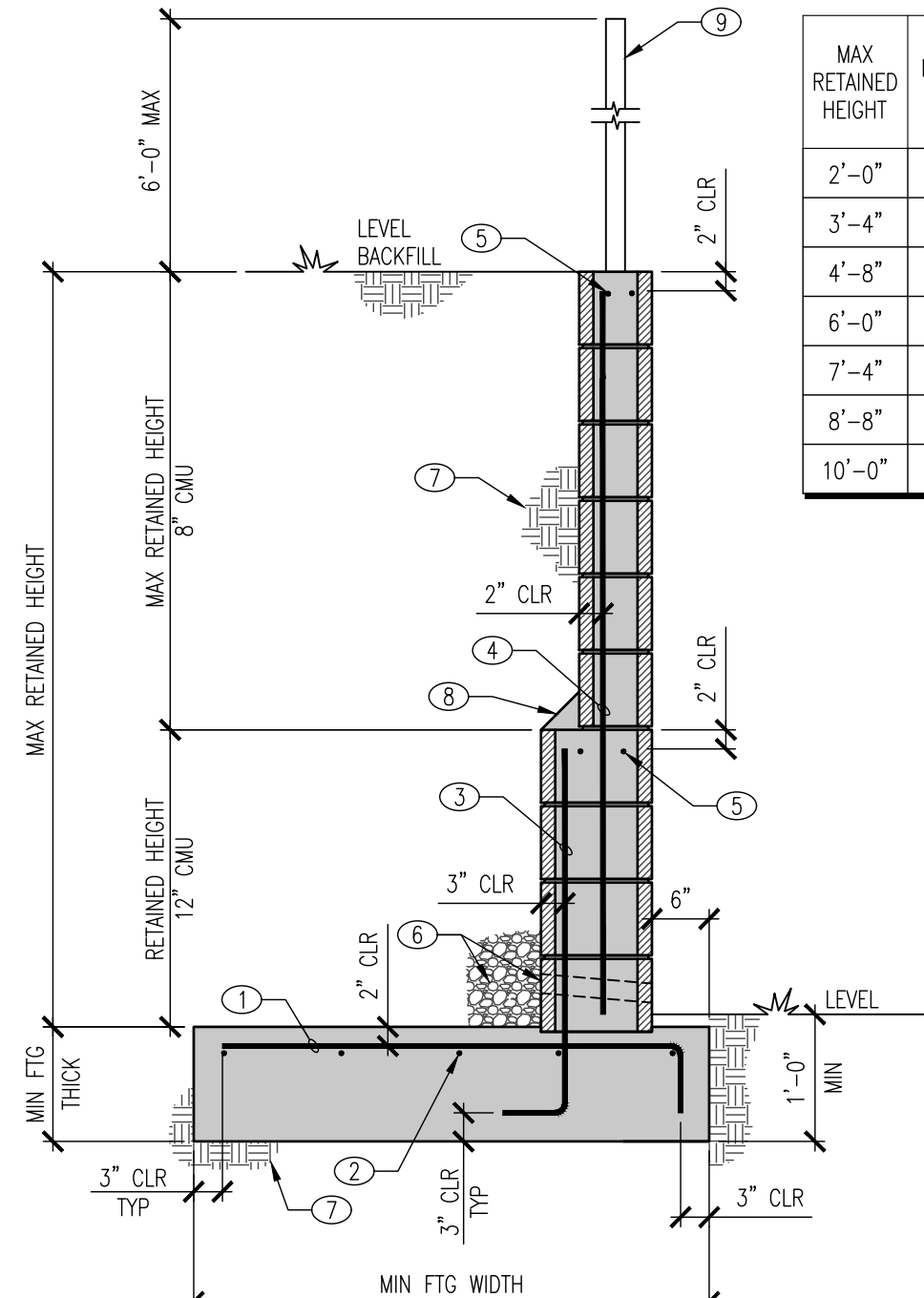
PROJECT: PROTO-II WALL SYSTEMS MAY ONLY BE INSTALLED BY APPROVED AND CERTIFIED INSTALLERS

PROTO-II™ WALL SYSTEMS
www.proto2.com
3612 CALIFORNIA AVE
LONG BEACH, CA 90807
ATTN: MARIO SALAZAR
PH: (562) 577-6620
msalazar@proto2.com
U.S. PATENTED 6,032,206 U.S. PATENTED 6,481,487 U.S. PATENTED 6,802,296 U.S. PATENTED 7,186,870 U.S. PATENTED 7,186,871 U.S. PATENTED 7,186,872 U.S. PATENTED 7,186,873

REV#	DESCRIPTION	DATE

CHECKED: TEM
DRAWN: CAD
DATE: 03-17-20
PROJ No.: 20-147
SHEET:

THIS DOCUMENT IS THE SOLE PROPERTY OF RIM ROCK ENGINEERING, LLC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION. ALL RIGHTS ARE RESERVED.

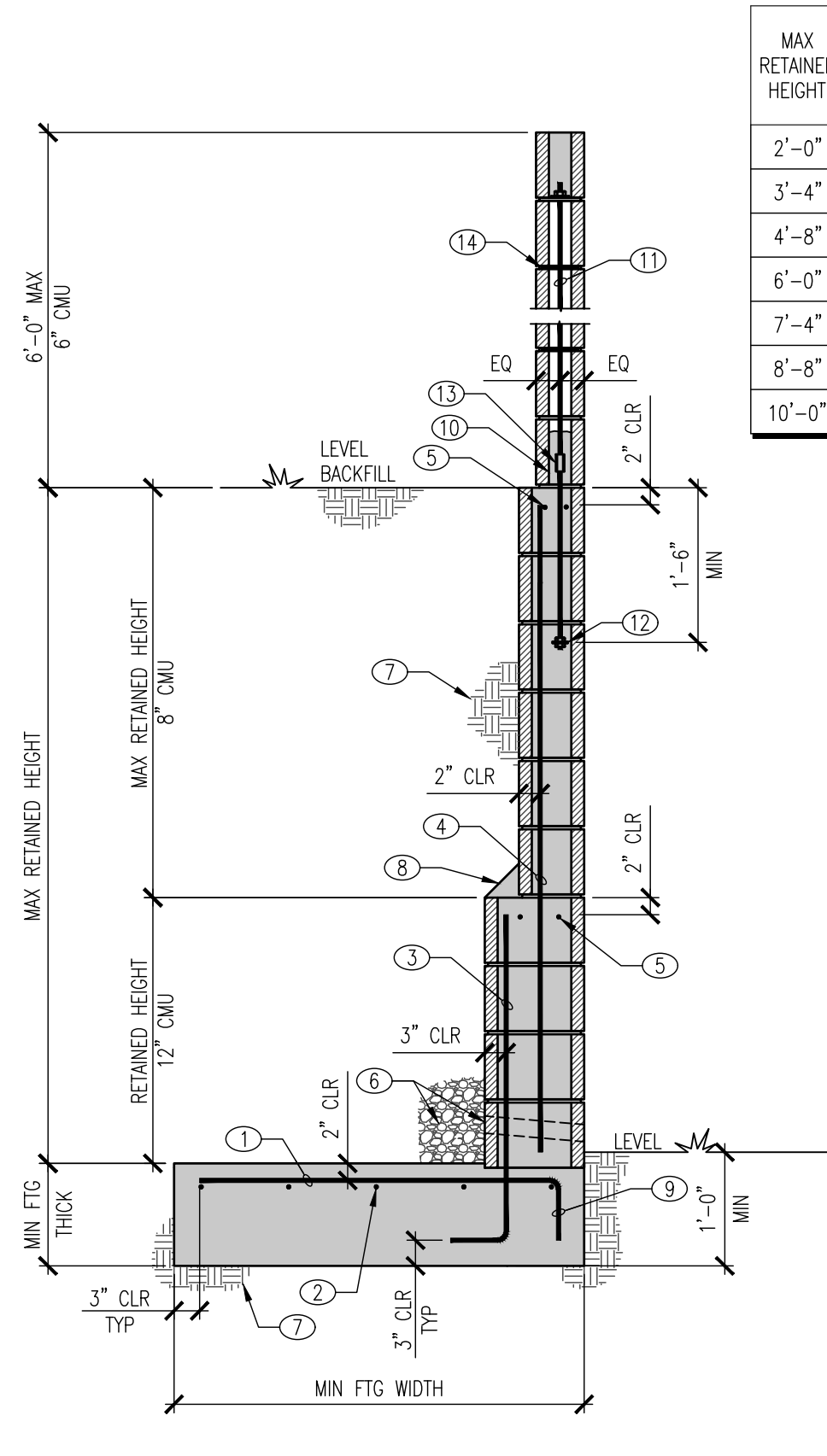


MAX RETAINED HEIGHT	MIN FTG WIDTH	MIN FTG THICK	TRANS TOP REINF IN FTG	* CONT TOP BARS IN FTG	RETAINED HEIGHT 12" CMU	VERT REINF AT 12" CMU	MAX RETAINED HEIGHT 8" CMU	VERT REINF AT 8" CMU
2'-0"	2'-2"	0'-10"	NOT REQ'D	(1) #4	---	---	2'-0"	#4 AT 48" O.C.
3'-4"	3'-1"	0'-10"	#4 AT 48" O.C.	(3) #4	---	---	3'-4"	#4 AT 48" O.C.
4'-8"	4'-0"	0'-10"	#4 AT 32" O.C.	(4) #4	---	---	4'-8"	#4 AT 24" O.C.
6'-0"	4'-11"	0'-10"	#4 AT 16" O.C.	(4) #4	---	---	6'-0"	#4 AT 8" O.C.
7'-4"	5'-11"	1'-0"	#4 AT 8" O.C.	(5) #4	---	---	7'-4"	#4 AT 8" O.C.
8'-8"	6'-9"	1'-0"	#4 AT 8" O.C.	(6) #4	2'-0"	#4 AT 8" O.C.	6'-8"	#4 AT 8" O.C.
10'-0"	7'-8"	1'-0"	#5 AT 8" O.C.	(7) #4	4'-0"	#6 AT 8" O.C.	6'-0"	#4 AT 8" O.C.

- KEYNOTES**
- (2) #3 CONT AT 8" CMU. (2) #4 CONT AT 12" CMU
 - REFER TO APPROVED GEOTECHNICAL REPORT FOR WATER PROOFING/DRAINAGE REQUIREMENTS AT BACK FACE OF WALL. IN ADDITION, PROVIDE 2" DIA HOLE AT 6'-0" O.C. FOR WEEPERS OR PROVIDE APPROVED ALTERNATE DRAINAGE SYSTEM BY OTHERS
 - BACKFILL AND SUBGRADE PER GSN
 - GROUT FILLET
 - WOOD FENCE & ATTACHMENT BY OTHERS

- NOTES**
- REFER TO GSN AND TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS AND ITEMS SHOWN BUT NOT NOTED
 - RETAINING WALL SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION, EXCEPT AS NOTED. FENCE WALL SHALL NOT BE FLOOD SURCHARGED, EXCEPT AS NOTED
 - WET SET 1st COURSE INTO FTG 1/2" MIN
 - AT RETAINED HEIGHTS WHERE 12" CMU IS NOT REQUIRED, PROVIDE STANDARD HOOK AT END OF 8" CMU VERT REINF EMBEDDED IN CONCRETE FOOTING
- * REINF SHALL BE SPACED 18" O.C. MAX

3 TYPICAL 8" & 12" CMU RETAINING WALLS W/ 6" TOE FTGS
NO SCALE

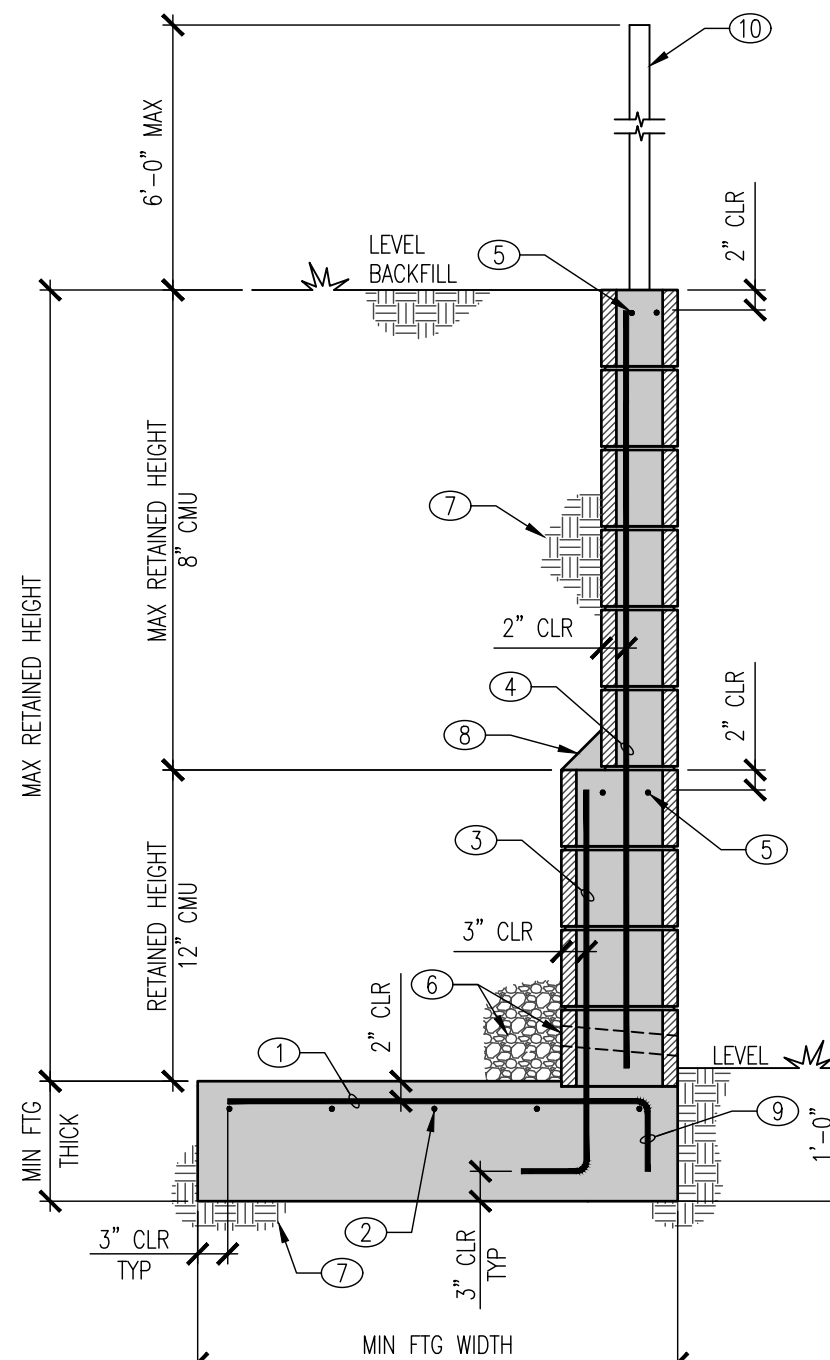


MAX RETAINED HEIGHT	MIN FTG WIDTH	MIN FTG THICK	TRANS TOP REINF IN FTG	* CONT TOP BARS IN FTG	RETAINED HEIGHT 12" CMU	VERT REINF AT 12" CMU	MAX RETAINED HEIGHT 8" CMU	VERT REINF AT 8" CMU
2'-0"	2'-0"	0'-10"	NOT REQ'D	(1) #4	---	---	2'-0"	#4 AT 48" O.C.
3'-4"	2'-6"	0'-10"	#4 AT 48" O.C.	(3) #4	---	---	3'-4"	#4 AT 48" O.C.
4'-8"	3'-5"	0'-10"	#4 AT 32" O.C.	(3) #4	---	---	4'-8"	#4 AT 24" O.C.
6'-0"	4'-4"	0'-10"	#4 AT 16" O.C.	(4) #4	---	---	6'-0"	#4 AT 8" O.C.
7'-4"	5'-4"	1'-0"	#4 AT 8" O.C.	(5) #4	---	---	7'-4"	#4 AT 8" O.C.
8'-8"	6'-9"	1'-0"	#4 AT 8" O.C.	(6) #4	2'-0"	#4 AT 8" O.C.	6'-8"	#4 AT 8" O.C.
10'-0"	9'-3"	1'-0"	#5 AT 8" O.C.	(8) #4	4'-0"	#6 AT 8" O.C.	6'-0"	#4 AT 8" O.C.

- KEYNOTES**
- (2) #3 CONT AT 8" CMU. LOCATE PT ROD BETWEEN CONT REINF. (2) #4 CONT AT 12" CMU
 - REFER TO APPROVED GEOTECHNICAL REPORT FOR WATER PROOFING/DRAINAGE REQUIREMENTS AT BACK FACE OF WALL. IN ADDITION, PROVIDE 2" DIA HOLE AT 6'-0" O.C. FOR WEEPERS OR PROVIDE APPROVED ALTERNATE DRAINAGE SYSTEM BY OTHERS
 - BACKFILL AND SUBGRADE PER GSN
 - GROUT FILLET
 - REFER TO TYP TRANS TOP REINF HOOK AT NO-TOE FTGS DETAIL
 - 3" MORTAR COVER AROUND COUPLER AND/OR POST TENSIONED ROD AT FIRST COURSE
 - POST TENSION ROD AT 6'-0" O.C. W/ 18" MIN EMBEDMENT INTO SOLID GROUTED CELLS
 - 1/4"x1/2" EMBED PLATE W/ 1/2" NUT ABOVE PLATE AND 1/2" COUPLER BELOW PLATE (OR (2) 1/2" NUTS) AT EMBEDDED END OF POST TENSION ROD
 - COUPLER IF PARTIAL HEIGHT ROD IS USED IN LIEU OF FULL HEIGHT ROD
 - HORIZONTAL JOINT REINFORCING PER GSN. PLACE IN FIRST TWO JOINTS BELOW PLATE WASHER AND 2'-0" O.C. THEREAFTER UNTIL THE TOP OF RETAINING WALL IS REACHED

- NOTES**
- REFER TO GSN AND TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS AND ITEMS SHOWN BUT NOT NOTED
 - RETAINING WALL SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION, EXCEPT AS NOTED. FENCE WALL SHALL NOT BE FLOOD SURCHARGED, EXCEPT AS NOTED
 - WET SET 1st COURSE INTO FTG 1/2" MIN
 - AT RETAINED HEIGHTS WHERE 12" CMU IS NOT REQUIRED, PROVIDE STANDARD HOOK AT END OF 8" CMU VERT REINF EMBEDDED IN CONCRETE FOOTING
- * REINF SHALL BE SPACED 18" O.C. MAX

4 TYPICAL 8" & 12" CMU RETAINING WALLS W/ NO-TOE FTGS
NO SCALE

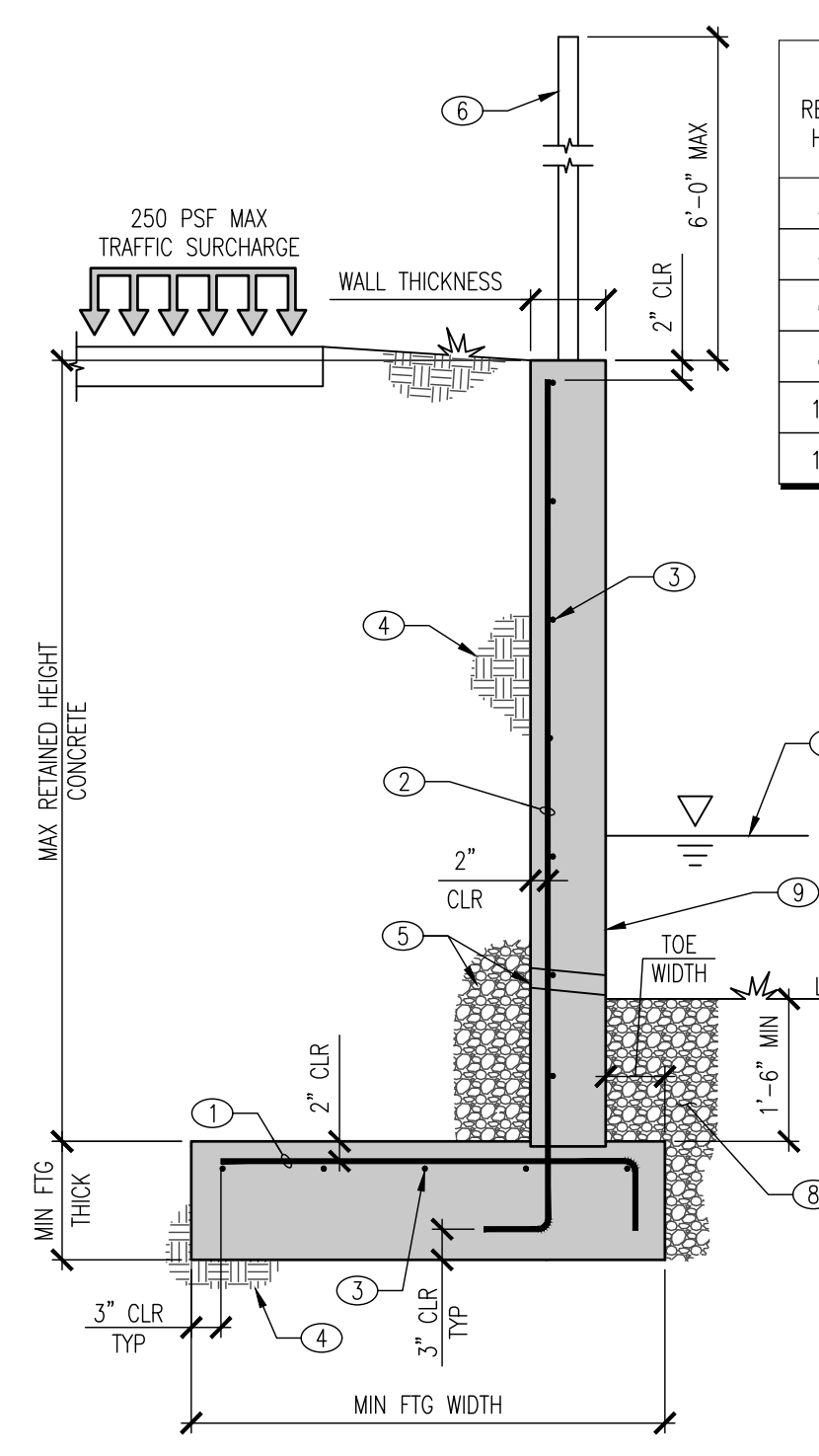


MAX RETAINED HEIGHT	MIN FTG WIDTH	MIN FTG THICK	TRANS TOP REINF IN FTG	* CONT TOP BARS IN FTG	RETAINED HEIGHT 12" CMU	VERT REINF AT 12" CMU	MAX RETAINED HEIGHT 8" CMU	VERT REINF AT 8" CMU
2'-0"	2'-1"	0'-10"	NOT REQ'D	(1) #4	---	---	2'-0"	#4 AT 48" O.C.
3'-4"	2'-9"	0'-10"	#4 AT 48" O.C.	(3) #4	---	---	3'-4"	#4 AT 48" O.C.
4'-8"	3'-7"	0'-10"	#4 AT 32" O.C.	(4) #4	---	---	4'-8"	#4 AT 24" O.C.
6'-0"	4'-6"	0'-10"	#4 AT 16" O.C.	(4) #4	---	---	6'-0"	#4 AT 8" O.C.
7'-4"	5'-5"	1'-0"	#4 AT 8" O.C.	(5) #4	---	---	7'-4"	#4 AT 8" O.C.
8'-8"	6'-6"	1'-0"	#4 AT 8" O.C.	(6) #4	2'-0"	#4 AT 8" O.C.	6'-8"	#4 AT 8" O.C.
10'-0"	8'-9"	1'-0"	#5 AT 8" O.C.	(7) #4	4'-0"	#6 AT 8" O.C.	6'-0"	#4 AT 8" O.C.

- KEYNOTES**
- (2) #3 CONT AT 8" CMU. LOCATE PT ROD BETWEEN CONT REINF. (2) #4 CONT AT 12" CMU
 - REFER TO APPROVED GEOTECHNICAL REPORT FOR WATER PROOFING/DRAINAGE REQUIREMENTS AT BACK FACE OF WALL. IN ADDITION, PROVIDE 2" DIA HOLE AT 6'-0" O.C. FOR WEEPERS OR PROVIDE APPROVED ALTERNATE DRAINAGE SYSTEM BY OTHERS
 - BACKFILL AND SUBGRADE PER GSN
 - GROUT FILLET
 - REFER TO TYP TRANS TOP REINF HOOK AT NO-TOE FTGS DETAIL
 - WOOD FENCE & ATTACHMENT BY OTHERS

- NOTES**
- REFER TO GSN AND TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS AND ITEMS SHOWN BUT NOT NOTED
 - RETAINING WALL SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION, EXCEPT AS NOTED. FENCE WALL SHALL NOT BE FLOOD SURCHARGED, EXCEPT AS NOTED
 - WET SET 1st COURSE INTO FTG 1/2" MIN
 - AT RETAINED HEIGHTS WHERE 12" CMU IS NOT REQUIRED, PROVIDE STANDARD HOOK AT END OF 8" CMU VERT REINF EMBEDDED IN CONCRETE FOOTING
- * REINF SHALL BE SPACED 18" O.C. MAX

5 TYPICAL 8" & 12" CMU RETAINING WALLS W/ NO-TOE FTGS
NO SCALE



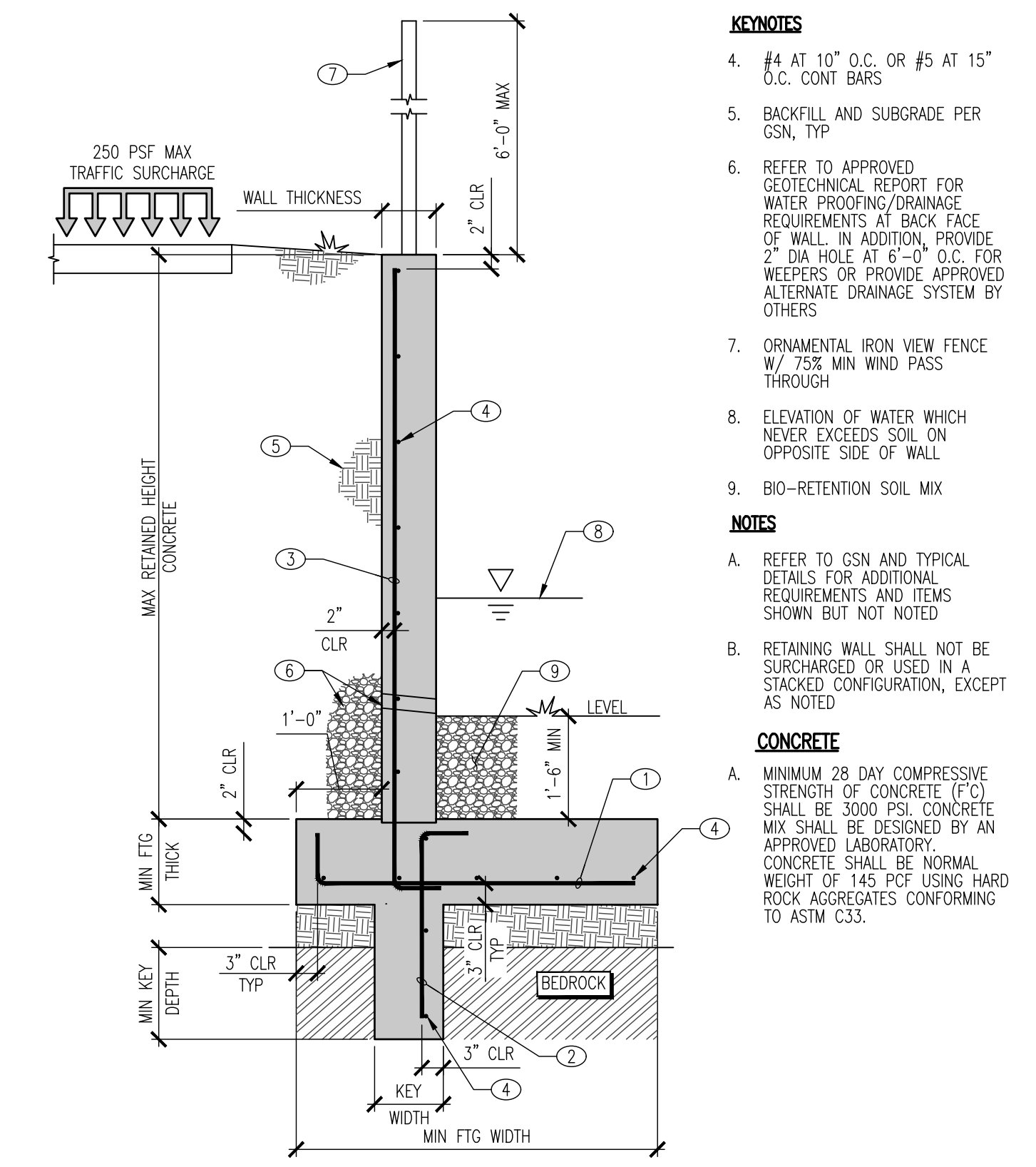
MAX RETAINED HEIGHT	WALL THICKNESS	MIN FTG WIDTH	MIN FTG THICK	TOE WIDTH	TRANS TOP REINF IN FTG	VERT REINF IN WALL
2'-0"	0'-8"	3'-3"	0'-10"	0'-6"	#4 AT 20" O.C.	#4 AT 10" O.C.
4'-0"	0'-8"	4'-9"	0'-10"	0'-6"	#4 AT 20" O.C.	#4 AT 10" O.C.
6'-0"	0'-8"	6'-0"	0'-10"	0'-6"	#4 AT 8" O.C.	#4 AT 8" O.C.
8'-0"	0'-8"	7'-6"	1'-0"	0'-6"	#4 AT 8" O.C.	#5 AT 8" O.C.
10'-0"	0'-10"	9'-6"	1'-1"	1'-3"	#5 AT 12" O.C.	#5 AT 7" O.C.
12'-0"	0'-10"	11'-6"	1'-2"	1'-9"	#5 AT 10" O.C.	#6 AT 5" O.C.

- KEYNOTES**
- #4 AT 10" O.C. OR #5 AT 15" O.C. CONT BARS
 - BACKFILL AND SUBGRADE PER GSN, TYP
 - REFER TO APPROVED GEOTECHNICAL REPORT FOR WATER PROOFING/DRAINAGE REQUIREMENTS AT BACK FACE OF WALL. IN ADDITION, PROVIDE 2" DIA HOLE AT 6'-0" O.C. FOR WEEPERS OR PROVIDE APPROVED ALTERNATE DRAINAGE SYSTEM BY OTHERS
 - ORNAMENTAL IRON VIEW FENCE W/ 75% MIN WIND PASS THROUGH
 - ELEVATION OF WATER WHICH NEVER EXCEEDS SOIL ON OPPOSITE SIDE OF WALL
 - BIO-RETENTION SOIL MIX AND/OR WASHED GRAVEL
 - REFER TO TYPICAL DETAIL AT RCP PENETRATIONS, AS OCCURS

- NOTES**
- REFER TO GSN AND TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS AND ITEMS SHOWN BUT NOT NOTED
 - RETAINING WALL SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION, EXCEPT AS NOTED
- CONCRETE**
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE (F'c) SHALL BE 3000 PSI. CONCRETE MIX SHALL BE DESIGNED BY AN APPROVED LABORATORY. CONCRETE SHALL BE NORMAL WEIGHT OF 145 PCF USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33.

6 TYPICAL CONCRETE RETAINING WALLS W/ TRAFFIC SURCHARGE
NO SCALE

MAX RETAINED HEIGHT	WALL THICKNESS	MIN FTG WIDTH	MIN FTG THICK	KEY WIDTH	KEY DEPTH INTO BEDROCK	TRANS BOT REINF IN FTG	KEY REINF	VERT REINF IN WALL
2'-0"	0'-8"	2'-2"	0'-10"	0'-8"	0'-6"	#4 AT 20" O.C.	NOT REQ'D	#4 AT 10" O.C.
4'-0"	0'-8"	2'-8"	0'-10"	0'-10"	1'-4"	#4 AT 20" O.C.	NOT REQ'D	#4 AT 10" O.C.
6'-0"	0'-8"	3'-11"	0'-10"	0'-10"	2'-3"	#4 AT 8" O.C.	#4 AT 16" O.C.	#4 AT 8" O.C.
8'-0"	0'-8"	5'-5"	1'-0"	1'-0"	3'-3"	#5 AT 8" O.C.	#5 AT 16" O.C.	#5 AT 8" O.C.
10'-0"	0'-10"	7'-1"	1'-1"	1'-4"	4'-1"	#5 AT 7" O.C.	#5 AT 7" O.C.	#5 AT 7" O.C.

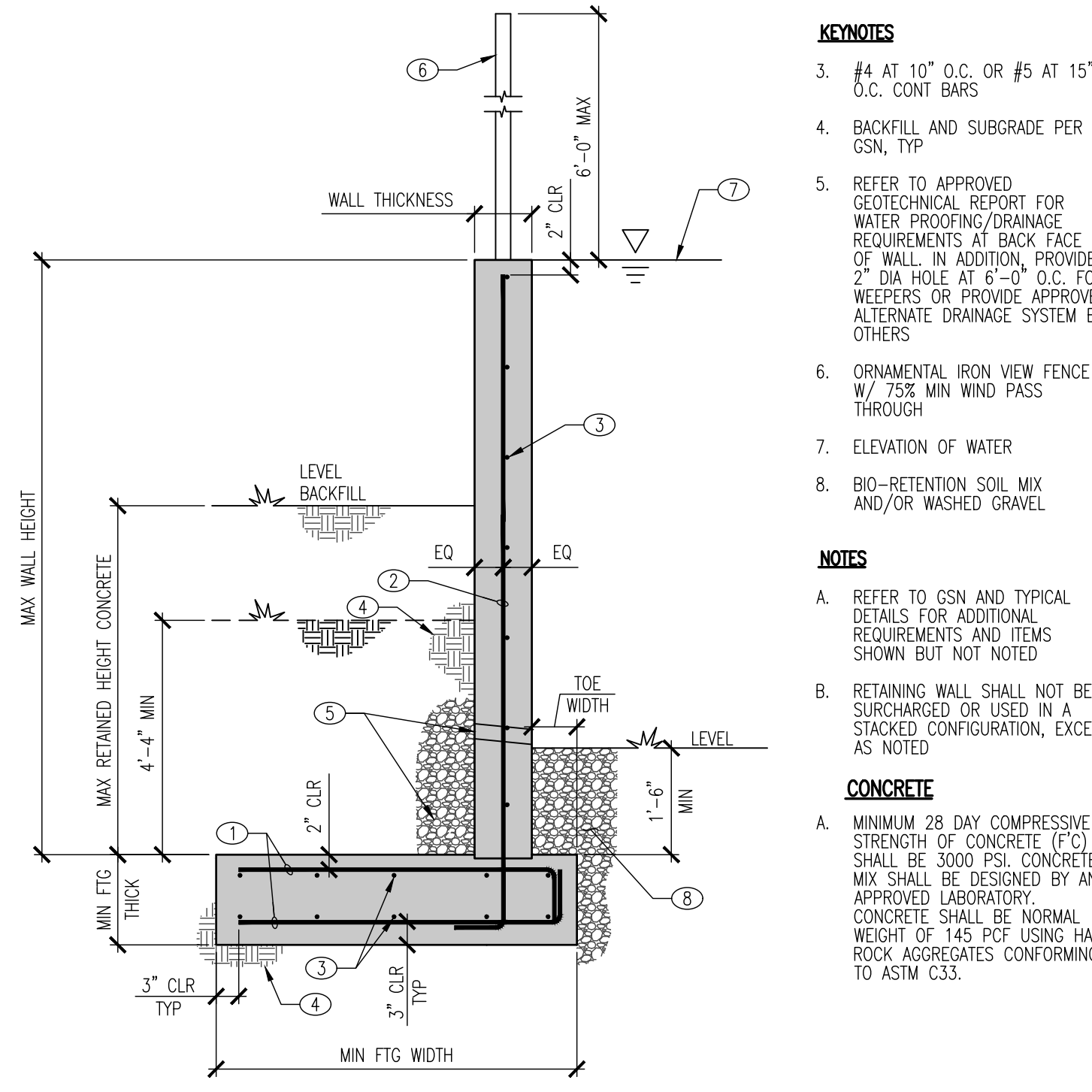


- KEYNOTES**
- #4 AT 10" O.C. OR #5 AT 15" O.C. CONT BARS
 - BACKFILL AND SUBGRADE PER GSN, TYP
 - REFER TO APPROVED GEOTECHNICAL REPORT FOR WATER PROOFING/DRAINAGE REQUIREMENTS AT BACK FACE OF WALL. IN ADDITION, PROVIDE 2" DIA HOLE AT 6'-0" O.C. FOR WEEPERS OR PROVIDE APPROVED ALTERNATE DRAINAGE SYSTEM BY OTHERS
 - ORNAMENTAL IRON VIEW FENCE W/ 75% MIN WIND PASS THROUGH
 - ELEVATION OF WATER WHICH NEVER EXCEEDS SOIL ON OPPOSITE SIDE OF WALL
 - BIO-RETENTION SOIL MIX

- NOTES**
- REFER TO GSN AND TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS AND ITEMS SHOWN BUT NOT NOTED
 - RETAINING WALL SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION, EXCEPT AS NOTED
- CONCRETE**
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE (F'c) SHALL BE 3000 PSI. CONCRETE MIX SHALL BE DESIGNED BY AN APPROVED LABORATORY. CONCRETE SHALL BE NORMAL WEIGHT OF 145 PCF USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33.

7 TYPICAL CONCRETE RETAINING WALLS W/ ALL-TOE FTG & TRAFFIC SURCHARGE
NO SCALE

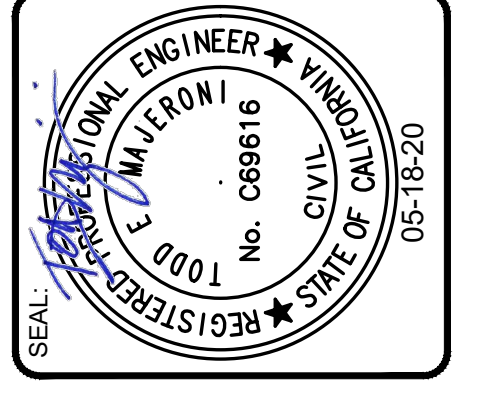
MAX WALL HEIGHT	MAX RETAINED HEIGHT	WALL THICKNESS	MIN FTG WIDTH	MIN FTG THICK	TOE WIDTH	TRANS TOP & BOT REINF IN FTG	VERT REINF IN WALL
9'-0"	6'-0"	0'-8"	4'-11"	1'-0"	0'-6"	#5 AT 8" O.C.	#5 AT 8" O.C.



- KEYNOTES**
- #4 AT 10" O.C. OR #5 AT 15" O.C. CONT BARS
 - BACKFILL AND SUBGRADE PER GSN, TYP
 - REFER TO APPROVED GEOTECHNICAL REPORT FOR WATER PROOFING/DRAINAGE REQUIREMENTS AT BACK FACE OF WALL. IN ADDITION, PROVIDE 2" DIA HOLE AT 6'-0" O.C. FOR WEEPERS OR PROVIDE APPROVED ALTERNATE DRAINAGE SYSTEM BY OTHERS
 - ORNAMENTAL IRON VIEW FENCE W/ 75% MIN WIND PASS THROUGH
 - ELEVATION OF WATER
 - BIO-RETENTION SOIL MIX AND/OR WASHED GRAVEL

- NOTES**
- REFER TO GSN AND TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS AND ITEMS SHOWN BUT NOT NOTED
 - RETAINING WALL SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION, EXCEPT AS NOTED
- CONCRETE**
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE (F'c) SHALL BE 3000 PSI. CONCRETE MIX SHALL BE DESIGNED BY AN APPROVED LABORATORY. CONCRETE SHALL BE NORMAL WEIGHT OF 145 PCF USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33.

8 TYPICAL CONCRETE RETAINING WALLS ALONG GREEN VALLEY RD W/ FTG TO SOIL SIDE
NO SCALE



RIMROCK ENGINEERING
9080 W. CHEYENNE AVE., SUITE 120
LAS VEGAS, NV, 89129
PHONE: (702) 898-5311
FAX: (702) 898-9339

CAMERON RANCH
GREEN VALLEY RD & STARBUCK RD
EL DORADO COUNTY, CA

PROJECT: PROTO-II WALL SYSTEMS MAY ONLY BE INSTALLED BY APPROVED AND CERTIFIED INSTALLERS

TITLE: TYP DETAILS

PROTO-II™ WALL SYSTEMS
www.proto2.com
3812 CALIFORNIA AVE
LONG BEACH, CA 90807
ATTN: MARIO SALAZAR
PH: (562) 277-8529
msalazar@protoii.com

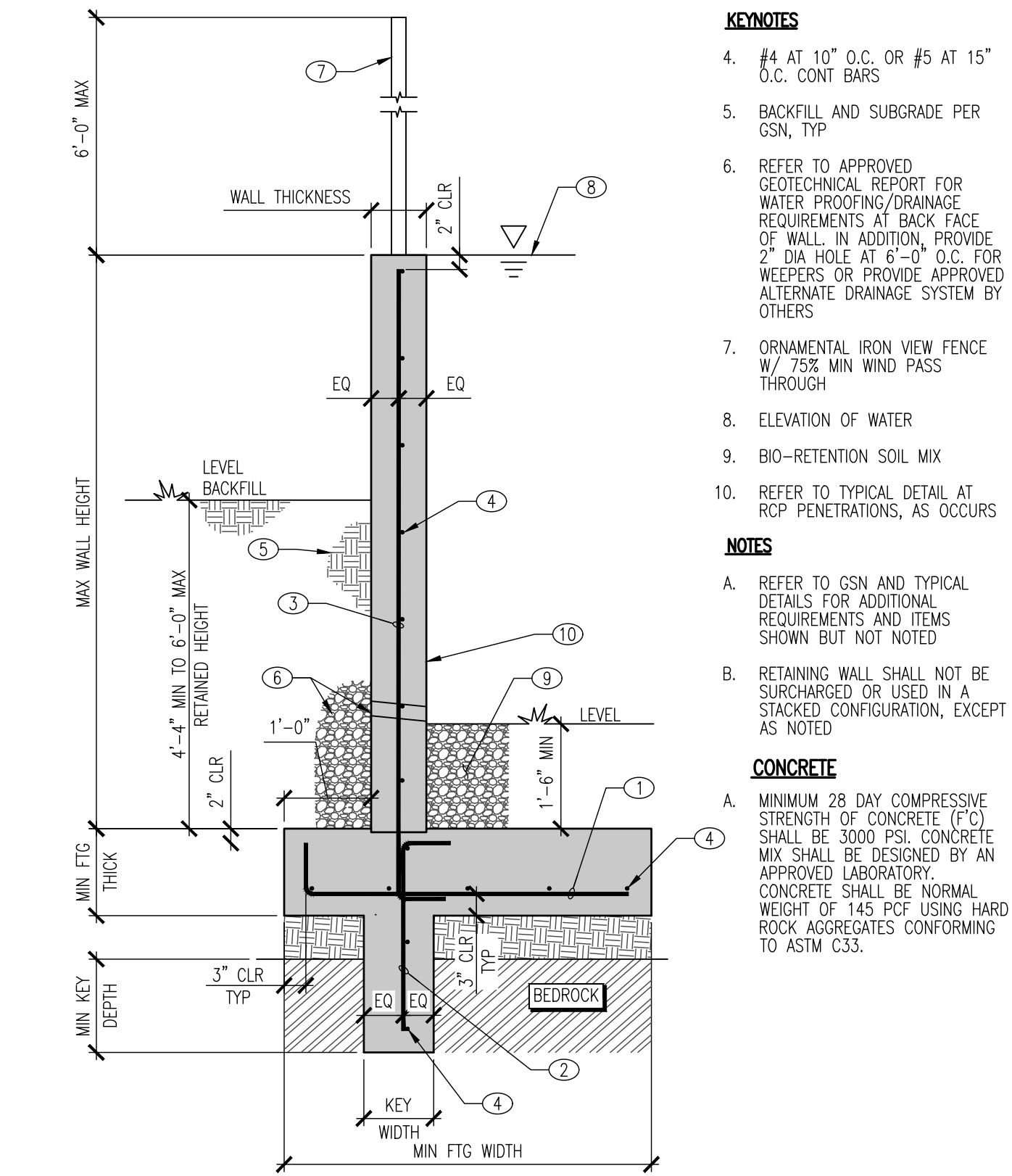
U.S. PATENTED 6,832,208 U.S. PATENTED 6,817,487
U.S. PATENTED 6,832,209 U.S. PATENTED 6,817,488
U.S. PATENTED 7,188,245 U.S. PATENTED 7,188,246

REV#	DESCRIPTION	DATE

CHECKED: TEM
DRAWN: CAD
DATE: 03-17-20
PROJ No.: 20-147
SHEET:

THIS DOCUMENT IS THE SOLE PROPERTY OF RIM ROCK ENGINEERING, LLC. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION. ALL RIGHTS ARE RESERVED.

MAX RETAINED HEIGHT	WALL THICKNESS	MIN FTG WIDTH	MIN FTG THICK	KEY WIDTH	KEY DEPTH INTO BEDROCK	TRANS BOT REINF IN FTG (1)	KEY REINF (2)	VERT REINF IN WALL (3)
9'-0"	0'-8"	3'-2"	0'-10"	0'-10"	1'-4"	#5 AT 8" O.C.	NOT REQ'D	#5 AT 8" O.C.



9 TYPICAL CONCRETE RETAINING WALLS ALONG GREEN VALLEY RD W/ ALL-TOE FTG
NO SCALE

- KEYNOTES**
- #4 AT 10" O.C. OR #5 AT 15" O.C. CONT BARS
 - BACKFILL AND SUBGRADE PER GSN, TYP
 - REFER TO APPROVED GEOTECHNICAL REPORT FOR WATER PROOFING/DRAINAGE REQUIREMENTS AT BACK FACE OF WALL. IN ADDITION, PROVIDE 2" DIA HOLE AT 6'-0" O.C. FOR WEEPERS OR PROVIDE APPROVED ALTERNATE DRAINAGE SYSTEM BY OTHERS
 - ORNAMENTAL IRON VIEW FENCE W/ 75% MIN WIND PASS THROUGH
 - ELEVATION OF WATER
 - BIO-RETENTION SOIL MIX
 - REFER TO TYPICAL DETAIL AT RCP PENETRATIONS, AS OCCURS

- NOTES**
- REFER TO GSN AND TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS AND ITEMS SHOWN BUT NOT NOTED
 - RETAINING WALL SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION, EXCEPT AS NOTED

CONCRETE

A. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE (F'c) SHALL BE 3000 PSL. CONCRETE MIX SHALL BE DESIGNED BY AN APPROVED LABORATORY. CONCRETE SHALL BE NORMAL WEIGHT OF 145 PCF USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33.

ROCKERY WALL STRUCTURAL NOTES

ROCK SELECTION

- CONTRACTOR SHALL HAVE SUFFICIENT SPACE AVAILABLE SO THAT HE CAN SELECT FROM AMONG A NUMBER OF STOCKPILED ROCKS FOR EACH SPACE IN THE ROCK WALL TO BE FILLED.
- ROCKS WHICH HAVE SHAPES WHICH DO NOT MATCH THE SPACES OFFERED BY THE PREVIOUS COURSE, OR ROCK SHOULD BE PLACED ELSEWHERE TO OBTAIN A BETTER FIT.
- ROCK SHOULD BE OF A GENERALLY CUBICAL, TABULAR OR RECTANGULAR SHAPE AND HAVE A MIN DENSITY OF 155 PCF. ANY ROCKS OF BASICALLY ROUNDED OR TETRAHEDRAL FORM SHOULD BE REJECTED OR USED FOR FILLING LARGE VOID SPACES.
- DO NOT SELECT ROCKS THAT EXHIBIT ANY SIGNIFICANT CRACKS, SEAMS OR FOLIATION JOINTS SO THAT ONCE IN-PLACE THE INDIVIDUAL ROCKS DO NOT BREAK, SPLIT OR CRUMBLE AND THEREBY CREATE A WEAK ZONE W/IN THE CONSTRUCTED WALL.
- IT IS ACCEPTABLE TO INSTALL INDIVIDUAL ROCKS W/ CRACKS, SEAMS, OR FOLIATION JOINTS IN A WALL PROVIDED THAT THEY CAN BE FIRMLY AND ADEQUATELY CONFINED BY THE SURROUNDING ROCKS. IT IS CRITICAL THAT THE CRACKS, SEAMS, OR FOLIATION JOINTS DO NOT ALLOW FOR PORTIONS OF THE ROCK TO SPALL OFF AND FALL OUT OF THE WALL.
- CARE SHOULD BE EXERCISED BY THE ROCK WALL CONTRACTOR TO AVOID INSTALLING ANY ROCK W/ A WEAKENED OR "SCABBING" FACE THAT MIGHT SPALL OFF AND FALL OUT OF THE WALL, OR OFF THE WALL FACE.
- INDIVIDUAL ROCKS SHALL BE SOLID AND NON-CONGLOMERATED. CALICHE AND OTHER CEMENTED SOILS SHALL NOT BE USED.

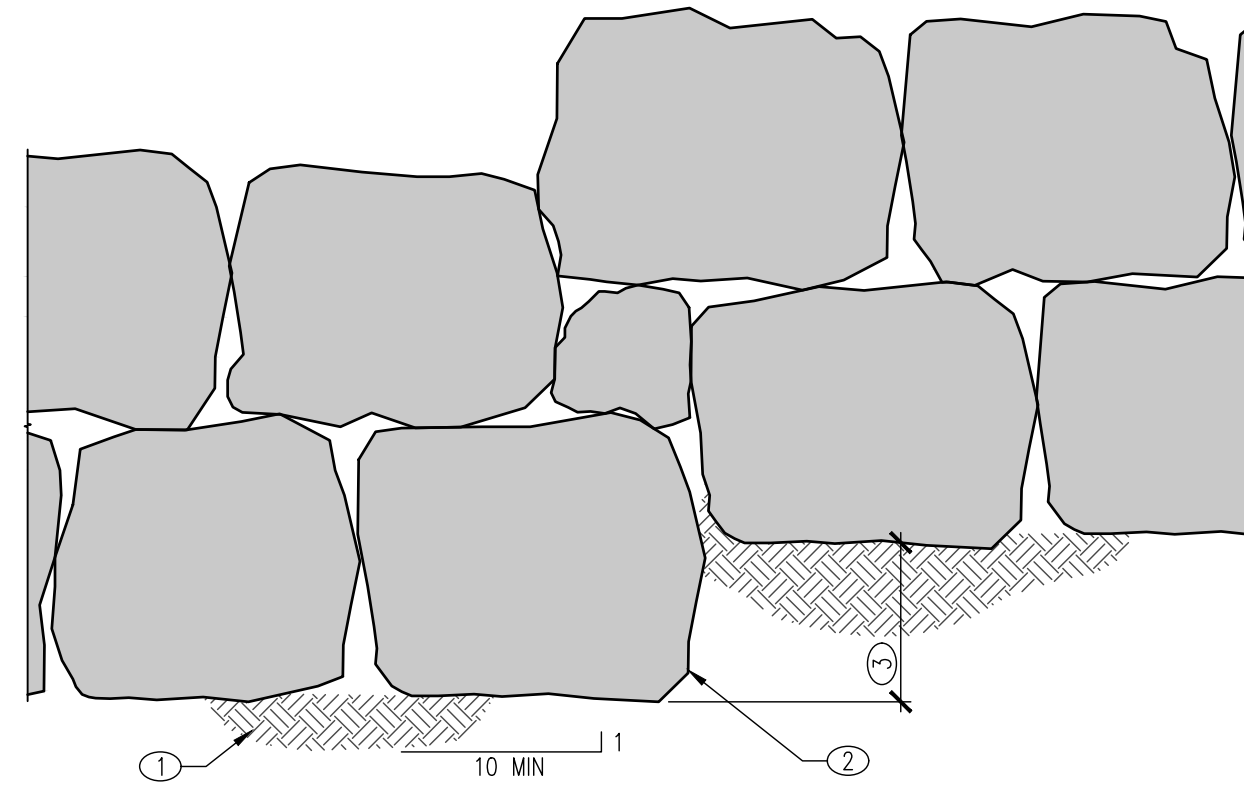
ROCK WALL CONSTRUCTION

- ROCKERY CONSTRUCTION IS A CRAFT AND DEPENDS LARGELY ON THE SKILL AND EXPERIENCE OF THE BUILDER.
- ROCKERY WALLS SHALL COMPLY W/ THE SOUTHERN NEVADA BUILDING OFFICIALS ROCKERY WALL CONSTRUCTION STANDARDS.
- IT IS CRITICAL THAT NO ROCK BE SET INTO ANY WALL ATOP A SURFACE SLOPING DOWNWARDS OUT OF THE WALL FACE. THIS WILL CREATE A POTENTIAL PLANE OF WEAKNESS.
- THE LONG DIMENSION OF THE ROCKS SHOULD EXTEND BACK TOWARDS THE CUT OR FILL FACE TO PROVIDE MAXIMUM STABILITY. ROCKS SHOULD NOT BE STICKED LIKE SHOE BOXES. THEY SHOULD BE PLACED TO AVOID CONTINUOUS JOINT PLANES IN VERTICAL OR LATERAL DIRECTIONS WHEREVER POSSIBLE. WHENEVER POSSIBLE EACH ROCK SHOULD BEAR ON TWO OR MORE ROCKS BELOW IT, W/ GOOD FLAT-TO-FLAT CONTACT.
- AS THE ROCK WALL IS CONSTRUCTED, THE ROCKS SHOULD BE PLACED SO THAT THERE ARE NO CONTINUOUS JOINT PLANES IN EITHER THE VERTICAL OR LATERAL DIRECTION, WHENEVER POSSIBLE. EACH ROCK SHOULD BEAR ON AT LEAST TWO ROCKS BELOW IT. ROCKS SHOULD BE PLACED SO THAT THERE IS SOME BEARING BETWEEN FLAT ROCK FACES EITHER THAN IN OR ON SPACES BETWEEN THE UNDERLYING ROCKS. THE UPPER PLANE OF EACH ROCK BETWEEN COURSES (THE TOP SURFACE OF ROCK) SHOULD SLOPE BACK TOWARDS THE PROTECTED SOIL FACE AND AWAY FROM THE FACE OF THE ROCK WALL.
- THE DEGREE OF RETENTION ACHIEVED IS DEPENDENT ON THE SIZE OF THE ROCK USED; THAT IS, THE MASS OR WEIGHT AND THE HEIGHT OF THE WALL BEING CONSTRUCTED. THE LARGER THE ROCK, THE MORE COMPETENT THE ROCKERY SHOULD BE.
- ROCKERIES SHOULD BE CONSIDERED MAINTENANCE ITEMS THAT WILL REQUIRE INSPECTION AND REPAIR; THEY SHOULD BE LOCATED SO THAT THEY CAN BE REACHED BY A CONTRACTOR IF REPAIRS BECOME NECESSARY.
- MINIMUM WIDTH OF THE KEYWAY EXCAVATION SHOULD BE EQUAL TO THE THICKNESS OF THE BASAL ROCK PLUS THE WIDTH OF THE DRAINAGE SYSTEM.
- UNLESS STATED OTHERWISE IN THE GEOTECHNICAL REPORT, BACKFILL MATERIAL AND PLACEMENT SHALL BE COMPOSED OF TWO TO FOUR INCH SIZED CRUSHED ROCK QUARRY SPALLS, CRUSHED RECYCLED CONCRETE.
- SETBACK FROM ROCKERY WALL TO BUILDING OR STRUCTURE SHALL BE NOT LESS THAN HEIGHT OF RETAINED EARTH. DISTANCE SHALL BE MEASURED FROM OUTSIDE FACE OF THE FOUNDATION OF THE STRUCTURE TO THE BACK FACE OF THE ROCKERY WALL FOR STRUCTURES TO THE HIGH SIDE AND TO THE EXPOSED FACE OF THE ROCKERY WALL FOR STRUCTURES TO THE LOW SIDE.
- ROCKERY WALLS SHALL BE SETBACK THE REQUIRED DISTANCES FROM FIRE HYDRANTS, LIGHT STANDARDS, GAS METERS, WATER METERS, ELECTRICAL TRANSFORMERS, UTILITY BOXES OR SIMILAR FEATURES. THESE DISTANCES SHALL BE ESTABLISHED AND ENFORCED BY THE AUTHORITY HAVING JURISDICTION. WHERE PERMITTED, ROCKERY WALLS LOCATED WITHIN A UTILITY OR OTHER EASEMENT SHALL BE IN ACCORDANCE WITH THE PUBLISHED STANDARDS OF THE DEPARTMENT OR AGENCY HAVING AUTHORITY OF THE EASEMENTS.

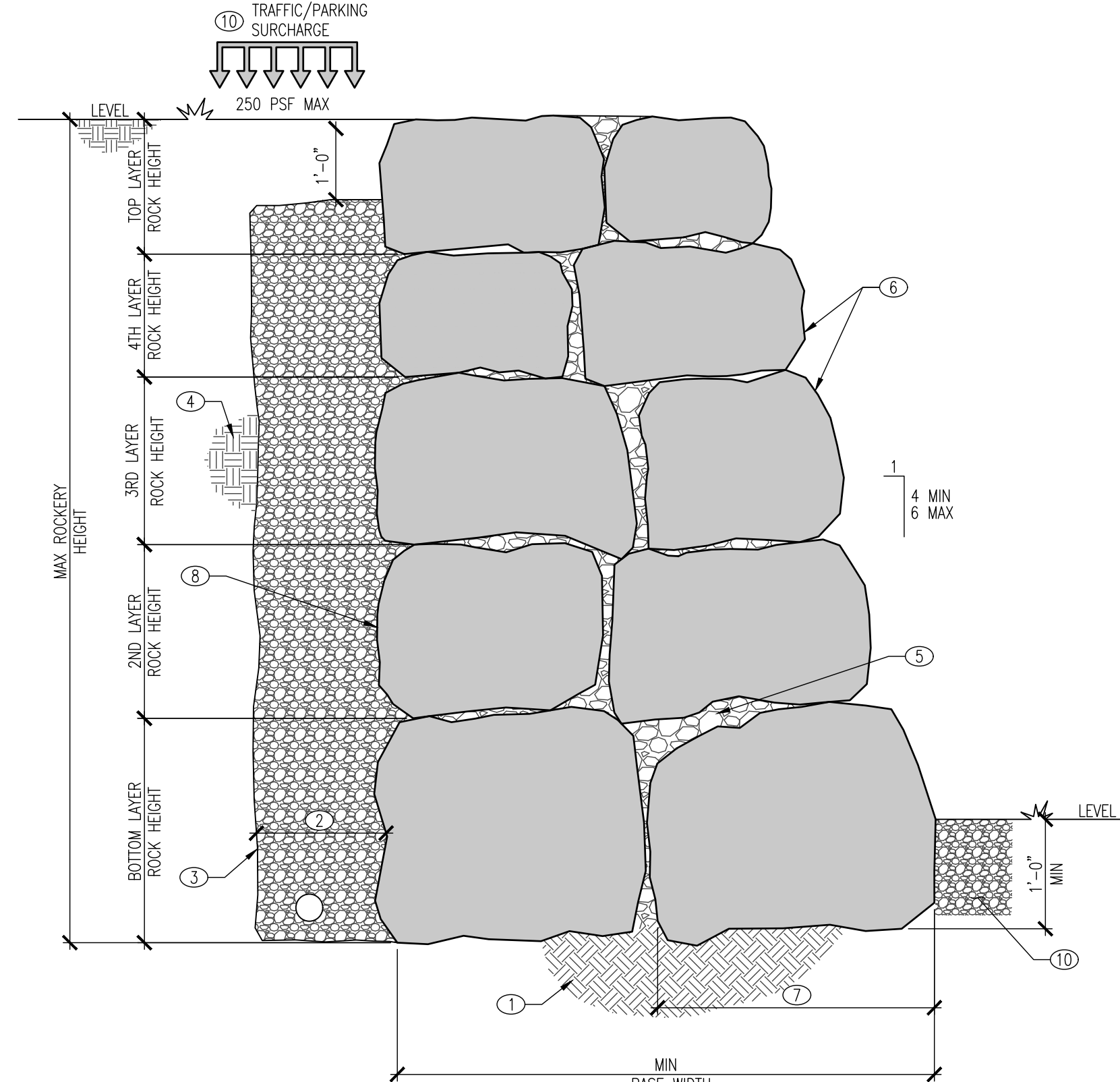
SPECIAL INSPECTION

- IN ADDITION TO THE INSPECTIONS SPECIFIED IN IBC SECTION 1704.2.1 THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THIS SECTION (ONLY WHEN SPECIFICALLY NOTED ON THE DETAILS).
- THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION AND SHALL MEET THE REQUIREMENTS OF 1704.2.1.
- THE SPECIAL INSPECTOR SHALL SATISFY THE REPORT REQUIREMENTS OF IBC SECTION 1704.2.4, AND THE CONTRACTOR SATISFY THE REQUIREMENTS OF IBC SECTION 1704.4.
- THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, NOT THE SHOP DRAWINGS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR ROCKERY RETAINING WALLS 5'-0" TALL AND GREATER PER THE REQUIREMENTS OF THE TABLE BELOW:

SPECIAL INSPECTION	
ROCKERY RETAINING WALLS	CONT/PERIODIC
1. THE INSPECTION PROGRAM SHALL VERIFY THE FOLLOWING:	
A. TYPE OF ROCK	■
B. UNIT WEIGHT	■
C. ROCK SIZE	■
D. ROCK PLACEMENT	■
E. DRAINAGE LAYER	■
F. WALL FACE INCLINATION (SLOPE OR BATTER)	■



A TYPICAL STEP IN ROCKERY WALL FOUNDATION
NO SCALE



1 TYPICAL ROCKERY RETAINING WALLS W/ LEVEL BACKFILL AND SLOPING TOE
NO SCALE

KEYNOTES

- COMPACTED SUB GRADE PER GEOTECHNICAL REPORT. THERE SHOULD BE FULL CONTACT BETWEEN THE ROCK AND SOIL WHICH MAY REQUIRE SHAPING OF THE GRADE SURFACE OR SLAMMING THE ROCKS INTO PLACE SO THAT THE SOIL CONFORMS TO THE ROCK FACE. IF NONE IS SPECIFIED THEN 4" TO 6" SCREENED ANGULAR ROCK, 12" MIN THICK, MAY BE USED AS A FOUNDATION PAD. 1 VERT TO 10 MIN HORIZ SLOPE AT GRADE.
- BASE SHALL BE LEVEL AND NOT HAVE A SLOPE GREATER THAN 1 UNIT VERTICAL TO 10 UNITS HORIZONTAL. OTHERWISE A STEPPED BASE SHALL BE REQUIRED AS SHOWN
- STEP IN WALL ELEVATION AS REQ'D, 2'-0" MAX

MAX ROCKERY HEIGHT	MIN BASE WIDTH	BOT LAYER ROCK HEIGHT	2ND LAYER ROCK HEIGHT	3RD LAYER ROCK HEIGHT	4TH LAYER ROCK HEIGHT	TOP LAYER ROCK HEIGHT
3'-0"	4'-2"	1'-6"	1'-6"	---	---	---
5'-0"	5.5'	2'-0"	1'-6"	1'-6"	---	---
7'-0"	6'-11"	2'-0"	2'-0"	1'-6"	1'-6"	---
9'-0"	8'-4"	2'-0"	2'-0"	2'-0"	1'-6"	1'-6"

KEYNOTES

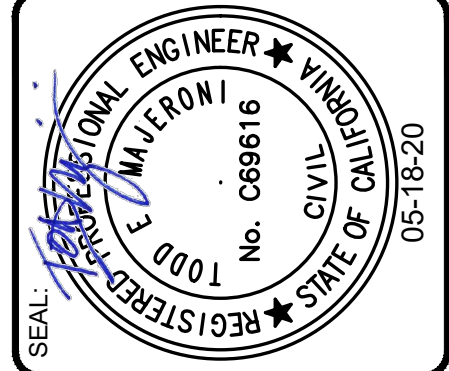
- COMPACTED SUB GRADE PER GEOTECHNICAL REPORT. THERE SHOULD BE FULL CONTACT BETWEEN THE ROCK AND SOIL WHICH MAY REQUIRE SHAPING OF THE GRADE SURFACE OR SLAMMING THE ROCKS INTO PLACE SO THAT THE SOIL CONFORMS TO THE ROCK FACE. IF NONE IS SPECIFIED THEN 4" TO 6" SCREENED ANGULAR ROCK, 12" MIN THICK, MAY BE USED AS A FOUNDATION PAD.
- 3" MINUS DRAIN ROCK SHALL BE 1'-0" WIDE
- DRAINAGE SYSTEM PER GEOTECHNICAL REPORT
- EXISTING SOIL OF CUT SLOPE OR BACKFILL PER GEOTECHNICAL ENGINEER
- LARGER ROCKS (GREATER THAN 18" IN DIAMETER) SHALL BE TIGHTLY FITTED AND INTERLOCKED WITH NEIGHBORING ROCKS. SMALLER ROCKS MAY BE INTERMITTENTLY USED FOR "STRUCTURAL CHINKING" WHICH ALLOWS LARGE ROCKS TO REST IN A STABLE MOVEMENT FREE POSITION. VOID SPACES BETWEEN LARGER ROCKS SHALL BE TIGHTLY FILLED OR "AESTHETICALLY CHINKED" SUCH THAT LARGE GAPS BETWEEN ROCKS IN THE EXPOSED FACE ARE REASONABLY WELL FILLED

KEYNOTES (CONT)

- NO ROCKS SMALLER THAN THE NOMINAL 18" DIAMETER SHALL BE PERMITTED TO BE EXPOSED IN THE FRONT FACE OR ATOP ROCK LAYER (CHINKING ROCKS ARE AN EXCEPTION)
- LONGEST DIMENSION OF ROCK SHALL BE PLACED HORIZONTALLY FROM BACK OF WALL TOWARDS FRONT OF WALL. LARGEST ROCKS AVAILABLE SHALL BE PLACED IN THE BOTTOM LAYER OF ROCKERY
- THE BACK OF EACH ROCK LAYER SHALL BE FLUSH OR NEAR FLUSH WITH THE BACK OF THE ROCK LAYER DIRECTLY BELOW
- TRAFFIC SURCHARGE NOTED ON PLANS SPECIFICALLY APPLIES TO TRAFFIC LOADINGS AS DEFINED IN 2018 IBC TABLE 1607.1, ITEM #29 & AASHTO TABLE 5.11.1.4-2. IF AASHTO H20-44 OR HS20-44 UNIFORM LOADING IS REQUIRED, CONTACT A MEMBER OF OUR OFFICE FOR ALTERNATE DETAIL
- BIO-RETENTION SOIL MIX AND/OR WASHED GRAVEL

NOTES

- REFER TO GSN FOR ADDITIONAL REQUIREMENTS AND ITEMS SHOWN BUT NOT NOTED
- STAGGER PLACEMENT OF ROCKS IN ORDER TO PREVENT DIRECT STACKING ATOP EACHOTHER. ROCKS SHOULD REST ON 2 OR MORE ROCKS BELOW
- NO ROCK SHALL BE SET ATOP A SURFACE SLOPING DOWNWARDS OUT OF THE WALL FACE
- THERE SHALL BE NO LOOSE ROCKS OR SCREE PRESENT AT ANY POINT IN THE EXPOSED FACE OR TOP OF A ROCKERY WALL
- ROCK HEIGHTS AND NUMBER OF LAYERS LISTED IN TABLE ARE APPROXIMATE. LARGER ROCKS MAY BE USED WITH FEWER LAYERS
- ROCKERY WALL SHALL NOT BE SURCHARGED OR USED IN A STACKED CONFIGURATION EXCEPT AS NOTED



RIMROCK ENGINEERING
9080 W. CHEYENNE AVE., SUITE 120
LAS VEGAS, NV 89129
PHONE: (702) 898-5311
FAX: (702) 898-9339

CAMERON RANCH
GREEN VALLEY RD & STARBUCK RD
EL DORADO COUNTY, CA

PROJECT: PROTO-II WALL SYSTEMS MAY ONLY BE INSTALLED BY APPROVED AND CERTIFIED INSTALLERS

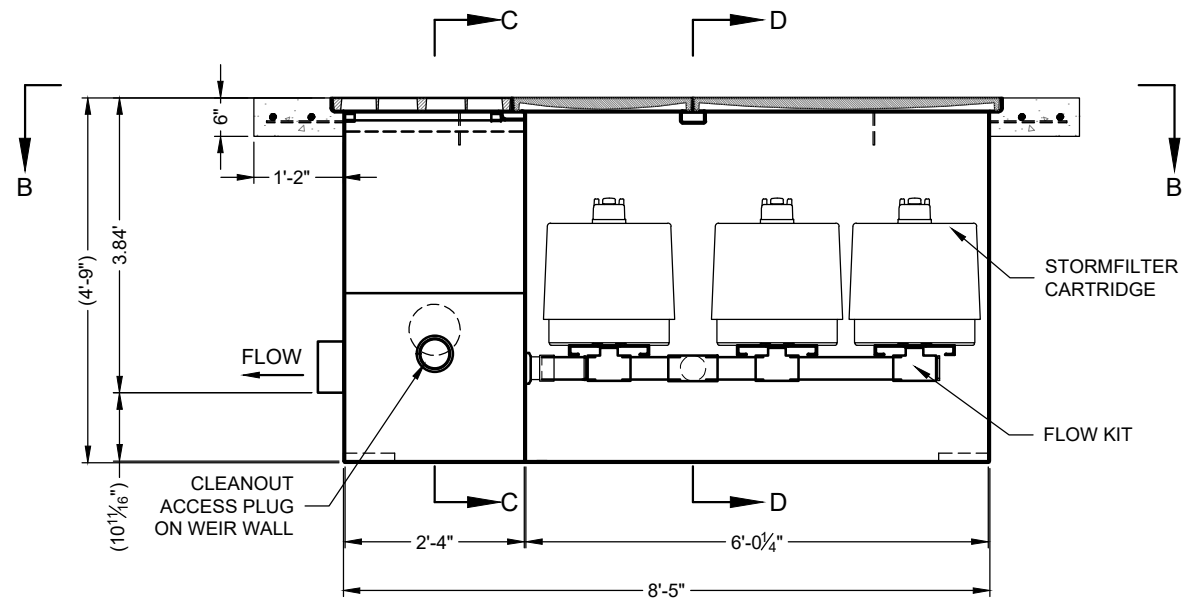
TITLE: TYP DETAILS & ROCKERY RETAINING WALL DETAILS

PROTO-II™ WALL SYSTEMS
www.proto2.com
3812 CALIFORNIA AVE
LONG BEACH, CA 90807
ATTN: MARIO SALAZAR
PH: (562) 271-8520
msalazar@proto2.com

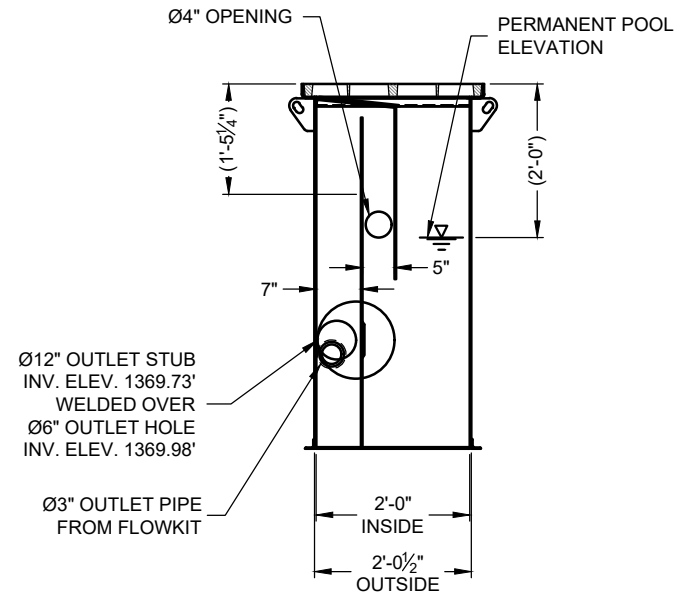
U.S. PATENTED 6,832,208 U.S. PATENTED 6,481,487
U.S. PATENTED 6,832,208 U.S. PATENTED 6,481,487
U.S. PATENTED 7,188,485 U.S. PATENTED 7,188,485

REV #	DESCRIPTION	DATE

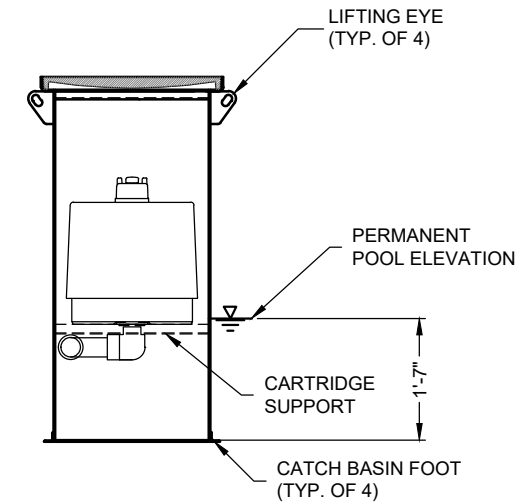
CHECKED: TEM
DRAWN: CAD
DATE: 03-17-20
PROJ No.: 20-147
SHEET: **S0.3**



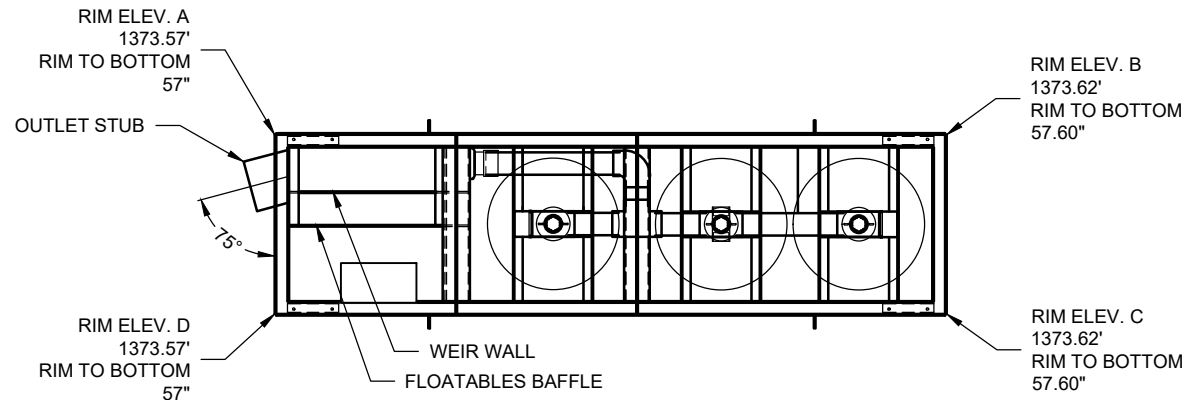
SECTION A-A
18" CARTRIDGES, DEEP SYSTEM



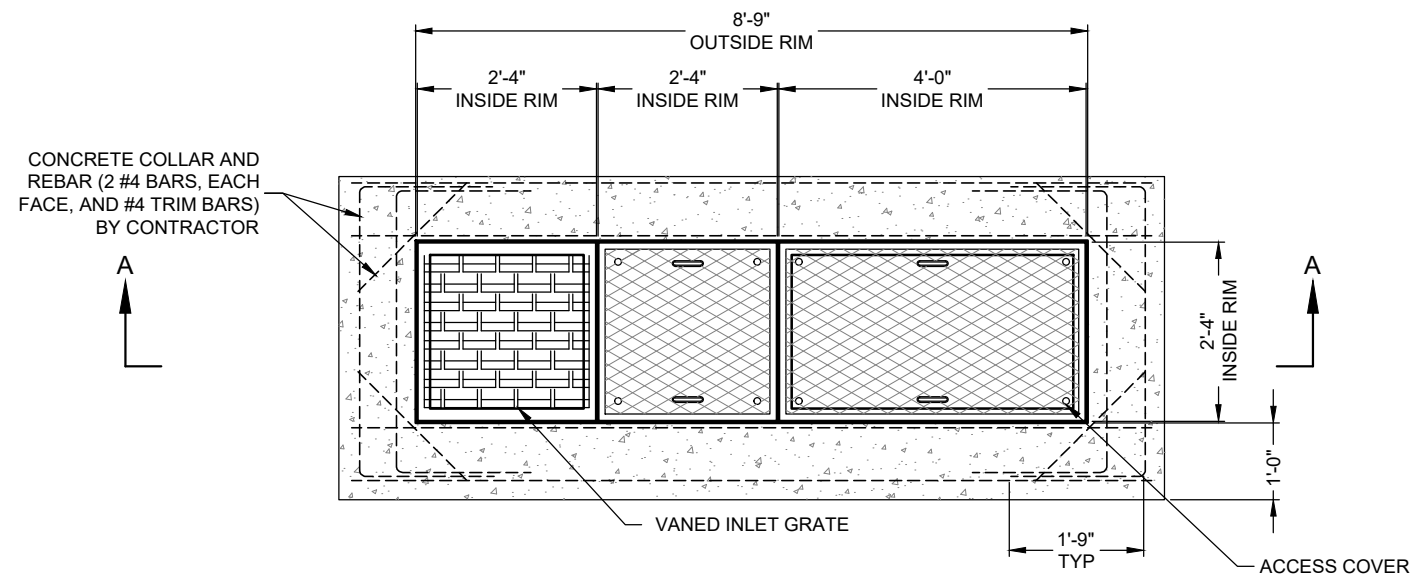
SECTION C-C



SECTION D-D



SECTION B-B



PLAN VIEW

MATERIAL LIST- PROVIDED BY CONTECH

COUNT	DESCRIPTION	INSTALLED BY
3	18", 15 GPM, ZPG CARTRIDGE (BLK)	CONTECH
1	FLOW KIT	CONTECH
1	NON-POWDER COATED STEEL CATCH BASIN	CONTECH
1	28" x 28" VANED INLET COVER	CONTRACTOR
1	28" x 28" ACCESS COVER	CONTRACTOR
1	28" x 48" ACCESS COVER	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.1 CFS
PEAK FLOW RATE	1.4 CFS
RETURN PERIOD OF PEAK FLOW	10 YRS
FILTER MEDIA TYPE	ZPG

PERFORMANCE SPECIFICATION

FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS. SPECIFIC FLOW RATE SHALL BE 2 GPM/SF (MAXIMUM). SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE 6 GPM/CF OF MEDIA (MAXIMUM).

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
- STEEL STRUCTURE TO BE MANUFACTURED OF 1/4 INCH STEEL PLATE. CASTINGS SHALL MEET AASHTO HS20 LOAD RATING. FOR HS20 LOAD RATING ON STRUCTURE. CONCRETE COLLAR IS REQUIRED AND TO BE PROVIDED BY CONTRACTOR.
- MANUFACTURER TO APPLY A SURFACE BEAD WELD IN THE SHAPE OF THE LETTER "O" ABOVE THE OUTLET PIPE STUB ON THE EXTERIOR SURFACE OF THE STEEL SFCB.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CATCHBASIN STORMFILTER EQUIPPED WITH 4 INCH (APPROXIMATE) LONG STUBS FOR INLET (IF APPLICABLE) AND OUTLET PIPING.
- STANDARD OUTLET STUB IS 8 INCHES IN DIAMETER. MAXIMUM OUTLET STUB IS 15 INCHES IN DIAMETER. CONNECTION TO COLLECTION PIPING CAN BE MADE USING FLEXIBLE COUPLING BY CONTRACTOR. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
- FOR H20 LOAD RATING, CONTRACTOR TO PROVIDE CONCRETE COLLAR WITH REINFORCEMENT, AS SHOWN.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

STRUCTURE WEIGHT

APPROXIMATE HEAVIEST PICK = 2,650 LBS

CONTECH
PROPOSAL
DRAWING

The design and information shown on this drawing is provided as a service to the project owner, engineer or contractor. It is not to be used for any other purpose. (Contech) Neither this drawing, nor any part thereof, may be used, reproduced or modified in any manner without the prior written consent of Contech. Failure to comply with the terms of this agreement shall constitute a breach of contract and shall render Contech liable for any and all damages, including but not limited to, reasonable attorney's fees and costs. Contech does not assume any liability or responsibility for any discrepancies between the supplied information upon which the drawing is based and actual field conditions are encountered as site work progresses. These discrepancies must be reported to Contech immediately. Contech shall not be held responsible for any incomplete or inaccurate information supplied by others.

NO.	DATE	REVISION DESCRIPTION	BY

MARK	DATE

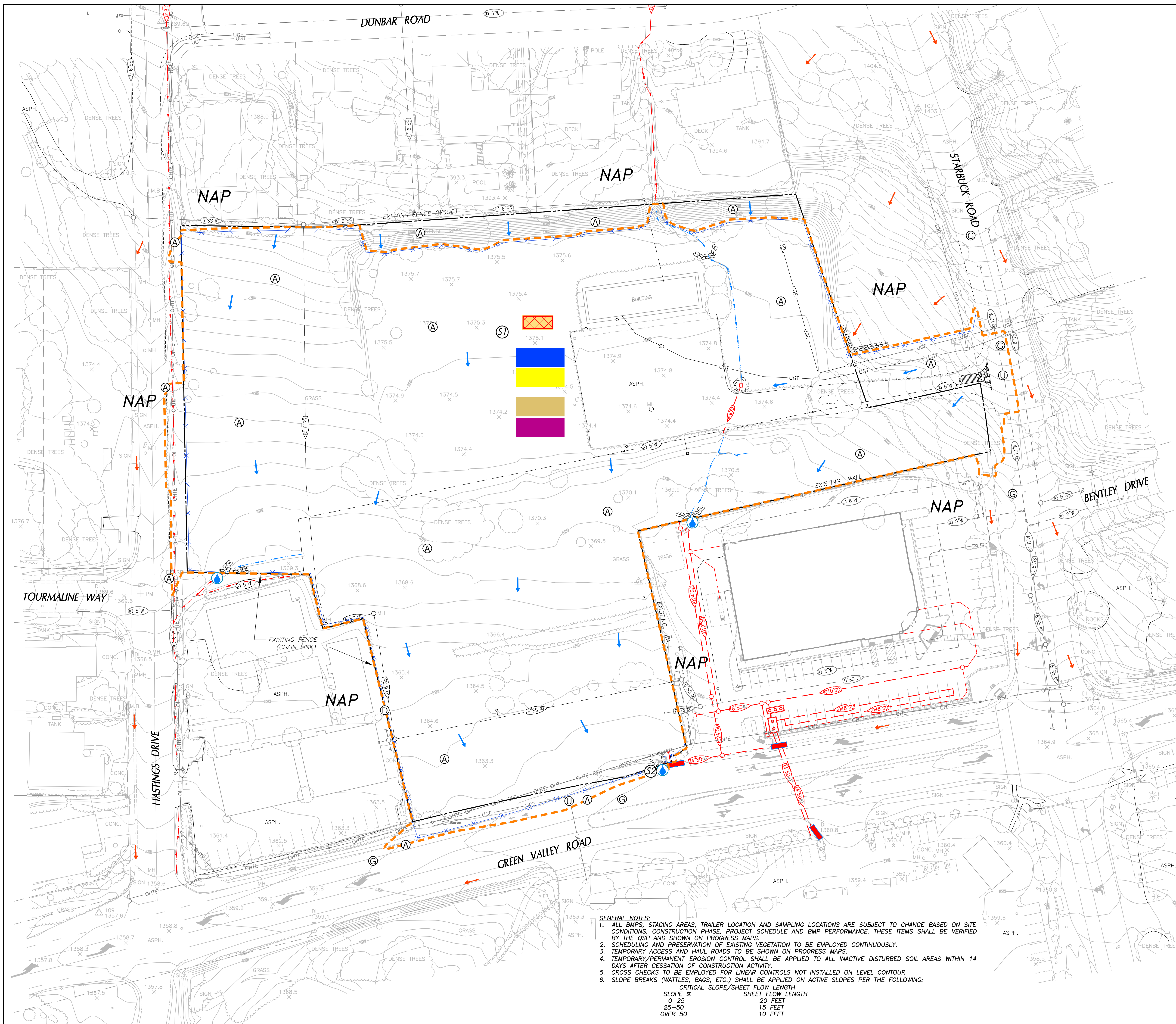
3 CARTRIDGE STEEL CATCHBASIN
645543-10
CAMERON RANCH
CAMERON PARK, CA
SITE DESIGNATION:

CONTECH
ENGINEERED SOLUTIONS LLC
11835 NE GARDEN LANE, SUITE 200, PORTLAND, OR 97220
800-566-4667 / 503-240-3393 / 800-566-1271 FAX
www.conteches.com

StormFilter
THE STORMFILTER IS AN INNOVATIVE WATER FILTERING SYSTEM THAT IS DESIGNED TO REMOVE SOLIDS, OILS, GREASE, AND OTHER POLLUTANTS FROM WASTEWATER.

DATE:	5/8/20
DESIGNED:	SJM
DRAWN:	SJM
CHECKED:	APPROVED:
PROJECT No.:	645543
SEQUENCE No.:	10
SHEET:	G 32 of 48

I:\AD\CONTECH\CPI\ROOT\MERLIN\PROJECT\TIVE\645500\645543\10-STORMFILTER\DRAWINGS\645543-10-SFCB3X-CON.DWG 5/12/2020 11:47 AM

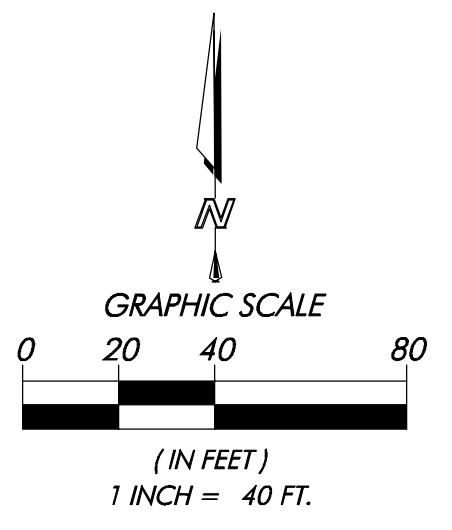


LEGEND

- PROPERTY LIMITS
- - - - - DISTURBANCE LIMITS WITH SEDIMENT CONTROL
SILT FENCE, FIBER ROLL OR GRAVEL BAGS
PER GSP'S DISCRETION (D) (E) (F)
- NAP**
- SURFACE FLOW (ONSITE)
- SURFACE FLOW (OFFSITE)
- EXISTING DRAINAGE SYSTEM
- PROPOSED DRAINAGE SYSTEM
- EC-9 DRAINAGE SWALE
- SE-3 SEDIMENT TRAP
- EC-10 VELOCITY DISSIPATION
- EXISTING CATCH BASIN WITH INLET PROTECTION (H)
- PROJECT CATCH BASIN WITH INLET PROTECTION (H)
- (S) NON-VISIBLE POLLUTANT SAMPLING LOCATION
- (D) DISCHARGE POINT/SAMPLING LOCATION
- CONSTRUCTION TRAILER
- TC-1 STABILIZED CONSTRUCTION ENTRANCE LOCATION(S) BASED ON CONSTRUCTION SCHEDULE AND SITE NEED PER GSP DISCRETION
- ALT-1 STABILIZED ROCK ENTRANCE LOCATION(S) BASED ON CONSTRUCTION SCHEDULE AND SITE NEED PER GSP DISCRETION
- MATERIAL DELIVERY/STORAGE (C)(F)(I)(K)(L)
- WASTE STORAGE AREA (C)(F)(M)(O)(R)
- VEHICLE/EQUIPMENT STORAGE (C)(F)(L)(N)(O)(R)(S)
- CONCRETE WASTE/WASHOUT (C)(F)(M)(O)(R)

BMP NOTES

- (A) EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
- EMPLOYED CONTINUOUSLY
- (B) EC-3 HYDRAULIC MULCH
EC-4 HYDROSEEDING
EC-5 SOIL BINDERS
EC-6 STRAW MULCH
EC-8 WOOD MULCH
EC-14 COMPOST BLANKETS
- PER 14 DAY/DUST CONTROL
- (C) EC-7 GEOTEXTILES
WM-3 STOCKPILE MANAGEMENT
- (D) SE-1 SILT FENCE - CROSS CHECKS TO BE INSTALLED IF FENCING IS INSTALLED ACROSS SLOPE
- (E) SE-6 FIBER ROLL
- (F) SE-4 CHECK DAM
SE-6 GRAVEL BAG BERM
- (G) SE-7 STREET SWEEPING
- (H) SE-10 INLET PROTECTION
- (I) WE-1 WIND EROSION CONTROL
EMPLOYED CONTINUOUSLY AND AS NEEDED BASED ON SITE SPECIFIC CONDITIONS PER GSP DISCRETION
- (J) WM-1 MATERIAL DELIVERY/STORAGE
- (K) WM-2 MATERIAL USE
- (L) WM-4 SPILL PREVENTION/CONTROL
- (M) WM-5 SOLID WASTE MANAGEMENT
- (N) WM-6 CONTAMINATED SOIL MANAGEMENT
- (O) WM-7 CONTAMINATED SOIL MANAGEMENT
- TO BE EMPLOYED AS NEEDED FOR ACCIDENTAL RELEASE OF CONSTRUCTION RELATED MATERIALS
- (P) WM-8 CONCRETE WASTE
- (Q) WM-9 SANITARY WASTE
- (R) WM-10 LIQUID WASTE
- (S) NS-1 WATER CONSERVATION
- EMPLOYED CONTINUOUSLY
- (T) NS-2 DEWATERING OPERATIONS
- (U) NS-3 PAVING AND GRINDING
- (V) NS-6 ILLICIT CONNECTION
- EMPLOYED CONTINUOUSLY
- (W) NS-7 POTABLE WATER/IRRIGATION
- (X) NS-8 VEHICLE & EQUIPMENT CLEANING
NS-9 VEHICLE & EQUIPMENT FUELING
NS-10 VEHICLE & EQUIPMENT MAINTENANCE
- (Y) NS-12 CONCRETE CURING
NS-13 CONCRETE FINISHING
- (Z) WE-1 WIND EROSION CONTROL
- EMPLOYED CONTINUOUSLY



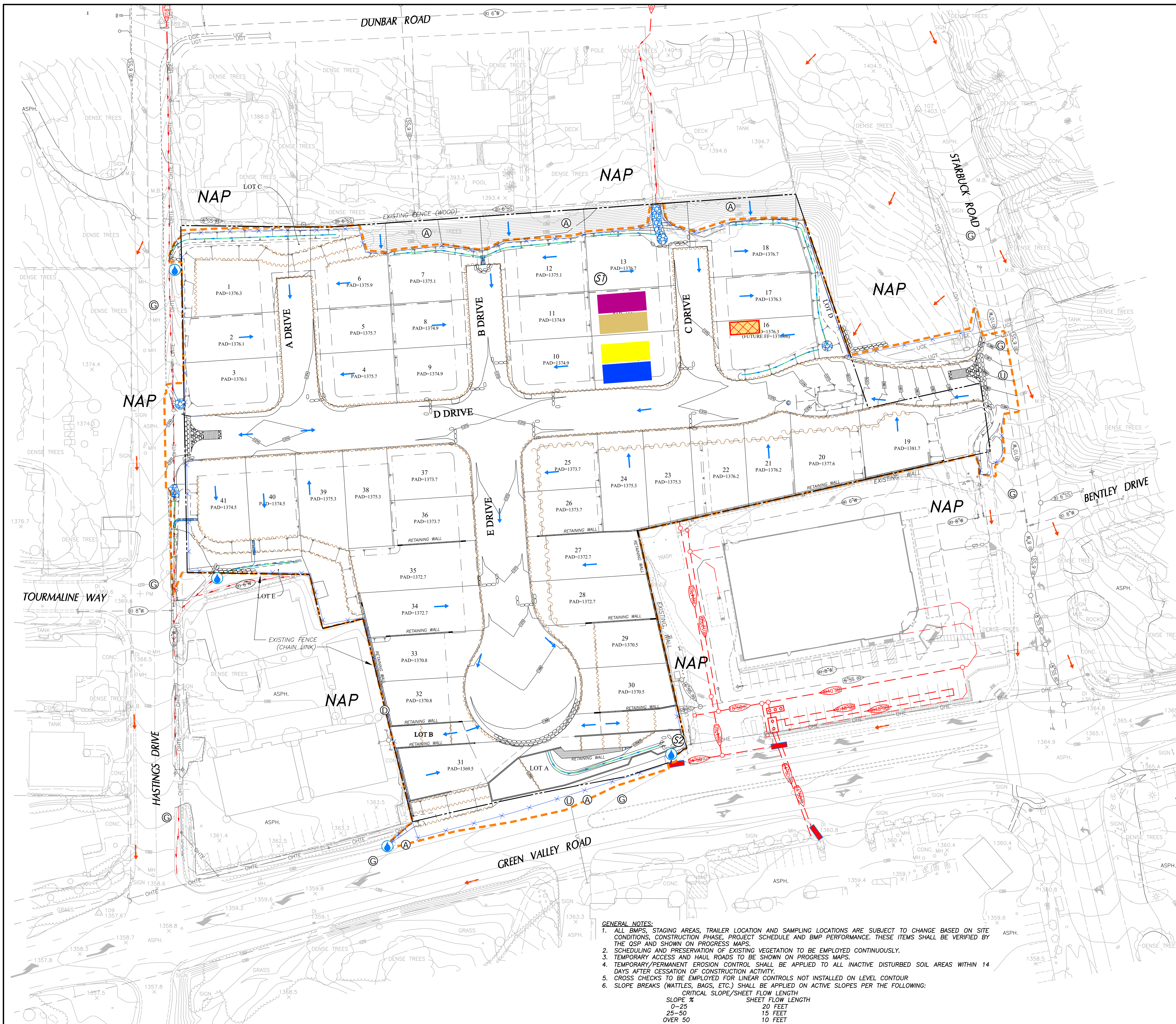
GENERAL NOTES:

- ALL BMPs, STAGING AREAS, TRAILER LOCATION AND SAMPLING LOCATIONS ARE SUBJECT TO CHANGE BASED ON SITE CONDITIONS, CONSTRUCTION PHASE, PROJECT SCHEDULE AND BMP PERFORMANCE. THESE ITEMS SHALL BE VERIFIED BY THE GSP AND SHOWN ON PROGRESS MAPS.
- SCHEDULING AND PRESERVATION OF EXISTING VEGETATION TO BE EMPLOYED CONTINUOUSLY.
- TEMPORARY ACCESS AND HAIL ROADS TO BE SHOWN ON PROGRESS MAPS.
- TEMPORARY/PERMANENT EROSION CONTROL SHALL BE APPLIED TO ALL INACTIVE DISTURBED SOIL AREAS WITHIN 14 DAYS AFTER CESSATION OF CONSTRUCTION ACTIVITY.
- CROSS CHECKS TO BE EMPLOYED FOR LINEAR CONTROLS NOT INSTALLED ON LEVEL CONTOUR
- SLOPE BREAKS (WATTLES, BAGS, ETC.) SHALL BE APPLIED ON ACTIVE SLOPES PER THE FOLLOWING:

SLOPE %	CRITICAL SLOPE/SHEET FLOW LENGTH	SHEET FLOW LENGTH
0-25	20 FEET	20 FEET
25-50	15 FEET	15 FEET
OVER 50	10 FEET	10 FEET

**STORM WATER POLLUTION PREVENT PLAN
BMP SITE PLAN - EXISTING & SITE CLEARING/
DEMOLITION PHASE**

APPLICANT: 4170 DOUGLAS BOULEVARD, SUITE 150 GRANITE BAY, CA 95746 (916) 850-0236	PREPARED BY: P.O. BOX 462 ELK GROVE, CA 95758 (916) 567-9248		
"CAMERON RANCH" TM 17-1531 / PD 17-0007 NORTHWEST OF GREEN VALLEY ROAD & STARBUCK ROAD CITY OF CAMERON PARK, CALIFORNIA			
DRAFTED BY: TIH	DATE: 04/29/2020	W.O. NO: 12037	SHEET NO: 1 OF 1

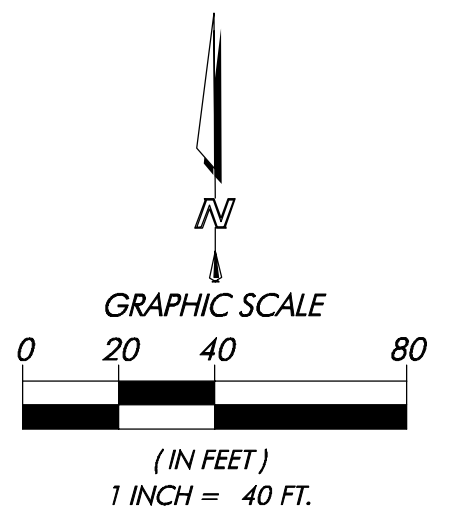


LEGEND

- PROPERTY LIMITS
- - - - - DISTURBANCE LIMITS WITH SEDIMENT CONTROL
SILT FENCE, FIBER ROLL OR GRAVEL BAGS
PER GSP'S DISCRETION (D) (E) (F)
- NAP**
- SURFACE FLOW (ONSITE)
- SURFACE FLOW (OFFSITE)
- EXISTING DRAINAGE SYSTEM
- PROPOSED DRAINAGE SYSTEM
- EC-9 DRAINAGE SWALE
- SE-3 SEDIMENT TRAP
- EC-10 VELOCITY DISSIPATION
- EXISTING CATCH BASIN WITH INLET PROTECTION (H)
- PROJECT CATCH BASIN WITH INLET PROTECTION (H)
- (ST) NON-VISIBLE POLLUTANT SAMPLING LOCATION
- (B) DISCHARGE POINT/SAMPLING LOCATION
- CONSTRUCTION TRAILER
- TC-1 STABILIZED CONSTRUCTION ENTRANCE LOCATION(S) BASED ON CONSTRUCTION SCHEDULE AND SITE NEED PER OSP DISCRETION
- ALT-1 STABILIZED ROCK ENTRANCE LOCATION(S) BASED ON CONSTRUCTION SCHEDULE AND SITE NEED PER OSP DISCRETION
- MATERIAL DELIVERY/STORAGE (C)(F)(I)(K)(L)
- WASTE STORAGE AREA (C)(F)(M)(O)(R)
- VEHICLE/EQUIPMENT STORAGE (C)(F)(L)(N)(O)(R)(S)
- CONCRETE WASTE/WASHOUT (C)(F)(M)(O)(R)

BMP NOTES

- (A) EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
- EMPLOYED CONTINUOUSLY
- (B) EC-3 HYDRAULIC MULCH
EC-4 HYDROSEEDING
EC-5 SOIL BINDERS
EC-6 STRAW MULCH
EC-8 WOOD MULCH
EC-14 COMPOST BLANKETS
- PER 14 DAY/DUST CONTROL
- (C) EC-7 GEOTEXTILES
WM-3 STOCKPILE MANAGEMENT
- (D) SE-1 SILT FENCE - X
- CROSS CHECKS TO BE INSTALLED IF FENCING IS INSTALLED ACROSS SLOPE
- (E) SE-6 FIBER ROLL
- (F) SE-4 CHECK DAM
SE-6 GRAVEL BAG BERM
- (G) SE-7 STREET SWEEPING
- (H) SE-10 INLET PROTECTION
- (I) WE-1 WIND EROSION CONTROL
EMPLOYED CONTINUOUSLY AND AS NEEDED BASED ON SITE SPECIFIC CONDITIONS PER OSP DISCRETION
- (J) WM-1 MATERIAL DELIVERY/STORAGE
- (K) WM-2 MATERIAL USE
- (L) WM-4 SPILL PREVENTION/CONTROL
- (M) WM-5 SOLID WASTE MANAGEMENT
- (N) WM-6 CONTAMINATED SOIL MANAGEMENT
- (O) WM-7 CONTAMINATED SOIL MANAGEMENT
- TO BE EMPLOYED AS NEEDED FOR ACCIDENTAL RELEASE OF CONSTRUCTION RELATED MATERIALS
- (P) WM-8 CONCRETE WASTE
- (Q) WM-9 SANITARY WASTE
- (R) WM-10 LIQUID WASTE
- (S) NS-1 WATER CONSERVATION
- EMPLOYED CONTINUOUSLY
- (T) NS-2 DEWATERING OPERATIONS
- (U) NS-3 PAVING AND GRINDING
- (V) NS-6 ILLICIT CONNECTION
- EMPLOYED CONTINUOUSLY
- (W) NS-7 POTABLE WATER/IRRIGATION
- (X) NS-8 VEHICLE & EQUIPMENT CLEANING
NS-9 VEHICLE & EQUIPMENT FUELING
NS-10 VEHICLE & EQUIPMENT MAINTENANCE
- (Y) NS-12 CONCRETE CURING
NS-13 CONCRETE FINISHING
- (Z) WE-1 WIND EROSION CONTROL
- EMPLOYED CONTINUOUSLY



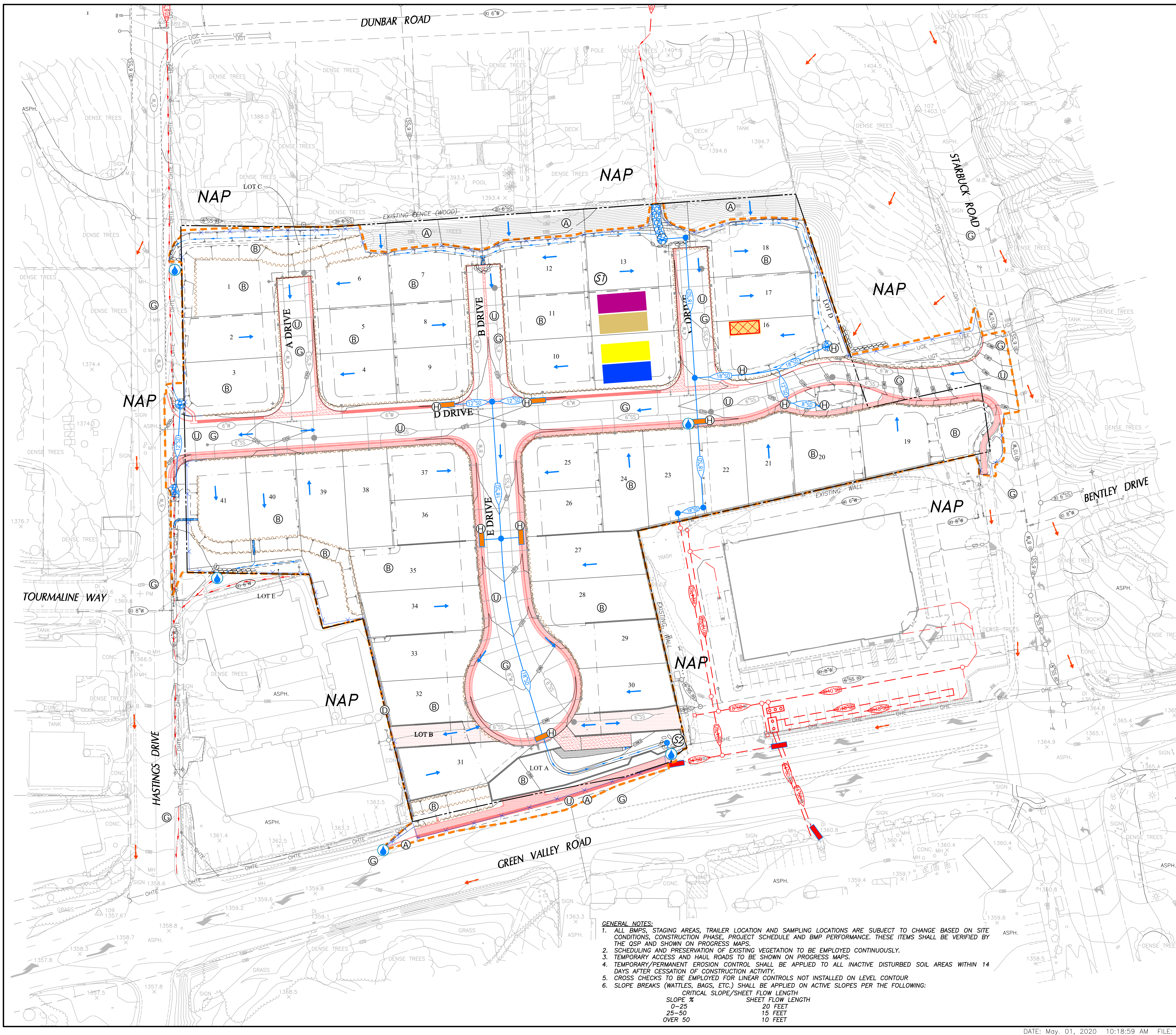
GENERAL NOTES:

- ALL BMPs, STAGING AREAS, TRAILER LOCATION AND SAMPLING LOCATIONS ARE SUBJECT TO CHANGE BASED ON SITE CONDITIONS, CONSTRUCTION PHASE, PROJECT SCHEDULE AND BMP PERFORMANCE. THESE ITEMS SHALL BE VERIFIED BY THE OSP AND SHOWN ON PROGRESS MAPS.
- SCHEDULING AND PRESERVATION OF EXISTING VEGETATION TO BE EMPLOYED CONTINUOUSLY.
- TEMPORARY ACCESS AND HAUL ROADS TO BE SHOWN ON PROGRESS MAPS.
- TEMPORARY/PERMANENT EROSION CONTROL SHALL BE APPLIED TO ALL INACTIVE DISTURBED SOIL AREAS WITHIN 14 DAYS AFTER CESSATION OF CONSTRUCTION ACTIVITY.
- CROSS CHECKS TO BE EMPLOYED FOR LINEAR CONTROLS NOT INSTALLED ON LEVEL CONTOUR
- SLOPE BREAKS (WATTLES, BAGS, ETC.) SHALL BE APPLIED ON ACTIVE SLOPES PER THE FOLLOWING:

SLOPE %	CRITICAL SLOPE/SHEET FLOW LENGTH	SHEET FLOW LENGTH
0-25	20 FEET	
25-50	15 FEET	
OVER 50	10 FEET	

**STORM WATER POLLUTION PREVENT PLAN
BMP SITE PLAN - ROUGH GRADING**

APPLICANT: 4170 DOUGLAS BOULEVARD, SUITE 150 GRANITE BAY, CA 95746 (916) 850-0236	PREPARED BY: P.O. BOX 462 ELK GROVE, CA 95758 (916) 567-9248		
"CAMERON RANCH" TM 17-1531 / PD 17-0007 NORTHWEST OF GREEN VALLEY ROAD & STARBUCK ROAD CITY OF CAMERON PARK, CALIFORNIA			
DRAFTED BY: TIH	DATE: 04/29/2020	W.O. NO: 12037	SHEET NO: 1 OF 1

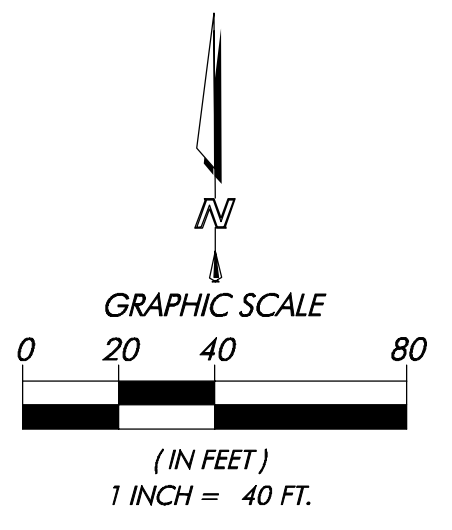


LEGEND

- PROPERTY LIMITS
- - - - - DISTURBANCE LIMITS WITH SEDIMENT CONTROL
SILT FENCE, FIBER ROLL OR GRAVEL BAGS
PER GSP'S DISCRETION (D) (E) (F)
- NAP**
- SURFACE FLOW (ONSITE)
- SURFACE FLOW (OFFSITE)
- EXISTING DRAINAGE SYSTEM
- PROPOSED DRAINAGE SYSTEM
- EC-9 DRAINAGE SWALE
- SE-3 SEDIMENT TRAP
- EC-10 VELOCITY DISSIPATION
- EXISTING CATCH BASIN WITH INLET PROTECTION (H)
- PROJECT CATCH BASIN WITH INLET PROTECTION (H)
- (S) NON-VISIBLE POLLUTANT SAMPLING LOCATION
- (D) DISCHARGE POINT/SAMPLING LOCATION
- CONSTRUCTION TRAILER
- TC-1 STABILIZED CONSTRUCTION ENTRANCE LOCATION(S) BASED ON CONSTRUCTION SCHEDULE AND SITE NEED PER GSP DISCRETION
- ALT-1 STABILIZED ROCK ENTRANCE LOCATION(S) BASED ON CONSTRUCTION SCHEDULE AND SITE NEED PER GSP DISCRETION
- MATERIAL DELIVERY/STORAGE (C)(F)(I)(K)(L)
- WASTE STORAGE AREA (C)(F)(M)(O)(R)
- VEHICLE/EQUIPMENT STORAGE (C)(F)(L)(N)(O)(R)(S)
- CONCRETE WASTE/WASHOUT (C)(F)(M)(O)(R)

BMP NOTES

- (A) EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
- EMPLOYED CONTINUOUSLY
- (B) EC-3 HYDRAULIC MULCH
EC-4 HYDROSEEDING
EC-5 SOIL BINDERS
EC-6 STRAW MULCH
EC-8 WOOD MULCH
EC-14 COMPOST BLANKETS
- PER 14 DAY/DUST CONTROL
- (C) EC-7 GEOTEXTILES
WM-3 STOCKPILE MANAGEMENT
- (D) SE-1 SILT FENCE - CROSS CHECKS TO BE INSTALLED IF FENCING IS INSTALLED ACROSS SLOPE
- (E) SE-6 FIBER ROLL
- (F) SE-4 CHECK DAM
SE-6 GRAVEL BAG BERM
- (G) SE-7 STREET SWEEPING
- (H) SE-10 INLET PROTECTION
- (I) WE-1 WIND EROSION CONTROL
EMPLOYED CONTINUOUSLY AND AS NEEDED BASED ON SITE SPECIFIC CONDITIONS PER GSP DISCRETION
- (J) WM-1 MATERIAL DELIVERY/STORAGE
- (K) WM-2 MATERIAL USE
- (L) WM-4 SPILL PREVENTION/CONTROL
- (M) WM-5 SOLID WASTE MANAGEMENT
- (N) WM-6 CONTAMINATED SOIL MANAGEMENT
- (O) WM-7 CONTAMINATED SOIL MANAGEMENT
- TO BE EMPLOYED AS NEEDED FOR ACCIDENTAL RELEASE OF CONSTRUCTION RELATED MATERIALS
- (P) WM-8 CONCRETE WASTE
- (Q) WM-9 SANITARY WASTE
- (R) WM-10 LIQUID WASTE
- (S) NS-1 WATER CONSERVATION
- EMPLOYED CONTINUOUSLY
- (T) NS-2 DEWATERING OPERATIONS
- (U) NS-3 PAVING AND GRINDING
- (V) NS-6 ILLICIT CONNECTION
- EMPLOYED CONTINUOUSLY
- (W) NS-7 POTABLE WATER/IRRIGATION
- (X) NS-8 VEHICLE & EQUIPMENT CLEANING
NS-9 VEHICLE & EQUIPMENT FUELING
NS-10 VEHICLE & EQUIPMENT MAINTENANCE
- (Y) NS-12 CONCRETE CURING
NS-13 CONCRETE FINISHING
- (Z) WE-1 WIND EROSION CONTROL
- EMPLOYED CONTINUOUSLY



GENERAL NOTES:

- ALL BMPs, STAGING AREAS, TRAILER LOCATION AND SAMPLING LOCATIONS ARE SUBJECT TO CHANGE BASED ON SITE CONDITIONS, CONSTRUCTION PHASE, PROJECT SCHEDULE AND BMP PERFORMANCE. THESE ITEMS SHALL BE VERIFIED BY THE GSP AND SHOWN ON PROGRESS MAPS.
- SCHEDULING AND PRESERVATION OF EXISTING VEGETATION TO BE EMPLOYED CONTINUOUSLY.
- TEMPORARY ACCESS AND HAUL ROADS TO BE SHOWN ON PROGRESS MAPS.
- TEMPORARY/PERMANENT EROSION CONTROL SHALL BE APPLIED TO ALL INACTIVE DISTURBED SOIL AREAS WITHIN 14 DAYS AFTER CESSATION OF CONSTRUCTION ACTIVITY.
- CROSS CHECKS TO BE EMPLOYED FOR LINEAR CONTROLS NOT INSTALLED ON LEVEL CONTOUR
- SLOPE BREAKS (WATTLES, BAGS, ETC.) SHALL BE APPLIED ON ACTIVE SLOPES PER THE FOLLOWING:

SLOPE %	CRITICAL SLOPE/SHEET FLOW LENGTH	SHEET FLOW LENGTH
0-25	15 FEET	20 FEET
25-50	15 FEET	15 FEET
OVER 50	10 FEET	10 FEET

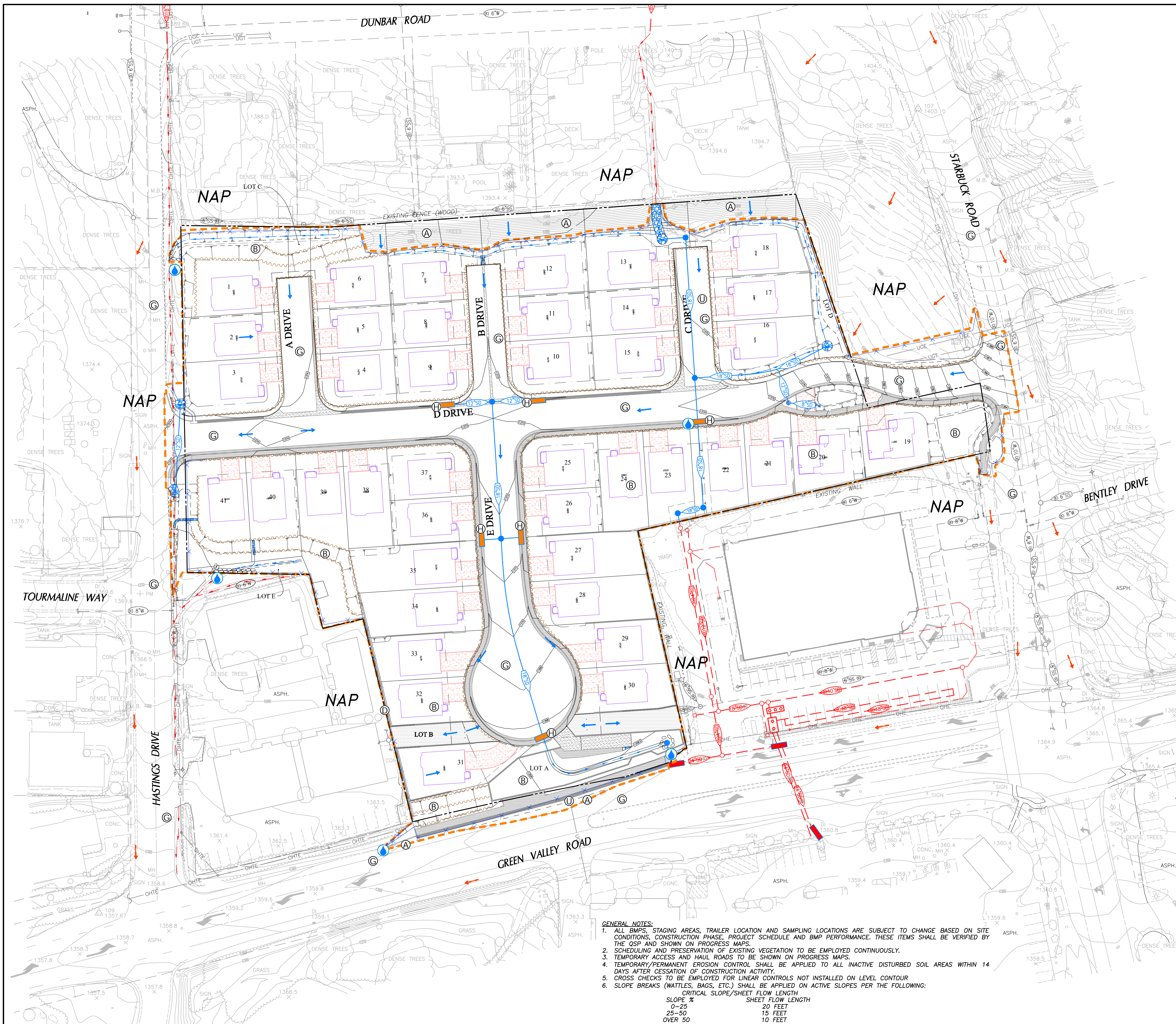
**STORM WATER POLLUTION PREVENT PLAN
BMP SITE PLAN - STREETS & UTILITIES**

APPLICANT: **RIVERLAND HOMES, INC.**
4170 DOUGLAS BOULEVARD, SUITE 150
GRANITE BAY, CA 95746
(916) 850-0236

PREPARED BY: **BRYAN ENVIRONMENTAL**
P.O. BOX 462
ELK GROVE, CA 95758
(916) 567-9248

"CAMERON RANCH"
TM 17-1531 / PD 17-0007
NORTHWEST OF GREEN VALLEY ROAD & STARBUCK ROAD
CITY OF CAMERON PARK, CALIFORNIA

DRAFTED BY: TIH DATE: 04/30/2020 W.O. NO: 12037 SHEET NO: 1 OF 1

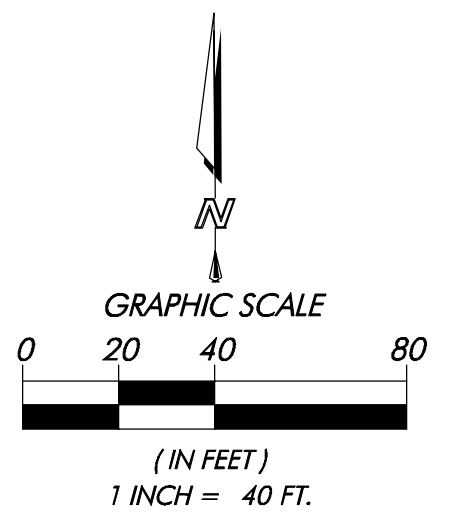


LEGEND

- PROPERTY LIMITS
- - - - - DISTURBANCE LIMITS WITH SEDIMENT CONTROL
SILT FENCE, FIBER ROLL OR GRAVEL BAGS
PER GSP'S DISCRETION (D) (E) (F)
- NAP**
- SURFACE FLOW (ONSITE)
- SURFACE FLOW (OFFSITE)
- EXISTING DRAINAGE SYSTEM
- PROPOSED DRAINAGE SYSTEM
- EC-9 DRAINAGE SWALE
- SE-3 SEDIMENT TRAP
- EC-10 VELOCITY DISSIPATION
- EXISTING CATCH BASIN WITH INLET PROTECTION (H)
- PROJECT CATCH BASIN WITH INLET PROTECTION (H)
- (ST) NON-VISIBLE POLLUTANT SAMPLING LOCATION
- (B) DISCHARGE POINT/SAMPLING LOCATION
- CONSTRUCTION TRAILER
- TC-1 STABILIZED CONSTRUCTION ENTRANCE LOCATION(S) BASED ON CONSTRUCTION SCHEDULE AND SITE NEED PER GSP DISCRETION
- ALT-1 STABILIZED ROCK ENTRANCE LOCATION(S) BASED ON CONSTRUCTION SCHEDULE AND SITE NEED PER GSP DISCRETION
- MATERIAL DELIVERY/STORAGE (C)(F)(I)(K)(L)
- WASTE STORAGE AREA (C)(F)(M)(R)
- VEHICLE/EQUIPMENT STORAGE (C)(F)(L)(N)(O)(R)(S)
- CONCRETE WASTE/WASHOUT (C)(F)(M)(R)

BMP NOTES

- (A) EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
- EMPLOYED CONTINUOUSLY
- (B) EC-3 HYDRAULIC MULCH
EC-4 HYDROSEEDING
EC-5 SOIL BINDERS
EC-6 STRAW MULCH
EC-8 WOOD MULCH
EC-14 COMPOST BLANKETS
- PER 14 DAY/DUST CONTROL
- (C) EC-7 GEOTEXTILES
WM-3 STOCKPILE MANAGEMENT
- (D) SE-1 SILT FENCE
- CROSS CHECKS TO BE INSTALLED IF FENCING IS INSTALLED ACROSS SLOPE
- (E) SE-6 FIBER ROLL
- (F) SE-4 CHECK DAM
SE-6 GRAVEL BAG BERM
- (G) SE-7 STREET SWEEPING
- (H) SE-10 INLET PROTECTION
- (I) WE-1 WIND EROSION CONTROL
EMPLOYED CONTINUOUSLY AND AS NEEDED BASED ON SITE SPECIFIC CONDITIONS PER GSP DISCRETION
- (J) WM-1 MATERIAL DELIVERY/STORAGE
- (K) WM-2 MATERIAL USE
- (L) WM-4 SPILL PREVENTION/CONTROL
- (M) WM-5 SOLID WASTE MANAGEMENT
- (N) WM-6 CONTAMINATED SOIL MANAGEMENT
- (O) WM-7 CONTAMINATED SOIL MANAGEMENT
- TO BE EMPLOYED AS NEEDED FOR ACCIDENTAL RELEASE OF CONSTRUCTION RELATED MATERIALS
- (P) WM-8 CONCRETE WASTE
- (Q) WM-9 SANITARY WASTE
- (R) WM-10 LIQUID WASTE
- (S) NS-1 WATER CONSERVATION
- EMPLOYED CONTINUOUSLY
- (T) NS-2 DEWATERING OPERATIONS
- (U) NS-3 PAVING AND GRINDING
- (V) NS-6 ILLICIT CONNECTION
- EMPLOYED CONTINUOUSLY
- (W) NS-7 POTABLE WATER/IRRIGATION
- (X) NS-8 VEHICLE & EQUIPMENT CLEANING
NS-9 VEHICLE & EQUIPMENT FUELING
NS-10 VEHICLE & EQUIPMENT MAINTENANCE
- (Y) NS-12 CONCRETE CURING
NS-13 CONCRETE FINISHING
- (Z) WE-1 WIND EROSION CONTROL
- EMPLOYED CONTINUOUSLY



GENERAL NOTES:

- ALL BMPs, STAGING AREAS, TRAILER LOCATION AND SAMPLING LOCATIONS ARE SUBJECT TO CHANGE BASED ON SITE CONDITIONS, CONSTRUCTION PHASE, PROJECT SCHEDULE AND BMP PERFORMANCE. THESE ITEMS SHALL BE VERIFIED BY THE GSP AND SHOWN ON PROGRESS MAPS.
- SCHEDULING AND PRESERVATION OF EXISTING VEGETATION TO BE EMPLOYED CONTINUOUSLY.
- TEMPORARY ACCESS AND HAUL ROADS TO BE SHOWN ON PROGRESS MAPS.
- TEMPORARY/PERMANENT EROSION CONTROL SHALL BE APPLIED TO ALL INACTIVE DISTURBED SOIL AREAS WITHIN 14 DAYS AFTER CESSATION OF CONSTRUCTION ACTIVITY.
- CROSS CHECKS TO BE EMPLOYED FOR LINEAR CONTROLS NOT INSTALLED ON LEVEL CONTOUR
- SLOPE BREAKS (WATTLES, BAGS, ETC.) SHALL BE APPLIED ON ACTIVE SLOPES PER THE FOLLOWING:

SLOPE %	CRITICAL SLOPE/SHEET FLOW LENGTH	SHEET FLOW LENGTH
0-25		20 FEET
25-50		15 FEET
OVER 50		10 FEET

**STORM WATER POLLUTION PREVENT PLAN
BMP SITE PLAN - VERTICAL PHASE**

APPLICANT: 4170 DOUGLAS BOULEVARD, SUITE 150 GRANITE BAY, CA 95746 (916) 850-0236	PREPARED BY: P.O. BOX 462 ELK GROVE, CA 95758 (916) 567-9248		
"CAMERON RANCH" TM 17-1531 / PD 17-0007 NORTHWEST OF GREEN VALLEY ROAD & STARBUCK ROAD CITY OF CAMERON PARK, CALIFORNIA			
DRAFTED BY: TIH	DATE: 04/30/2020	W.O. NO: 12037	SHEET NO: 1 OF 1

LANDSCAPE PLANS FOR CAMERON RANCH TM 17-1531 / PD 17 - 0001

PROJECT INFORMATION:

Date: April 17, 2020
 Project applicant: Karen K. Clausen
 Project address: Cameron Ranch - TM 17-1531 / PD 17-001
 Cameron Park, CA 95682

APN # 102-110-005
 TM 17-1531 / PD 17-001

Total landscape area: 8,166 sq.ft.

Project type: New Landscaping

Water supply type: Domestic Water
 Local Retail Water Purveyor: El Dorado Irrigation District

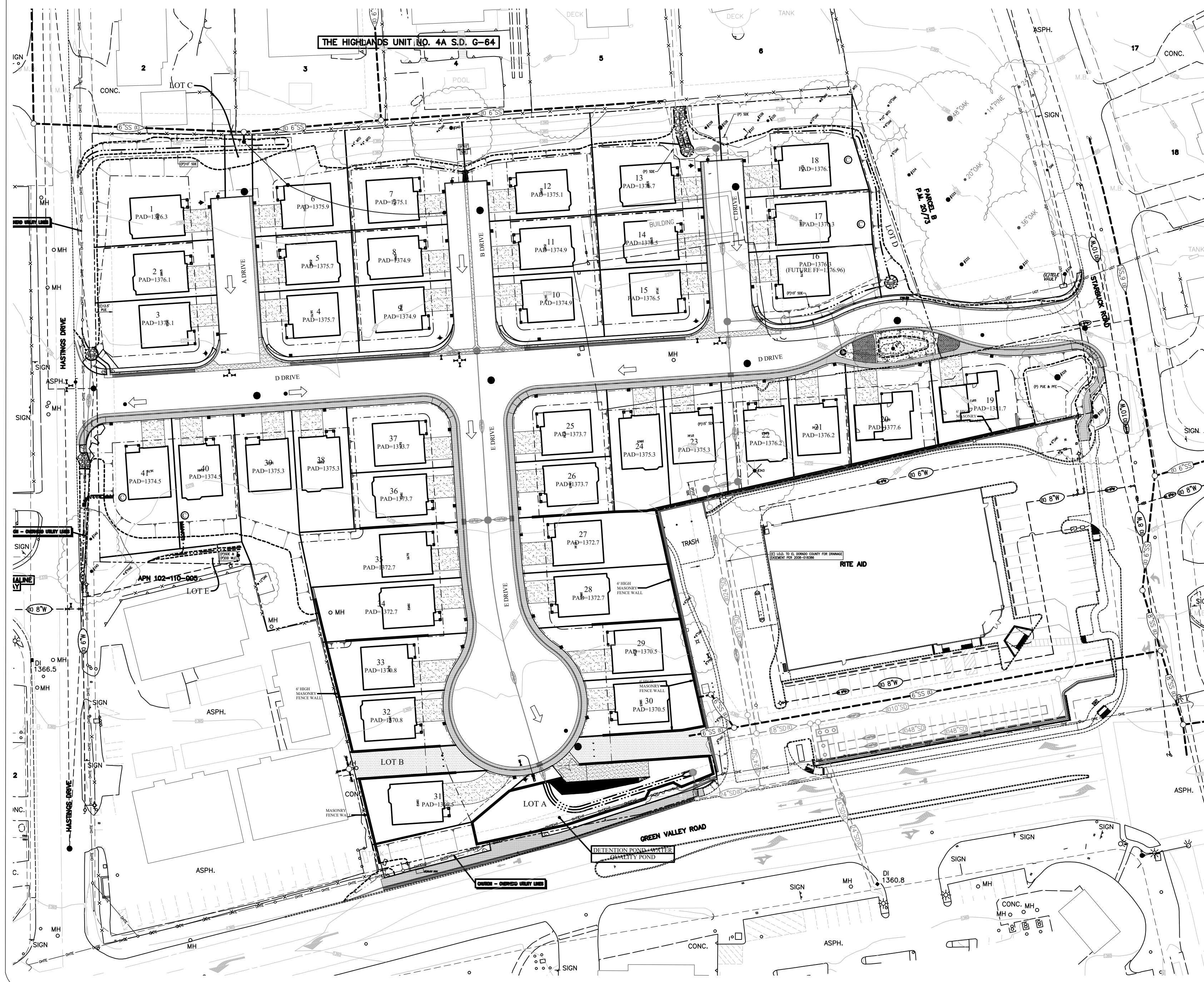
- Checklist of all documents in landscape documentation package:
 Hydrozone Information Table – Plant Legend Sheet L2.1 & Irrigation Plan Sheet L3.0 & L3.1
 Water Budget Calculations: MAWA & ETWA - Sheet L3.5
 Soil Management Report – Sheet L2.2
 Landscape Layout Plan – Sheet L1.0 – L1.1
 Landscape Design Plan – Sheets L2.0 – L2.2
 Irrigation Plan – L3.0 – L3.5

Project contacts:
 Project Applicant – Karen K. Clausen, President
 J.K. Clausen, Inc.
 P.O. Box 8095
 Auburn, CA 95604
 Tel: (530) 885-8196

Property Owner – Riverland Homes, Inc.
 4170 Douglas Blvd., Ste. 150
 Granite Bay, CA - 95746
 Tel: (916) 850-0536
 Contact: Heather Westaby

"I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package"

Karen K. Clausen 07/01/2020
 APPLICANT NAME DATE



A diagram of the Irrigation Plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.
 A Certification of Completion shall be filled out and certified by either the designer of the landscape plans, irrigation plans or the licensed landscape contractor for the project.
 An Irrigation Audit Report by a disinterested third party shall be completed at the time of the final inspection.

PLANNING APPROVAL
 APPROVED BY: _____ DATE: _____
 COUNTY OF EL DORADO PLANNING DEPARTMENT

COUNTY OF EL DORADO COMMUNITY DEVELOPMENT AGENCY TRANSPORTATION DIVISION
 APPROVED BY: _____ DATE: _____
 ANDREW GABER, DEPUTY DIRECTOR, R.C.E. 45187

Applicant
 "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete landscape documentation package."
Karen K. Clausen 07/01/2020
 Applicant Signature Date

THE COUNTY'S SIGNATURE IS FOUNDED ON THE PREMISE THAT THE OWNER AND ENGINEER OF RECORD HAVE PROVIDED ACCURATE INFORMATION TO THE COUNTY. IF ANY OF THE INFORMATION IS FOUND TO BE ERRONEOUS, THEN THE COUNTY MAY REQUIRE THE OWNER, ENGINEER OF RECORD AND CONTRACTOR TO STOP ALL NON-EROSION CONTROL RELATED WORK UNTIL THE DISCREPANCY IS RECTIFIED TO THE SATISFACTION OF THE COUNTY.



COVER SHEET
CAMERON RANCH
 GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:
 Scale: AS SHOWN
 Date: 04/20/2020
 Job # 061

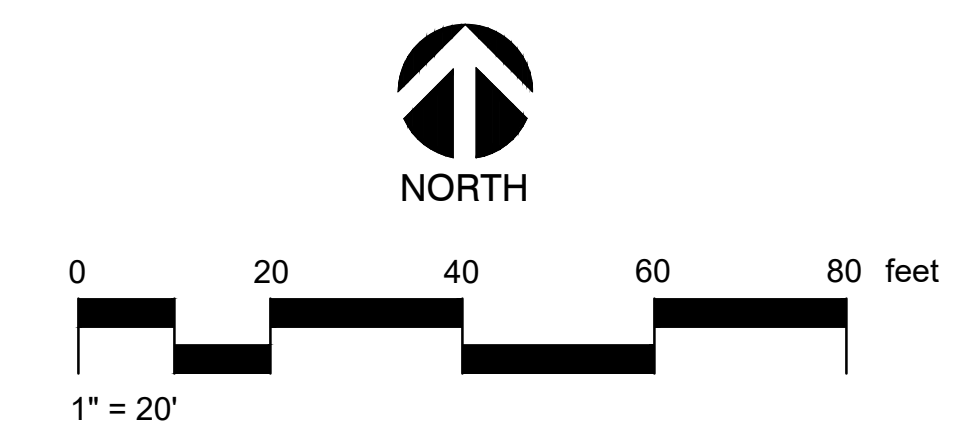
**L.O.O
OF SHEET**



LAYOUT NOTES

SYMBOL	DESCRIPTION	DETAIL
03-01	03 Concrete 1 FT. WIDE CONCRETE AT BACK OF CURB.	DETAIL 1/L1.1
32-01	32 Exterior Improvement 18" - 30" DIAMETER ACCENT BOULDERS	DETAIL
32-02	3" DEEP SHREDDED CEDAR OR OAK LEAF MULCH, KEEP 6" AWAY FROM TRUNK OF EXISTING OAK TREE.	
P-301	Unit Paving UNLOCK TURFSTONE A (or approved equal) PERMEABLE PAVER UNITS, INDIVIDUAL UNIT SIZE 25.625" x 15.75" x 3.125" (100% STANDARD SIZING, FOR PEDESTALIAN, LIGHT VEHICULAR, AND HEAVY VEHICULAR APPLICATIONS)	DETAIL 2/L1.1

"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans".
Klausen 07/01/2020
 Licensed Landscape Architect Date



KLAUSEN, INC.
 K. CLAUSEN RLA 4169
 LANDSCAPE ARCHITECT
 P.O. Box 8065
 Auburn, CA 95604
 (530) 885-4169 C. (916) 551-7880
 klausen@klausenlandscapearchitect.com

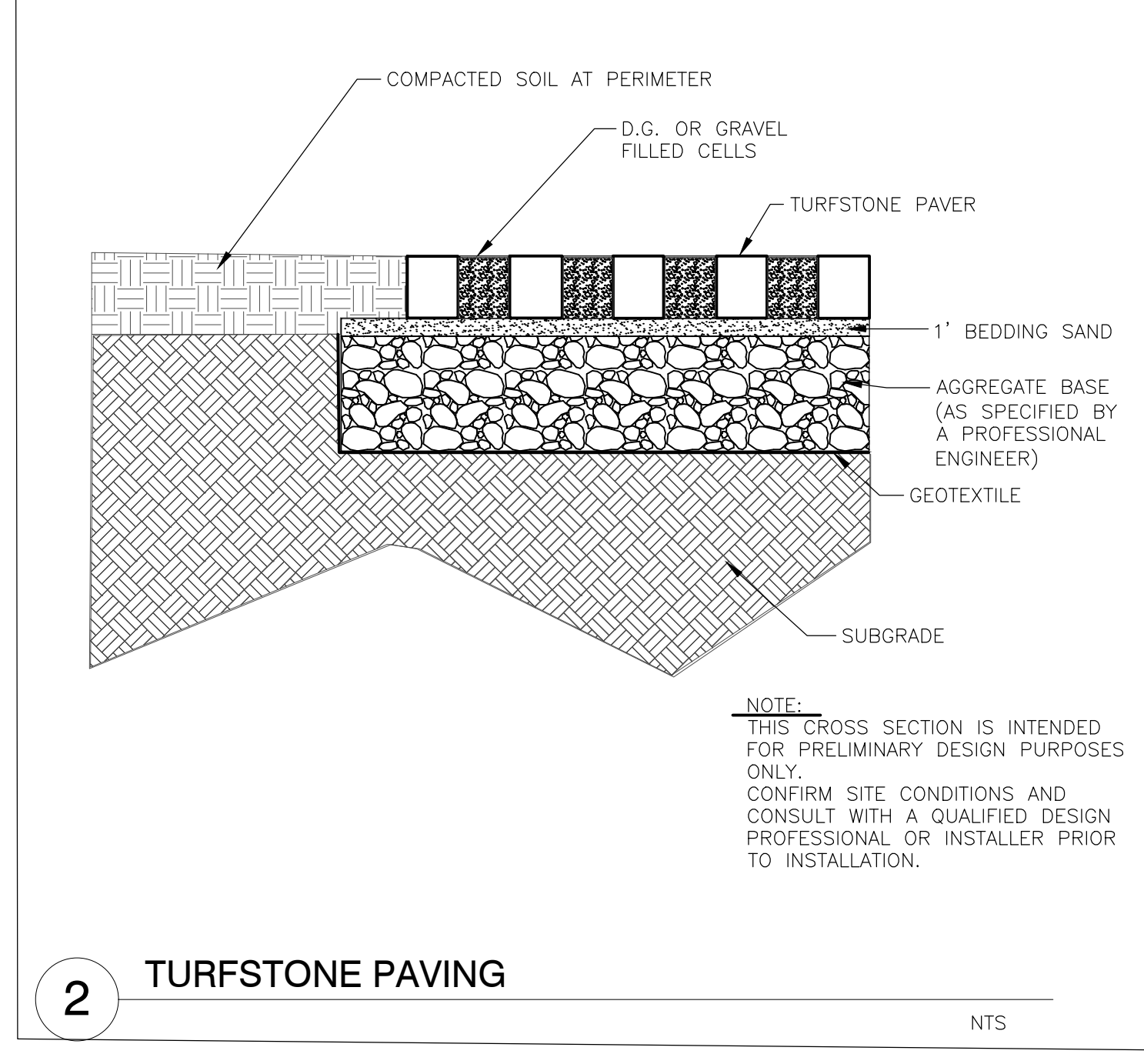
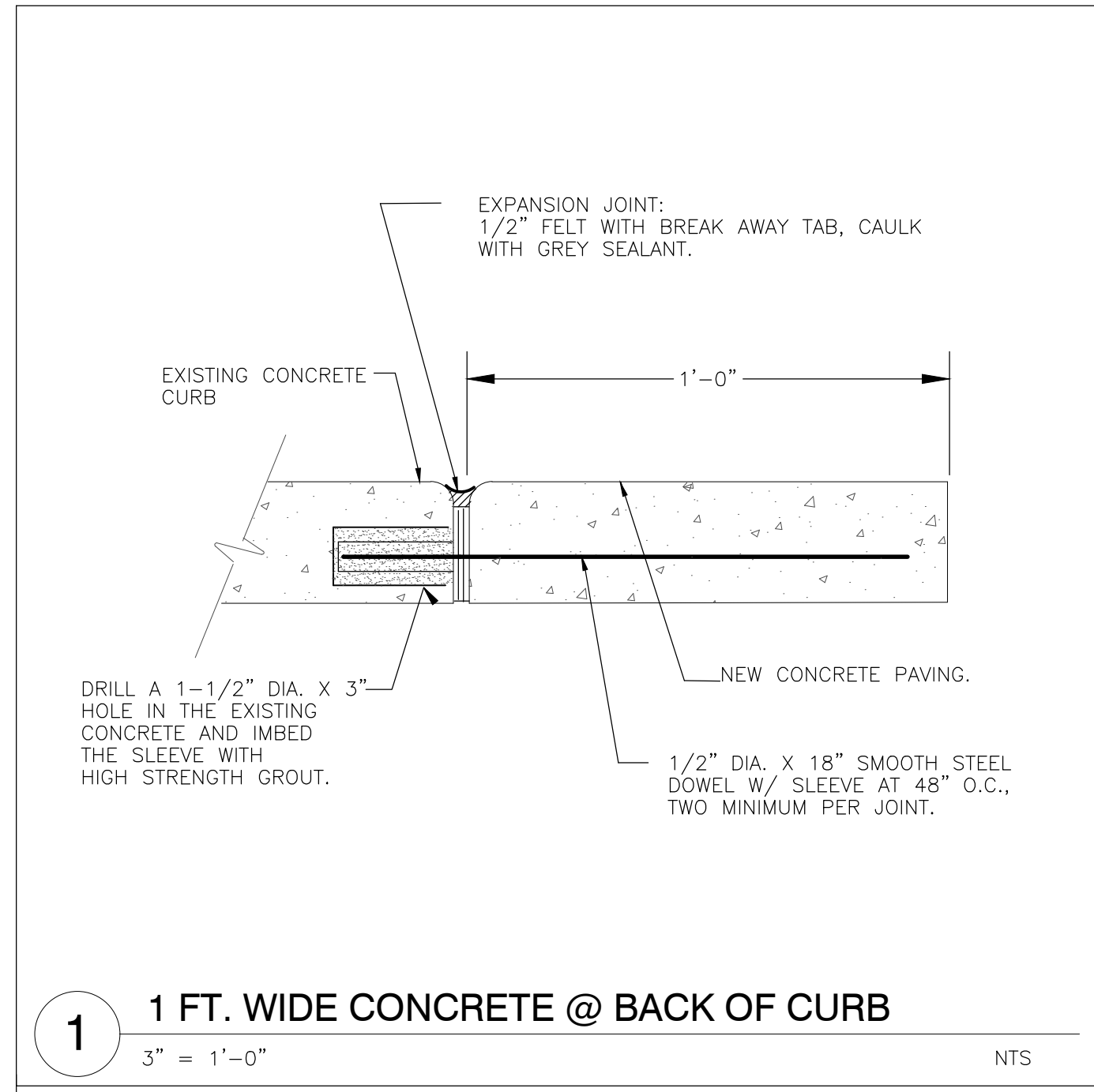
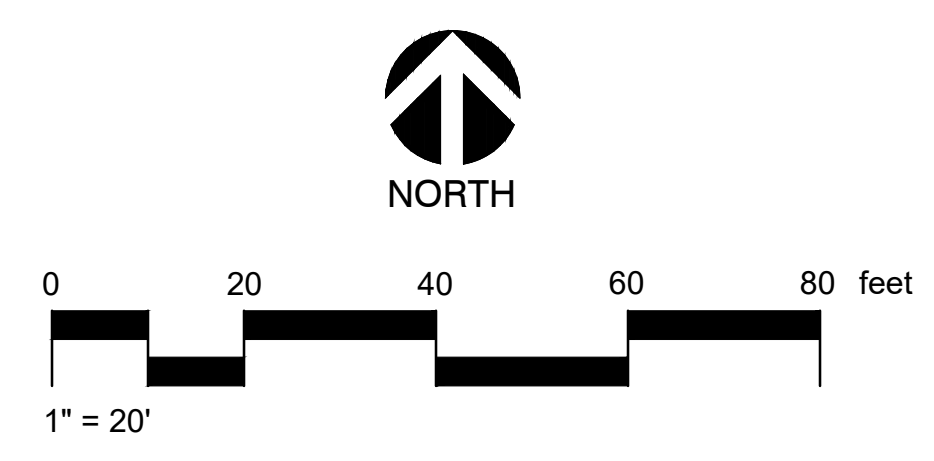
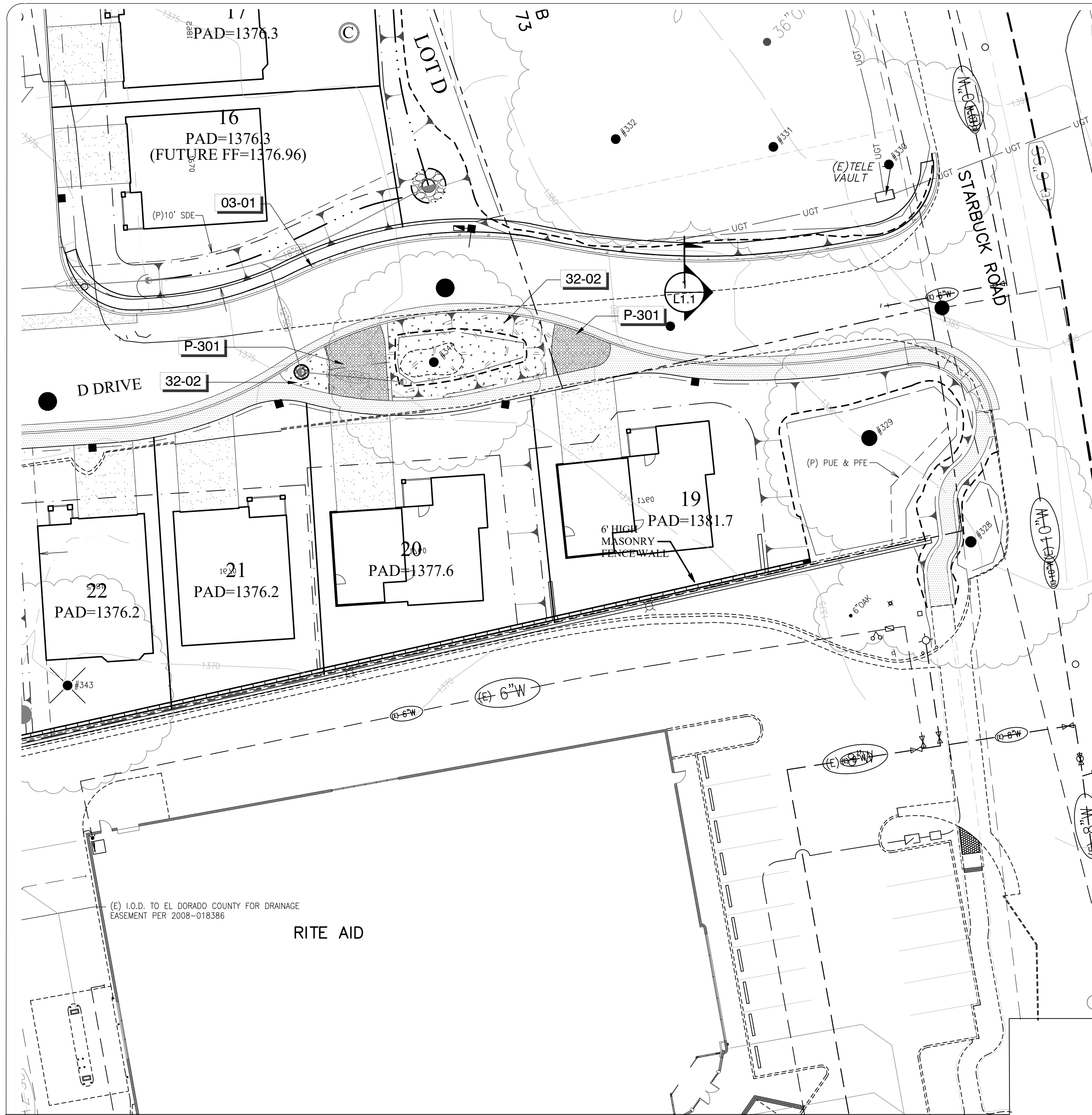
LANDSCAPE ARCHITECT
 K. CLAUSEN
 No. 4169
 07/31/2022
 07/01/2020
 STATE OF CALIFORNIA

LAYOUT PLAN
CAMERON RANCH
 GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:

Scale: AS SHOWN
 Date: 07/01/2020
 Job #: 061

L1.0
OF SHEET



LAYOUT NOTES

SYMBOL	Q2 Concrete DESCRIPTION	DETAIL
03-01	1 FT. WIDE CONCRETE AT BACK OF CURB.	1/L1.1
SYMBOL	32 Exterior Improvement DESCRIPTION	DETAIL
32-01	18" - 30" DIAMETER ACCENT BOULDERS	
32-02	3" DEEP SHREDDED CEDAR OR OAK LEAF MULCH. KEEP 6" AWAY FROM TRUNK OF EXISTING OAK TREE.	
SYMBOL	Unit Paving DESCRIPTION	DETAIL
P-301	UNILOCK TURFSTONE A (or approved equal) PERMEABLE PAVER UNITS. INDIVIDUAL UNIT SIZE 23.625" x 15.15" x 3.125". (100%) STANDARD SIZING. FOR PEDESTIAN, LIGHT VEHICULAR, AND HEAVY VEHICULAR APPLICATIONS	2/L1.1

KLAUSEN, INC.
 K. CLAUSEN RLA 4169
 LANDSCAPE ARCHITECT
 P.O. Box 8065
 Auburn, CA 95604
 (530) 882-4169 C. (916) 551-1980
 kclausen@kclausenlandscapearchitect.com

LAYOUT PLAN
CAMERON RANCH
 GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:

Scale:	AS SHOWN
Date:	07/01/2020
Job #	061

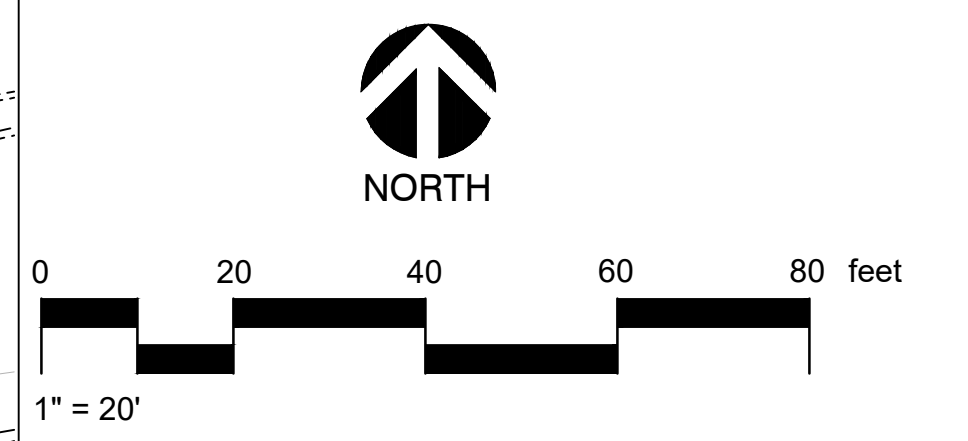
"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans".
Klausen
 Licensed Landscape Architect 07/01/2020 Date

L1.1
OF SHEET



TREE SETBACK NOTE
 TREE SETBACKS SHALL BE AS FOLLOWS:
 6' FROM PAVED SURFACES; 5' FROM POTABLE WATER SYSTEM AND WATER METERS; 5' FROM JOINT TRENCHES; 15' FROM STREET LIGHTS; 10' FROM SANITARY SEWER LINES AND CULVERTS. ALL TREES PLANTED WITHIN THE REQUIRED UNDERGROUND UTILITY SETBACKS OUTLINED ABOVE SHALL RECEIVED LINEAR ROOT BARRIERS.

"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans."
Klausen 07/01/2020
 Licensed Landscape Architect Date



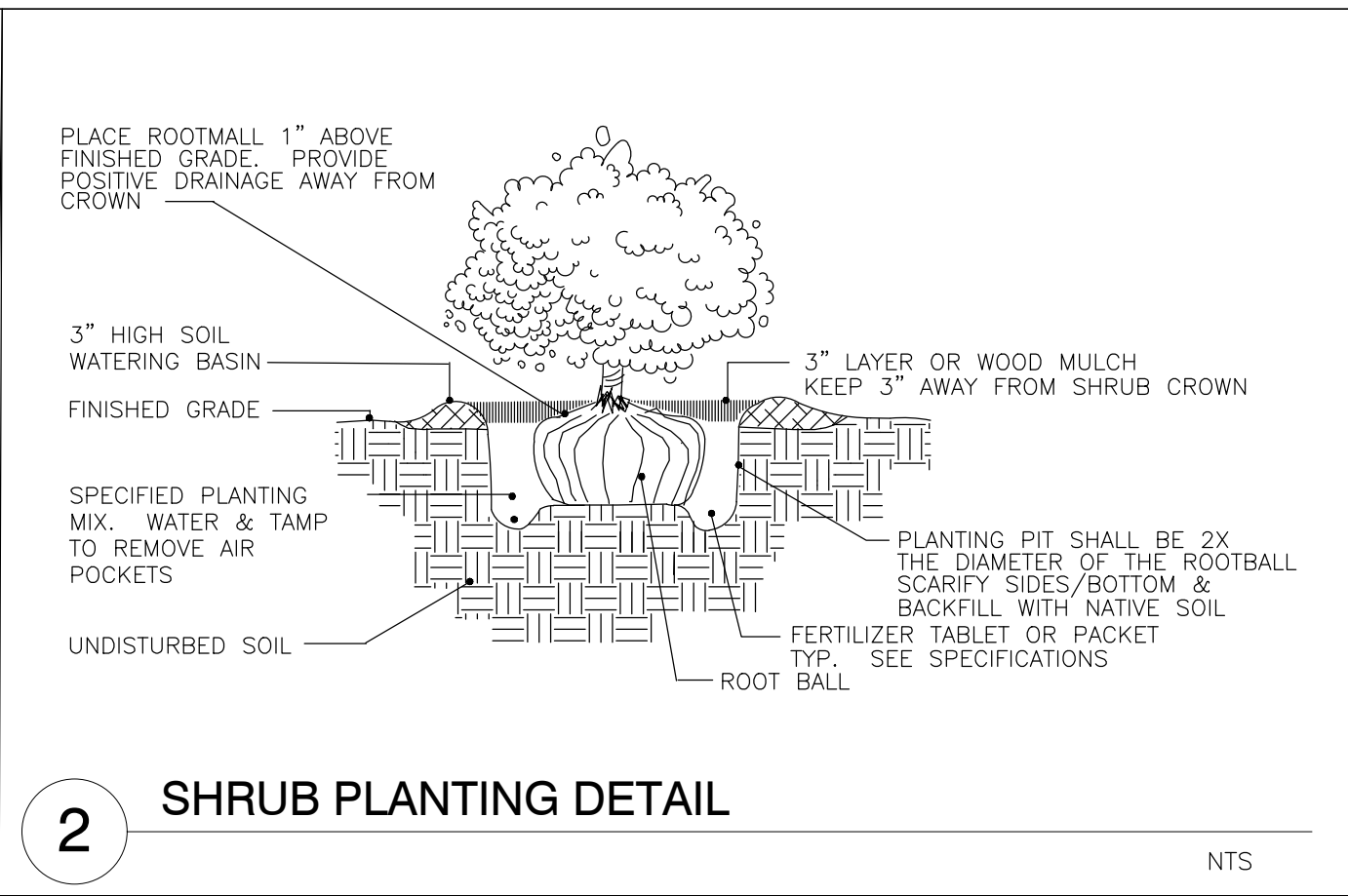
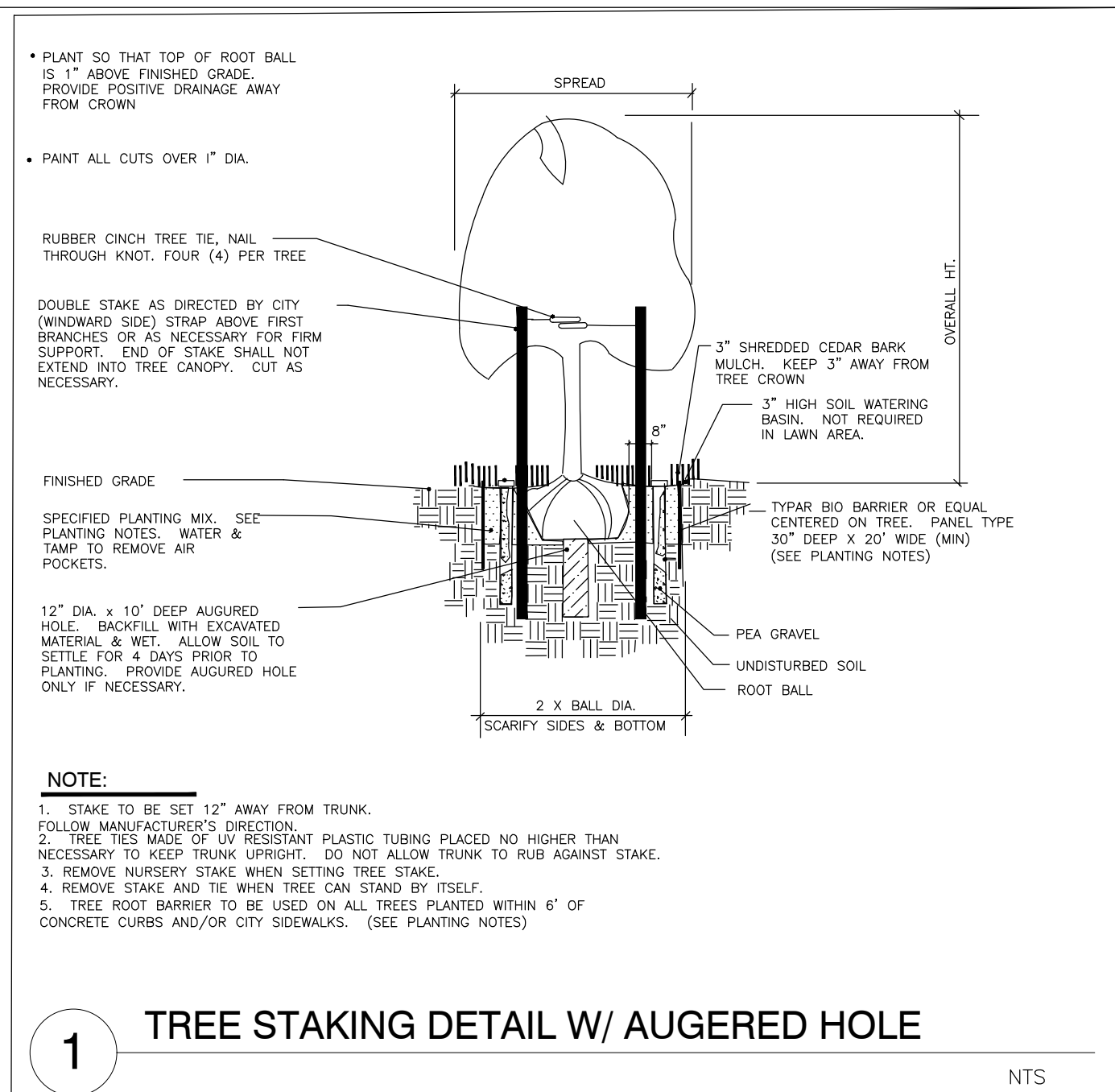
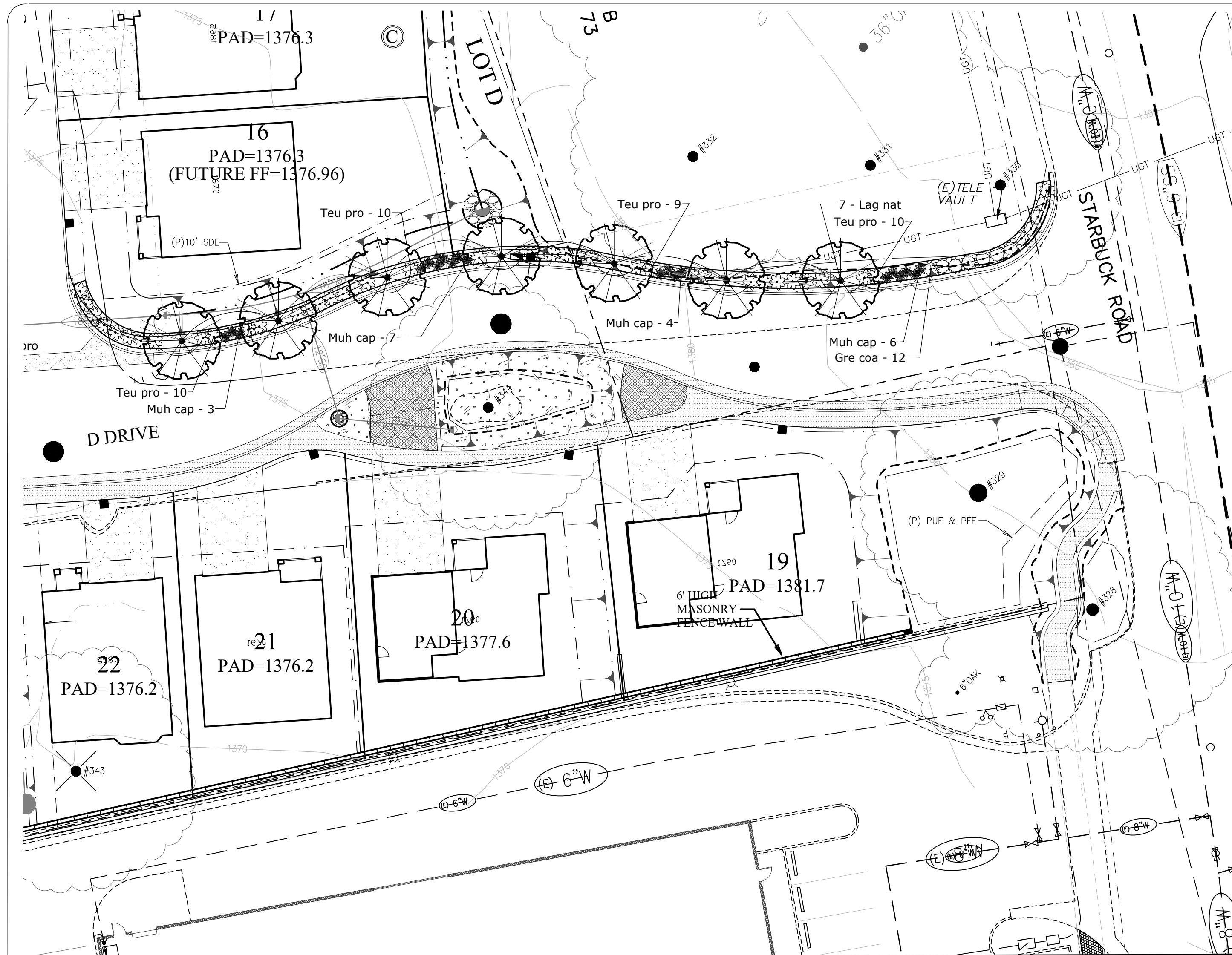
KLAUSEN, INC.
 K. CLAUSEN RLA 4169
 LANDSCAPE ARCHITECT
 P.O. Box 8065
 Auburn, CA 95604
 (530) 885-4169 C. (916) 551-7880
 klausen@klausenlandscapearchitect.com

LANDSCAPE ARCHITECT
 K. CLAUSEN
 07/31/2022
 07/01/2020
 STATE OF CALIFORNIA

PLANTING PLAN
CAMERON RANCH
 GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:
 Scale: AS SHOWN
 Date: 07/01/2020
 Job# 061

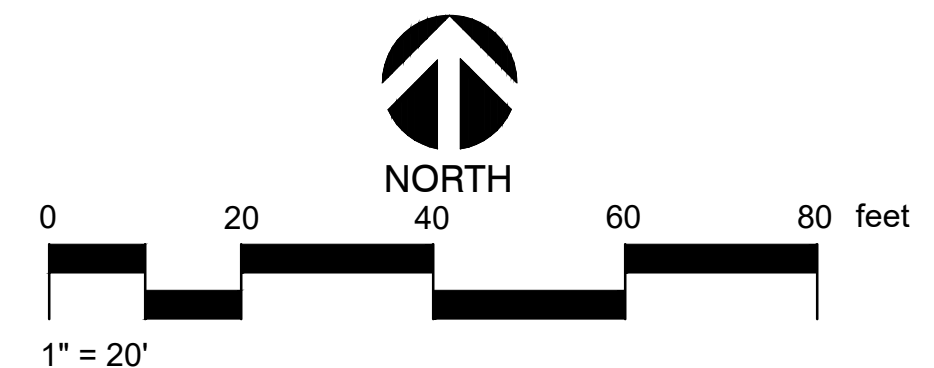
L2.0
OF SHEET



"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans".
 Karen K. Clausen
 Licensed Landscape Architect
 07/01/2020
 Date

TREE SETBACK NOTE

TREE SETBACKS SHALL BE AS FOLLOWS:
 6' FROM PAVED SURFACES; 5' FROM PORTABLE WATER SYSTEM AND WATER METERS; 5' FROM JOINT TRENCHES; 15' FROM STREET LIGHTS; 10' FROM SANITARY SEWER LINES AND CULVERTS.
 ALL TREES PLANTED WITHIN THE REQUIRED UNDERGROUND UTILITY SETBACKS OUTLINED ABOVE SHALL RECEIVE LINEAR ROOT BARRIERS.



PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONT	GAL	PERCENTAGE	WATER USE	GROWTH RATE	HEIGHT & WIDTH
Lag spl	11	Lagerstroemia l. 'Centennial Spirit' / Grape Myrtle	15 Gal	Medium Root Depth	46%	Low Water Use	Moderate	20' x 20'
Lag nat	13	Lagerstroemia ix 'Natchez' / Natchez Grape Myrtle	15 Gal	Medium Root Depth	34%	Low Water Use	Moderate	20' x 20'
SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	WATER USE	GROWTH RATE	HEIGHT & WIDTH		
Bud pur	8	Buddleja d. 'Nanho Purple' / Nanho Purple Butterfly Bush	5 Gal	Medium Water Use	Fast	5' x 4'		
Cal kar	21	Calamagrostis x a. 'Karl Foerster' / Feather Reed Grass	1 Gal	Low Water Use	Fast	3' x 5'		
Cal dna	19	Callistemon v. 'Little John' / Dwarf Weeping Bottlebrush	5 Gal	Low Water Use	Fast	3' x 3'		
Cam tak	12	Campsis x t. 'Takarazuka Fresa' / Summer Jazz Fire	1 Gal	Low Water Use	Fast	1' x 20'		
Gre coa	20	Grevillea l. 'Coastal Gem' / Coastal Gem Grevillea	5 Gal	Low Water Use	Fast	1' x 4'		
Jun Blu	26	Juniperus s. 'Blue Arrow' / Blue Arrow Juniper	5 Gal	Low Water Use	Medium	2' x 15'		
Jun sky	17	Juniperus s. 'Skyrocket' / Skyrocket Juniper	5 Gal	Low Water Use	Fast	3' x 20'		
Muh cap	94	Muhlenbergia capillaris / Pink Muhly Grass	1 Gal	Low Water Use	Fast	3' x 3'		
Ole man	15	Olea s. 'Mantra' / Little Olive	5 Gal	Low Water Use	Medium	6' x 5'		
Pen bun	14	Pennisetum a. 'Little Bunny' / Little Bunny Fountain Grass	1 Gal	Low Water Use	Fast	2' x 2'		
Ros mel	10	Rosa x 'Meljocos' / Pink Drift Groundcover Rose	5 Gal	Medium Water Use	Fast	1' x 4'		
Teu pro	107	Teucrium c. 'Prostratum' / Prostrate Germander	5 Gal	Low Water Use	Medium	1' x 4'		
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT	WATER USE	GROWTH RATE	HEIGHT & WIDTH		SPACING
	1,530 sf	Lantana s. 'Monna' / White Lightnin' Trailing Lantana	1 Gal	Low Water Use	Fast	1' x 6'		60" o.c.
	3,109 sf	Turf Hydroseed Biofiltration Grass / Biofiltration Grass Seed Blend	Hydro-Seed					

GENERAL PLANTING NOTES

- SYMBOL DESCRIPTION**
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LOCAL CODES AND ORDINANCES.
 - COMPOSITE BASE SHEET: PROPOSED IMPROVEMENTS SHOWN ON DRAWINGS RE SUPER IMPOSED ON A COMPOSITE BASE SHEET. THE COMPOSITE BASE SHEET IS A COMPILATION OF ARCHITECTURAL, ENGINEERING AND OTHER DATA THAT WAS PROVIDED. THE LANDSCAPE ARCHITECT SHALL NOT BE HELD LIABLE FOR CHANGES, INACCURACIES, OMISSIONS OR ERRORS PERTAINING TO THE COMPOSITE BASE SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THESE DOCUMENTS. ANY DISCREPANCIES NEED TO BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM AND RESOLVED PRIOR TO CONTINUATION OF WORK.
 - PRE-EMERGENT HERBICIDE, DOWN-TO-EARTH WEED BLOCKER, SHALL BE APPLIED TO ALL PLANTING AREAS (EXCEPT LAWN) AT THE FOLLOWING APPLICATION RATE: 20 LBS. PER 1,000 SQ.FT.
 - SOIL PREP SHALL CONSIST OF 4 CUYDS. OF BULK ORGANIC AMENDMENT (NITROFIED), 20 LBS. OF COMMERCIAL 6-20-20 FERTILIZER, 34 LBS. LIME AND 2 LBS. AMMONIUM SULFATE PER 1,000 SQ.FT. OF LAWN OR CREEPING GROUND COVER AREA. ROTOTILL THOROUGHLY INTO THE TOP 6" OF SOIL. THE LANDSCAPE CONTRACTOR SHALL OBTAIN A SOILS FERTILITY REPORT PRIOR TO STARTING THIS PROJECT. A COPY OF THE REPORT SHALL BE GIVEN TO THE LANDSCAPE ARCHITECT AND THE OWNER'S REPRESENTATIVE.
 - FOR SOILS LESS THAN 6% ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL, COMPOST AT A RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL EXCEPT WITH IN THE TPZ OF PROTECTED TREES, WHICH SHALL RECEIVE 4-6" OF HARDWOOD CHIP MULCH.
 - PLANTING HOLE SHALL BE 2X'S THE WIDTH AND AS DEEP AS THE ROOT BALL. BACKFILL PLANTING HOLES WITH 1/3 PLANTING MIX AND 2/3 NATIVE SOIL.
 - PLANTING MIX SHALL CONSIST OF: 3 PARTS NATIVE SOIL (OR IMPORTED TOP SOIL) WITH 1 PART ORGANIC AMENDMENT (PREFERABLY NITROGEN AND IRON FORTIFIED) & 2.5 LBS OF 6-20-20 FERTILIZER PER YARD. THE LANDSCAPE CONTRACTOR SHALL OBTAIN A SOILS FERTILITY REPORT PRIOR TO STARTING THIS PROJECT. A COPY OF THE REPORT SHALL BE GIVEN TO THE LANDSCAPE ARCHITECT AND THE OWNER'S REPRESENTATIVE.
 - STAKE ALL TREES AS SHOWN IN DETAIL.
 - VARY SIZES OF MOSS ROCK BOULDERS. SEE BOULDER SCHEDULE. 1/4 OF THE BOULDER SURFACE SHALL BE BELOW FINISHED GRADE.
40% 3 FT. +/- DIAMETER MOSS ROCK BOULDERS
60% 2 FT. +/- DIAMETER MOSS ROCK BOULDERS.
 - EDGE LAWN AND/OR GROUND COVER AREAS WITH PROLINE 4" PERMALOG OR 1/2" X 6" TREX. STAKE OFTEN TO HOLD CURVES. (OR APPROVED EQUAL BY KAREN K. CLAUSEN, LANDSCAPE ARCHITECT)
 - AGRIFORM FERTILIZER TABLETS SHALL BE PLACED IN EACH PLANTING HOLE AS FOLLOWS: 1-1 GAL, 2-5 GAL, 3-15 GAL & 6-24" BOX.
 - A MINIMUM 3-INCH LAYER OF ORGANIC MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS OR SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED.
 - ALL TREES PLANTED WITHIN 6' OF ANY PAVING SHALL BE PLANTED WITH TYPAR BIO-BARRIER (OR APPROVED EQUAL BY KAREN K. CLAUSEN, LANDSCAPE ARCHITECT).
 - PLANT TREES A MINIMUM OF 3' FROM THE EDGE OF CURBS, WALKS AND ASPHALT AND 15' FROM ANY LIGHT STANDARD. COORDINATE TREE PLANTING WITH DRAINLINE LOCATIONS TO AVOID CONFLICT.
 - FINISH GRADE OF PLANTING AREAS SHALL BE 1/2" BELOW TOP OF CONCRETE WALKS AND/OR CONCRETE CURBS. PLANTING AREAS ADJACENT TO THE BUILDING SHALL HAVE A MINIMUM SLOPE OF 1% AWAY FROM BUILDING.
 - CONTRACTOR SHALL RECEIVE SITE GRADED TO +/- 1 FT. THE CONTRACTOR IS RESPONSIBLE FOR SURFACE DRAINAGE OF ALL PLANTING AREAS. NO LOW SPOTS WHICH HOLD STANDING WATER WILL BE ACCEPTED.
 - AFTER INSTALLATION OF THE IRRIGATION SYSTEM, ALL PLANTING AREAS SHALL BE RAKED SMOOTH AND ALL ROCKS AND PEBBLES OVER 1" SHALL BE REMOVED FROM SITE.
 - PLANT QUANTITIES ARE FOR CONVENIENCE ONLY. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CHECK PLAN FOR CORRECT PLANT COUNT.
 - LANDSCAPE CONTRACTOR SHALL SUPPLY A 60 DAY MAINTENANCE CONTRACT WITH THE OWNER. THIS SHALL INCLUDE WATERING, WEEDING, CULTIVATING, PRUNING, FERTILIZING, SPRAYING FOR PESTS & DISEASES AND REPLACEMENT OF ANY PLANT MATERIAL THAT DIES.

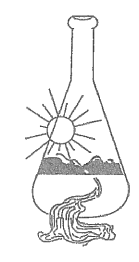
K. CLAUSEN, INC.
 LANDSCAPE ARCHITECT
 P.O. Box 8095
 Auburn, CA 95604
 (530) 885-4194 C. (916) 551-5380
 kclausen@kclausenlandscapearchitect.com



PLANTING PLAN & NOTES
CAMERON RANCH
 GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:
 Scale: AS SHOWN
 Date: 07/01/2020
 Job # 061

L2.1
OF SHEET



Sunland Analytical
11419 Sunrise Gold Circle, #10
Rancho Cordova, CA 95742
(916) 852-8557

Report of Analysis
Printed 05/25/2020

Date Reported 02/07/2020
Date Submitted 01/29/2020

To: Karen K. Clausen
J.K. Clausen, Inc.
P.O. Box 8065
Auburn, CA 95604

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following:
Location : CAMERON RANCH Site ID : A.
Thank you for your business.

* For future reference to this analysis please use SDW # 81365-169889.

SOIL ANALYSIS

Parameter	Value	Soil Texture	Loam
Saturation Percent (SP)	45	5.94	
pH	5.94	mmho/cm	
E.C.	0.06	ppm	
Tot.Dissolved Salts	38.4	in/hr	
Infiltration Rate (0% Slope)	0.54	meq/100g	
% Organic Matter	5.9		
C.E.C.	14.0		
Sodium Adsorption Ratio (SAR)	1.2		
Exchangeable Sodium Percent (ESP)	0.5		
Lime Req.	34.1	#/1000 sq.ft.	
est. Nitrogen Release	1.9	#/1000 sq.ft.	

Nitrate	1.48	ppm
Phosphorus	5.69	ppm
Potassium	99.67	ppm
Sulfur	0.99	ppm
Chloride	2.13	ppm
Carbonates	24.46	ppm
Sodium	16.13	ppm
Calcium	2158.48	ppm
Magnesium	356.20	ppm
Boron	0.15	ppm
Copper	0.52	ppm
Iron	51.18	ppm
Manganese	95.13	ppm
Zinc	2.67	ppm

Very Low Adequate Excessive

SOIL RECOMMENDATIONS FOR LANDSCAPE GARDENING

SOIL pH (Acidity and Alkalinity)
The pH of this sample indicates the soil is moderately acid and should be modified for non acid-tolerant plants. Apply 34 pounds of lime per 1000 sq. ft. and work into ground before planting.

DISSOLVED SALTS (Indicated by E.C. & TDS)
These conditions are in the normal range for plant growth.

SOIL TEXTURE AND RATE OF WATER INFILTRATION
The infiltration rate for all soil textures decreases with increasing ground slope. At 0 to 4%, 5 to 8%, 9 to 12%, 13 to 16% and above 16% the infiltration rate of this sample decreases from 0.54 to 0.43, 0.32, 0.22, 0.14, respectively. Infiltration rate also decreases with percent of ground cover and by compaction.

WATER PENETRATION OF SOIL DUE TO CHEMICAL CHARACTERISTICS
When exchangeable Sodium increases in the soil, water penetration decreases. Based on SAR and ESP values this sample has no penetration problem due to soil Sodium. No Gypsum required.

ORGANIC MATTER
Organic matter provides a slow nitrogen release and aids water retention. This sample has a moderate Organic Matter content. To maintain moisture and provide sustained nitrogen release a level of 10% organic matter is recommended. This can be accomplished by adding 2 yards per 1000 sq. ft. of ground fir bark that is approximately 75% organic matter (i.e. typically found in ground fir bark which also has naturally low salt and boron concentrations). In California, the WREDO ordinance requires a fixed application of four yards of COMPOST if the soil organic matter is less than 6%. However, of significant concern when applying COMPOST is the potential for the compost to have high salt, high boron content, high C to N ratio and having a highly variable pH (very high to very low). All of these COMPOST characteristics can have very negative affect on plant growth. Take care by having the compost analyzed or by seeing a recent analysis of the compost to be used.

SOIL RECOMMENDATIONS FOR LANDSCAPE GARDENING

SOIL BORON
Boron concentrations are in a range allowing normal plant growth.

SOIL MICRONUTRIENTS
Micronutrients, Copper, Iron, Manganese and Zinc, in soil are present in small amounts. However, they play a necessary role in plant metabolism. Without appropriate amounts plants will not thrive. Soil has adequate amounts - no application needed.

SOIL MICRONUTRIENTS : NITROGEN-PHOSPHORUS-POTASSIUM (N-P-K)
GENERAL N-P-K RECOMMENDATION

Use ONE of these NPK preparations for the first fertilizer application.

Standard NPK	Fertilizer	Preparations	Customer Choice			
6-20-20	5-20-10	16-16-16	0-10-10	28-3-4	21-0-0	None
20	24	N/A	N/A	N/A	N/A	**

GRASS OR SOD PREPARATION
Fill in organic matter, N,P,K and micro nutrients in addition to any lime gypsum or sulfur as directed above. Smooth soil surface and follow seed or sod producers direction for moisture and product application.

TREES AND SHRUBS
Excavate holes for planting shrubs and trees to at least twice the volume of the container. Prepare backfill for tree and shrub planting holes by mixing three parts of native soil (or imported top soil) with one part organic amendment (preferably nitrogen and iron fortified) and 2.5 pounds of 6-20-20 per yard of mix. For extended fertilization, place slow release fertilizer tablets in each hole per manufacturer's instructions. If 6-20-20 was not directly added to backfill mix, during backfill apply uniformly 1/2 oz of 6-20-20 per gallon containers, 2.5 oz per 5 gallons, 6 oz per 24 inch boxes.

SOIL RECOMMENDATIONS FOR LANDSCAPE GARDENING

Summary and Suggested Sequence of Soil Improvements (#/1000 Sq.Ft.)

Lime	34	#
Organic Amendment	2	Yd./1000 Sq.Ft. Bulk organic amendment (nitrified) or in Calif. if Org.Mat. less than 6% use 4 yd compost.
N-P-K Fertiliser	See above chart	
Sulfate-Sulfur	2	# Ammonium Sulfate

Maintenance Fertilisation
Apply 5 pounds of Ammonium sulfate (21-0-0) per 1000 sq.ft. every month until plants become established. After established, apply 28-3-4 (or similar preparation) to provide desired growth rate and color.

02900 LANDSCAPE SPECIFICATIONS

PART 1 GENERAL

1.01 WORK INCLUDED

A. Furnish and install all landscaping work indicated on the Drawings and specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Earthwork: Section 02200.
- B. Irrigation System: Section 02810.
- C. Electrical: Division 16
- D. Construction Documents: Staking & Layout Plans: L1.0-L1.1
Landscape Plans: L2.0-L2.2
Irrigation Plans: L3.0-3.4

1.03 WARRANTY

- A. Warranty all lawn and plant material for the duration of the landscape maintenance period. Plants and lawn not alive and in satisfactory growing condition, as determined by Owner's Representative, shall be replaced without additional cost to Owner.
- B. All repair work shall be as specified in this Section; all plant replacements shall be plants of the same kind and size as specified in plant list; furnished and planted as specified.

1.04 QUALITY ASSURANCE

- A. Contractor or an experienced foreman shall be present during installation.
- B. Owner's Representative reserves the right to inspect and reject all material both at place of growth and at site, before and/or after planting, for compliance with requirements for name, variety, size and quality.

1.04 SUBMITTALS

- A. Locate all plant materials required for construction within 15 days after award of contract. Contractor is responsible for all trees and shrubs to be contract grown from a certified nursery. Notify Owner's Representative of all plant material, tied off, for the option of reviewing for approval at the Contractor's selected nursery. If specified material is not obtainable, submit to Owner's Representative proof of non-availability and proposal for use of equivalent material. Submit photographs of alternative choices of plant material for selection by Owner's Representative. Included with these photographs should be clear, written description of the type, size, condition and general character of the plant material.
- B. Submit sample of bark mulch and soil amendment to Owner's Representative.

1.06 PROTECTION AND CLEAN UP

- A. Protection of persons and property shall be provided throughout the progress of the work. Use temporary barricades as required. The work shall proceed in such a manner as to minimize the spread of dust and flying particles and to provide safe working conditions for personnel. Store materials and equipment where directed.
- B. Execute all work in an orderly and careful manner to protect paving, work of other trades, and other improvements.
- C. Be responsible for protection of all existing utilities within construction area; repair, to satisfaction of Owner's Representative, any damages to utility lines that occur as a result of operation of this work.
- D. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades and trespassers. Maintain protection during installation and maintenance periods.
- E. Maintain cleanliness of paving areas and other public areas used by equipment and be responsible for immediate removal of all spillage on these pavings. Remove from the project site all rubbish and debris found thereon and all material and debris resulting from the landscaping work, leaving site in a safe and clean condition.

1.07 RECORD DRAWINGS

- A. Upon completion of work, and as a precedent to final payment, deliver to Owner's Representative originals of all Drawings showing the work exactly as installed. Deliver to Owner's Representative one (1) complete set of reproducible Drawings, showing the recorded work.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Materials shall be new, in perfect conditions and as specified. Deviation or substitution from Specifications and Drawings must be first approved by Owner's Representative.
- B. Provide new topsoil that is fertile, friable, natural loam, surface soil, reasonable free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 2 inches in any dimension and other extraneous or toxic matter harmful to plant growth.
- C. Soil amendment shall be a 90% bark base product (Nitrified Dark Humus), 0-1/4 inch size treated with Nitrogen, 1/2-0-0.
- D. Fertilizer for trees and shrubs shall be commercial fertilizer, in tablet form; Gro-Power, Agriform or equal.
- E. Mulch shall be an untreated 90% bark base product, Shredded Cedar Bark or Shredded Redwood Bark.
- F. Tree stakes and ties shall be as indicated on Drawings.
- G. Vitamin B-1 shall be 'Superthrive', 'Liquinox Start', or 'Cal-Liquid'.
- H. Weed Control shall be 'Enide' (Upjohn), 'Surflan' (Eiano Products Company), 'Dacthal' (Diamond Chemical) or equal.
- I. Plant Material Shall Be:
 1. As indicated on Drawings. Do not remove container grown stock from containers until planting time. All plants shall be true to name.
 2. Healthy, shapely, well-rooted, not pot-bound, free from insect pests or plant diseases and properly 'hardened off' before planting.
 3. Labeled. Label at least one tree and one shrub of each species with a securely attached waterproof tag bearing legible designation of botanical and common name.
- J. Fertilizer/Soil Conditioner shall be Gro-Power Plus beaded with soil penetrant added.

PART 3 EXECUTION

3.01 JOB CONDITIONS

- A. Carefully examine the site, verify grade elevations and observe the conditions under which work is to be performed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Owner's Representative.
- B. Proceed with the complete landscape work as rapidly as portions of the site become available, bearing within the seasonal limitations for each kind of landscape work required.
- C. Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required, to minimize possibility of damage to underground utilities. Maintain grade stakes set by others until removal is mutually agreed upon by all parties concerned.
- D. When conditions detrimental to sod or plant growth are encountered, such as rubble fill, adverse drainage condition, or obstruction, notify Owner's Representative before planting.

3.02 SOIL TESTING

- A. Contractor shall be responsible for coordinating soil testing in an expeditious and timely manner as required for on-site topsoil materials. The responsibility of contracting with as soil laboratory shall be borne by Contractor and the cost of sampling and testing shall be included in the contract price. Two (2) samples shall be taken by the contractor under the direction and in the presence of Owner's Representative.
- B. Each sample, according to the quantity of soil required by the testing laboratory, shall be submitted to a competent laboratory to be approved by the Owner's Representative.
- C. As a minimum, soil samples shall be analyzed for: PH, salinity, ammonia, phosphate, potassium, calcium, magnesium, boron and sodium levels. Laboratory shall provide appraisal of chemical properties, including particle size determination and recommendations for types and quantities of amendments and fertilizers.

3.03 LANDSCAPE PREPARATION

- A. General - Grading and drainage is not a part of this Section. Discrepancies shall be brought to the attention of Owner's Representative prior to start of landscaping work.
- B. All areas to be planted shall be cleared, weeded and cultivated to a minimum of 8 inches and shall be loose and friable.

3.04 PREPARATION OF PLANTING PITS

- A. Excavate pits and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage.
- B. Loosen hard subsoil in bottom of excavation. Extend excavation as required to insure proper drainage from plant pits.
- C. See Drawings for pit size requirements.

3.05 PLANTING AND FERTILIZATION

- A. Layout individual tree and shrub locations and areas for multiple plantings. Stake locations and outline areas and secure Owner's Representative's acceptance before start of planting work. Make minor adjustments as may be requested.
- B. Set container grown stock in center of pit. In hot weather, pre-wet the pit. When set, place additional backfill around base and sides of root ball. Work each layer to settle backfill and eliminate voids and air pockets. Compact thoroughly lower half of backfill in plant pit.
- C. Place fertilizer planting tablets in root zone and alongside of each plant. Follow manufacturer's instructions for the amount of tablets to use for each container size.
- D. Water after planting. Build a temporary watering basin around the base of each plant, unless otherwise directed. Inside of each basin, evenly spread mulch to depth of three inches.
- E. See Drawings for additional information.

3.06 VITAMIN B-1

- A. Add Vitamin B-1, in the proper solution as recommended by the manufacturer, to the second watering of each watering basin.

3.07 WEED CONTROL

- A. Pre-emergent herbicide shall be applied at rate recommended by the manufacturer to all shrub areas after planting is complete; do not allow in lawn areas. Notify Owner's Representative of time of installation for verification of application.

3.08 MULCHING

- A. Mulch shall be applied as a top dressing to all shrub areas, at a rate of 6 cubic yards per 1,000 sq. ft. (3" thick). Do not apply mulch until the pre-emergent herbicide has been applied.

3.09 GROOMING OF TREES AND SHRUBS

- A. Prune, thin out and shape in accordance with standard horticultural practice and as directed by Owner's Representative. Prune to retain natural character to accomplish their use in the landscape design. Required plant sizes are the size after pruning.
- B. Remove and replace excessively pruned or misformed plants resulting from improper pruning.

3.10 MAINTENANCE PERIOD

- A. The landscape maintenance period shall commence upon completion of all planting as verified by Owner's Representative, and shall continue for a minimum period of 60 calendar days after final acceptance of the total project by the Owner. During this period, all planting shall be kept in a healthy growing condition by watering, weeding, cultivating, pruning, spraying, fertilizing, trimming and by performing any other necessary operation of maintenance.
- B. Request, 48 hours in advance, on-site visits to start and end the maintenance period.
- C. Guarantee all new plant materials as outlined in Paragraph 1.03 of this Section.

END OF SECTION

"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans."

Karen K. Clausen 07/01/2020
Licensed Landscape Architect Date

K. CLAUSEN, INC.
LANDSCAPE ARCHITECT
K. CLAUSEN RLA 4169
LANDSCAPE ARCHITECT
P.O. Box 8065
Auburn, CA 95604
(530) 852-6116 C. (916) 551-7380
kclausen@kclausenlandscapearchitect.com



PLANTING REPORTS & SPECIFICATIONS
CAMERON RANCH
GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:
Scale: AS SHOWN
Date: 07/01/2020
Job #: 061

L2.2
OF SHEET



IRRIGATION SCHEDULE CONTROLLER B&C

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
1401	RAIN BIRD 1800-1400 FLOOD 1401 FIXED FLOW RATE (0.25-2.06GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	215	30
1402	RAIN BIRD RAS-B-C ROOT WATERING SYSTEM WITH 4.0" DIAMETER X 36.0" LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE, AND CHECK VALVE. RAIN BIRD BUBBLER OPTION AS INDICATED. 1401 0.25 GPM.	42	30
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
⊕	RAIN BIRD FE5B 1" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY. GLOBE CONFIGURATION. WITH SCRUBBER TECHNOLOGY. INSTALL LEMMA 1600HE SOLENOIDS AND SOLENOID/VALVE ADAPTORS FOR EACH VALVE.	10	
⊗	NIBCO T-113 CLASS 125 BRONZE GATE SHUT OFF VALVE WITH WHEEL HANDLE. SAME SIZE AS MAINLINE PIPE DIAMETER AT VALVE LOCATION. SIZE RANGE - 1/4" - 3"	6	
⊕	HUNTER ICV101-6/FSI-T10-001 1" 1" PLASTIC ELECTRIC MASTER VALVE, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET COMBINED WITH GREATVUE SENSOR TECHNOLOGY 1" FLOW SENSOR.	1	
⊗	FEBCO 825YA- 1" REDUCED PRESSURE BACKFLOW PREVENTER	1	
C	DIG LEIT SOLAR CONTROLLER 4004 W/MOISTURE SENSOR 4 STATION SOLAR CONTROLLER. INSTALL STAINLESS STEEL ENCLOSURE PER DETAIL AND MANUFACTURER'S SPECIFICATIONS. AVAILABLE AT DIG, TELEPHONE 760 727-0914. INSTALL WITH IRROMETER WEM-B BATTERY OPERATED SOIL MOISTURE SENSOR USING SKIT 8821-4 SOIL MOISTURE ADAPTOR KIT BY DIG.	1	
B	DIG LEIT SOLAR CONTROLLER 4006 W/MOISTURE SENSOR 6 STATION SOLAR CONTROLLER. INSTALL STAINLESS STEEL ENCLOSURE PER DETAIL AND MANUFACTURER'S SPECIFICATIONS. AVAILABLE AT DIG, TELEPHONE 760 727-0914. INSTALL WITH IRROMETER WEM-B BATTERY OPERATED SOIL MOISTURE SENSOR USING SKIT 8821-4 SOIL MOISTURE ADAPTOR KIT BY DIG.	1	
M	WATER METER 3/4" BY OTHERS. REFER TO CIVIL ENGINEERS PLANS FOR ADDITIONAL INFORMATION	1	
---	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	1347 L.F.	
---	IRRIGATION MAINLINE: PVC SCHEDULE 40	844.3 L.F.	
---	PIPE SLEEVE: PVC SCHEDULE 40 SLEEVES SHALL BE TWICE THE DIAMETER OF THE PIPE BEING SLEEVED, TYPICAL.	141.3 L.F.	

SHEET SCHEDULE:

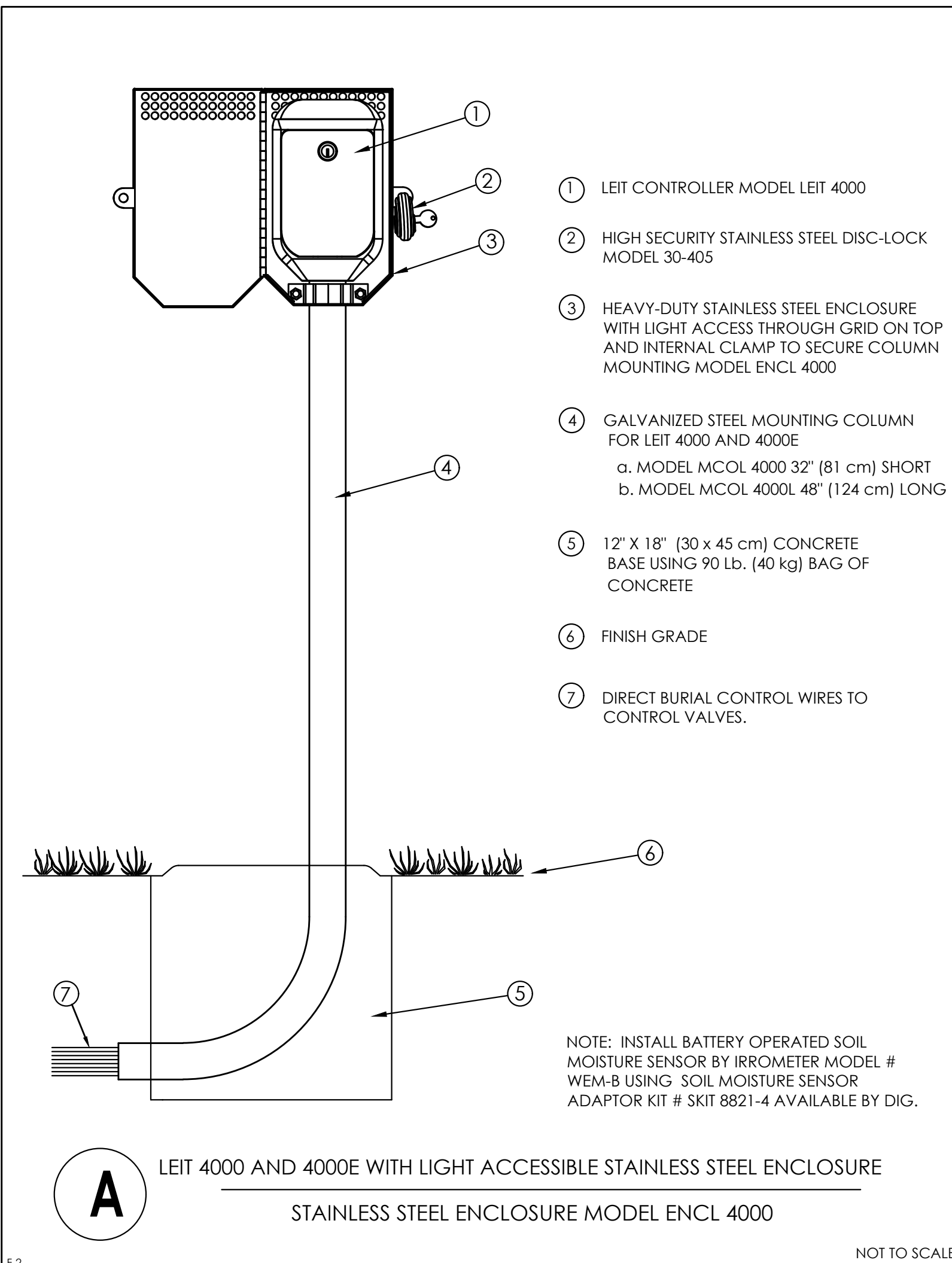
REFER TO SHEET L3.1 FOR IRRIGATION LEGEND FOR CONTROLLER A

REFER TO SHEET L3.2 FOR IRRIGATION LEGEND FOR CONTROLLERS B & C IRRIGATION NOTES & SCHEDULE

REFER TO SHEET L3.3 FOR IRRIGATION DETAILS

REFER TO SHEET L3.4 FOR IRRIGATION DETAILS

REFER TO SHEET L3.5 FOR IRRIGATION SPECIFICATIONS



"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans".

Carol Perry Brown 07/01/2020
Licensed Landscape Architect Date

CAROL PERRY BROWN

Landscape Architecture
Irrigation Design

PERRY DESIGN

530 823 2621
perrydesign@att.net
RLA 3941 CID 002624

K. CLAUSEN, INC.
K. CLAUSEN RLA 4189
LANDSCAPE ARCHITECT
P.O. Box 8065
Auburn, CA 95604
(530) 885-4114 C. (916) 551-1380
kclausen@kclausenlandscapearchitect.com



IRRIGATION PLAN
CAMERON RANCH
GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:

Scale: AS SHOWN

Date: 07/01/2020

Job #: 061

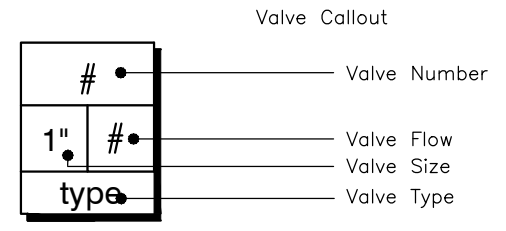
L3.1
OF SHEET

IRRIGATION SCHEDULE AREA A

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
Ⓜ Ⓛ Ⓞ	Hunter MP1000 PROS-12-PRS40-CV Shrub Rotator, 12" pop-up with check valve, pressure regulated to 40 psi, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc on PRS40 body.	11	40
Ⓚ Ⓠ Ⓠ Ⓡ	Hunter MP2000 PROS-12-PRS40-CV Shrub Rotator, 12" pop-up with check valve, pressure regulated to 40 psi, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc on PRS40 body.	9	40
Ⓟ Ⓟ Ⓟ Ⓟ	Hunter MP3000 PROS-12-PRS40-CV Shrub Rotator, 12" pop-up with check valve, pressure regulated to 40 psi, MP rotary nozzle. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc on PRS40 body.	6	40
Ⓞ	Hunter MP800SR PROS-12-PRS40-CV Shrub Rotator, 12.0" pop-up with check valve, pressure regulated to 40 psi, MP Rotator nozzle on PRS40 body. OR = Orange adj arc 90 to 210.	2	40
1401	Rain Bird 1800-1400 Flood 1401 Fixed flow rate (0.25-2.06GPM), full circle bubbler, 1/2" FIPT.	17	30
1402	Rain Bird RAS-B-C Root Watering System with 4.0" diameter x 36.0" long with locking grate, semi-rigid mesh tube, and check valve. Rain Bird bubbler option as indicated. 1401 0.25 gpm.	6	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
Ⓜ	Rain Bird XGZ-100-PRF Medium Flow Drip Control Kit, 1" DV valve, 1" pressure regulating filter, 40psi pressure regulator. 3gpm - 15gpm. Install LEMA 1600HE Solenoids and Solenoid/valve Adaptors for each valve.	1
Ⓟ	Rain Bird MDCFCAP/ OPERIND Dripline Flush Valve cap in compression fitting coupler and install Drip System Operation Indicator at each flush valve location.	3
Area to Receive Dripline	Rain Bird XFS-CV-06-18 XFS-CV On-Surface Landscape Dripline with a Heavy-Duty 4.3 psi Check Valve. 0.6 GPH emitters at 18" O.C. Dripline laterals spaced at 18" apart, with emitters offset for triangular pattern. Specify XF insert fittings. Available Only in California	1,491 l.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
Ⓜ	Rain Bird PESB 1" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Scrubber Technology. Install LEMA 1600HE Solenoids and Solenoid/valve Adaptors for each valve.	4
Ⓞ	Rain Bird 44-LRC 1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Rubber Cover, and 2-Piece Body.	2
A	Dig Leit Solar Controller 400B w/Moisture Sensor & Station Solar Controller. Install Stainless Steel Enclosure per detail and Manufacturer's Specifications. Available at DLS, telephone 760 727-0914. Install with Irrrometer WEM-B battery operated soil moisture sensor using SKIT 8821-4 Soil Moisture Adaptor Kit by DLS.	1
---	Irrigation Lateral Line: PVC Schedule 40	637.2 l.f.
---	Irrigation Mainline: PVC Schedule 40	614.2 l.f.
---	Pipe Sleeve: PVC Schedule 40 Sleeves shall be twice the diameter of the pipe being sleeved, typical.	37.1 l.f.



"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans".

Karen K. Clausen 07/01/2020
 Licensed Landscape Architect Date

GENERAL IRRIGATION NOTES

- THIS PROJECT CONSISTS OF ONE POINT OF CONNECTION. THE SPRINKLER SYSTEM DESIGN FOR CONTROLLER A, B AND C IS BASED ON THE STATIC PRESSURE OF 47 PSI AND THE MAXIMUM FLOW OF 12 GPM. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE AT THE POINT OF CONNECTIONS PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCES BETWEEN THE WATER PRESSURE TO THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, SLEEVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING, AND ARCHITECTURAL FEATURES.
- DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- INSTALL ALL PIPE MATERIALS AND EQUIPMENT AS SHOWN IN THE DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON ALL SPRINKLER SWING JOINT AND VALVE ASSEMBLIES.
- IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, ETC. HE SHALL COORDINATE HIS WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVING, AND STRUCTURES, ETC.
- TRENCHING IS TO BE OF SUFFICIENT DEPTH TO PROVIDE 18" OF COVER OVER IRRIGATION MAIN LINES, ROTARY PVC LATERALS AND CONTROL WIRE, AND 12" OF COVER OVER BUBBLER PVC LATERAL LINES, 4" TO 6" COVER OVER SUBSURFACE LATERALS AND ALL LINES UNDER PAVING SHALL BE BURIED WITH 24" OF COVER.
- ALL WIRE SPLICES ARE TO BE MADE WITHIN A VALVE BOX. SPLICES ARE TO BE WIRE NUTTED, SEALED AND WATER PROOF USING 3M[®] SPLICE KIT NO. 054007-04053 OR 054007-04964.
- CONTRACTOR SHALL PROVIDE LANDSCAPE ARCHITECT WITH AN ACCURATE AS-BUILT SET OF DRAWINGS OF THE IRRIGATION SYSTEM PRIOR TO FINAL ACCEPTANCE OF THE WORK AS-BUILT DRAWINGS SHALL BE DELINEATED ON A PDF TO BE SUPPLIED BY THE LANDSCAPE ARCHITECT.
- CONTRACTOR IS TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO PERFORMING ANY EXCAVATIONS. CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 642-2444 FOR UTILITY MARKING. CONTRACTOR IS TO REPAIR ANY DAMAGE CAUSED BY, OR DURING THE PERFORMANCE OF, HIS WORK AT NO ADDITIONAL COST TO THE OWNER.
- FOR ALL MAIN LINE INSTALLED IN PLANTERS THE CONTRACTOR TO INSTALL WARNING TAPE & COPPER LOCATING WIRE ALONG THE ENTIRE LENGTH OF MAIN LINE. (TYPICAL).
- CONTRACTOR SHALL INSTALL TWO (2) SPARE WIRES STARTING FROM THE CONTROLLER, LOOPED TO EACH VALVE BOX TO THE FURTHEST VALVE BOX, WITHOUT SPLICES. THE COLOR OF SPARE WIRE SHALL BE DIFFERENT THAN THE COLORS USED FOR ACTIVE WIRES.
- BACKFLOW PREVENTER SHALL BE TESTED AND CERTIFIED OPERATIONAL BY CERTIFIED BACKFLOW PREVENTION DEVICE TESTER PRIOR TO OPERATION AND FINAL ACCEPTANCE. CONTRACTOR SHALL INSTALL EXPANDED METAL CAGE AND BLANKET TO FIT UNIT.
- PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.
- CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR.

SUBSURFACE IRRIGATION NOTES

- FOR ALL SHRUB AND GROUND COVER AREAS NOTED ON PLAN TO HAVE RAIN BIRD XFS-CV SUB-SURFACE DRIPLINE IRRIGATION INSTALLED, CONTRACTOR SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS, DETAILS, AND THESE NOTES.
- PRIOR TO INSTALLATION SOILS SHALL BE RIPPED AND TILLED AT A UNIFORM EIGHT TO TWELVE INCHES DEPTH REFER TO SOIL PREPARATION AND BACKFILL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- THIS PLAN IS DIAGRAMMATIC AND DOES NOT SHOW EXACT LOCATION OF RAIN BIRD XFS-CV DRIPLINE, FLUSH VALVES, OR AIR RELIEF VALVES, OR INDICATORS. CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION PROCEDURES. ALL DRIPLINE SHALL BE INSTALLED AT A UNIFORM DEPTH OF 4" AND WIDTH OF ALL PERIMETER DRIPLINE LOCATED NO FURTHER THAN 6" FROM CONFINING EDGE. PLACE PERIMETER DRIP LINE OVER HEADERS IF NECESSARY. THE REMAINING INTERIOR LATERALS SHALL BE EQUALLY SPACED AND MINIMUM 18".
- ALL RAIN BIRD XFS-CV DRIPLINE SHALL TIE BACK INTO EITHER ADJACENT DRIP LINE OR SUPPLY OR EXHAUST MAINTAINING A CLOSED SYSTEM.
- ALL SUBSURFACE IRRIGATION PRODUCTS AND SPECIFICATIONS ARE AVAILABLE THROUGH THE RAIN BIRD CORPORATION, (www.rainbird.com).
- CONTRACTOR SHALL USE RAIN BIRD XFS DRIPLINE FITTINGS FOR ALL DRIPLINE CONNECTIONS.
- INSTALLATION STEPS:
 - ASSEMBLE AND INSTALL FILTER, REMOTE CONTROL VALVE AND PRESSURE REGULATOR VALVE ASSEMBLY ACCORDING TO DETAIL ON SHEET L3.3.
 - ASSEMBLE AND INSTALL SUPPLY HEADERS ACCORDING TO DETAILS ON SHEET L3.3 TEFLON TAPE OR PLUG ALL OPEN CONNECTIONS TO PREVENT DEBRIS CONTAMINATION.
 - ASSEMBLE AND INSTALL EXHAUST HEADERS IN ACCORDANCE WITH DETAILS ON SHEET SHEET L3.3, TEFLON TAPE AND PLUG ALL OPEN CONNECTIONS TO PREVENT CONTAMINATION.
 - INSTALL RAIN BIRD XFS DRIPLINE LATERALS. TAPE OR PLUG ALL OPEN ENDS WHILE INSTALLING THE RAIN BIRD XFS-CV DRIPLINE TO PREVENT DEBRIS CONTAMINATION.
 - THOROUGHLY FLUSH SUPPLY HEADERS AND CONNECT DRIP LINE LATERALS WHILE FLUSHING.
 - THOROUGHLY FLUSH EXHAUST HEADERS AND INSTALL LINE FLUSHING VALVES ACCORDING TO DETAIL ON SHEET L3.3. INSTALL (1) FLUSH CAP FOR EVERY 15 GPM OF FLOW FOR EACH ZONE(VALVE) AND ON THE LOWEST ELEVATION.
 - CONTRACTOR SHALL PRESSURE TEST THE SYSTEM PRIOR TO COVERING TRENCHES, AND REPAIR ANY LEAKS PRIOR TO PLANTING.
 - CONTRACTOR SHALL COORDINATE PLANTING INSTALLATION WITH SUBSURFACE DRIP INSTALLATION.
- THE SUB-SURFACE RAIN BIRD XFS DRIPLINE SHOWN ON IRRIGATION PLANS IS DIAGRAMMATIC. FOR ALL SLOPES WITHIN SUB-SURFACE AREA, CONTRACTOR SHALL INSTALL RAIN BIRD XFS DRIPLINE PERPENDICULAR (ACROSS) SLOPES. CONTRACTOR SHALL IN THE UPPER 2/3 OF SLOPE SPACE RAIN BIRD XFS DRIPLINE PER LEGEND. IN THE LOWER 1/3 OF THE SLOPE INCREASE THE SPACING BETWEEN ROWS BY 25% FOR SLOPES GREATER THAN 4 TO 1 THAT INCLUDES THE DRAINAGE SWALES.
 - PROVIDE RCV'S, FILTER, AND PRESSURE REGULATOR FOR RAIN BIRD SYSTEMS AS PER DETAILS.
 - PROVIDE SUPPLY HEADER (CL 200) PVC AS PER RAIN BIRD DETAILS. SEE SHEET L3.3.
 - PROVIDE EXHAUST HEADER (CL 200) PVC AS PER RAIN BIRD DETAILS. SEE SHEET L3.3.
 - EACH SUB-SURFACE STATION SHALL HAVE A DRIP SYSTEM OPERATION INDICATOR, 6" POP-UP, INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND DETAIL ON SHEET L3.3.

IRRIGATION SCHEDULE:

CONTROLLER A SQFT 5,863												ESTABLISHMENT PERIOD												MAINTENANCE PERIOD												TOTAL ETWU GALLONS PER YEAR
STATION	GPM	AREA SQ.FT.	PLANT TYPE	Kc	IE	PR	WATER DAYS/ WEEK	MONTHLY ETO												MONTHLY ETO																
								TIME IN MINUTES/DAY												TIME IN MINUTES/DAY																
								JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC					
NEW								1	1.05	3.25	4.7	3.25	7.7	8.45	7.25	5.45	3.75	1.75	0.95	1	1.05	3.25	4.7	3.25	7.7	8.45	7.25	5.45	3.75	1.75	0.95					
A1	9.94	2,267	SHRUBS DRIP	0.20	0.81	0.33	3	0	7	12	18	36	42	69	76	66	49	17	15	0	9	15	30	35	58	64	55	41	14	13	7	18,012				
A2	3.0	96	TREE BUB	0.20	0.81	4.10	3	0	3	5	6	7	7	8	7	6	5	4	3	0	2	3	4	5	6	7	6	7	4	2	2	763				
A3	4.2	172	BUBBLERS	0.20	0.81	2.70	3	0	7	9	10	9	14	16	15	12	9	4	3	0	6	7	8	7	11	12	10	8	6	3	2	1,367				
A4	11.5	1,570	ROTARY	0.50	0.75	0.68	3	0	3	10	11	10	22	25	21	13	12	5	3	0	2	8	10	8	20	23	20	12	10	4	2	26,944				
A5	10.0	1,758	ROTARY	0.50	0.75	0.68	3	0	3	10	11	10	22	25	21	13	12	5	3	0	2	8	10	8	20	23	20	12	10	4	2	30,170				
																								77,255	Gallons per year											
CONTROLLER B & C SQFT 2,161																																				TOTAL ETWU GALLONS PER YEAR
B1	4.75	127	BUBBLERS	0.20	0.81	2.70	3	0	7	9	10	9	14	16	15	12	9	4	3	0	6	7	8	7	11	12	10	8	6	3	2	1,009				
B2	9.50	297	BUBBLERS	0.20	0.81	2.70	3	0	7	9	10	9	14	16	15	12	9	4	3	0	6	7	8	7	11	12	10	8	6	3	2	2,360				
B3	4.0	64	TREE BUB	0.20	0.81	4.10	3	0	3	5	6	7	7	8	7	6	5	4	3	0	2	3	4	5	6	7	6	7	4	2	2	508				
B4	10.0	352	BUBBLERS	0.25	0.81	2.70	3	0	7	9	10	9	14	16	15	12	9	4	3	0	6	7	8	7	11	12	10	8	6	3	2	3,496				
B5	4.0	64	TREE BUB	0.20	0.81	4.10	3	0	3	5	6	7	7	8	7	6	5	4	3	0	2	3	4	5	6	7	6	7	4	2	2	508				
B6	12.0	404	BUBBLERS	0.25	0.81	2.70	3	0	7	9	10	9	14	16	15	12	9	4	3	0	6	7	8	7	11	12	10	8	6	3	2	4,012				
C1	5.0	80	TREE BUB	0.25	0.81	4.10	3	0	3	5	6	7	7	8	7	6	5	4	3	0	2	3	4	5	6	7	6	7	4	2	2	795				
C2	9.25	341	BUBBLERS	0.25	0.81	2.70	3	0	7	9	10	9	14	16	15	12	9	4	3	0	6	7	8	7	11	12	10	8	6	3	2	3,387				
C3	7.0	112	TREE BUB	0.25	0.81	4.10	3	0	3	5	6	7	7	8	7	6	5	4	3	0	2	3	4	5	6	7	6	7	4	2	2	1,112				
C4	8.50	320	BUBBLERS	0.25	0.81	2.70	3	0	7	9	10	9	14	16	15	12	9	4	3	0	6	7	8	7	11	12	10	8	6	3	2	3,178				
																								20,365	Gallons per year											

- NOTES:
- Run time in minutes/day shall occur on each Watering Day per Week. run Time = Weekly ETO*60/(PR*IE)*Watering Days
 - Any irrigation valve whose Precipitation Rate (PR) exceeds the Soil Infiltration Rate (SIR), shall be programmed using Cycle and Soak feature. Run times in minutes per day shall be divided into the necessary amount of cycles to avoid runoff. Do not exceed Max Cycle time of 14 minutes.
 - Controllers need to be programmed using multiple program features in order to obtain the maximum flow demand. If necessary, program multiple valves to run simultaneously so the the Maximum Flow Demand in met.
 - Establishment period is 3 months.
 - Contractor shall insure that only one Controller run at one time when setting up schedule.

I HAVE COMPLIED WITH THE CRITERIA OF SCMC CHAPTER 17.34 AND APPLIED THEM THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN.

Karen K. Clausen 07/01/2020
 KAREN K. CLAUSEN, LANDSCAPE ARCHITECT DATE

K. CLAUSEN, INC.
 LANDSCAPE ARCHITECT
 P.O. Box 8065
 Auburn, CA 95604
 (530) 884-9146 C. (916) 551-5380
 kclausen@kclausenlandscapearchitect.com

IRRIGATION NOTES & LEGEND
CAMERON RANCH
 GREEN VALLEY RD • EL DORADO COUNTY, CA

Revisions:

Scale: AS SHOWN

Date: 07-01-2020

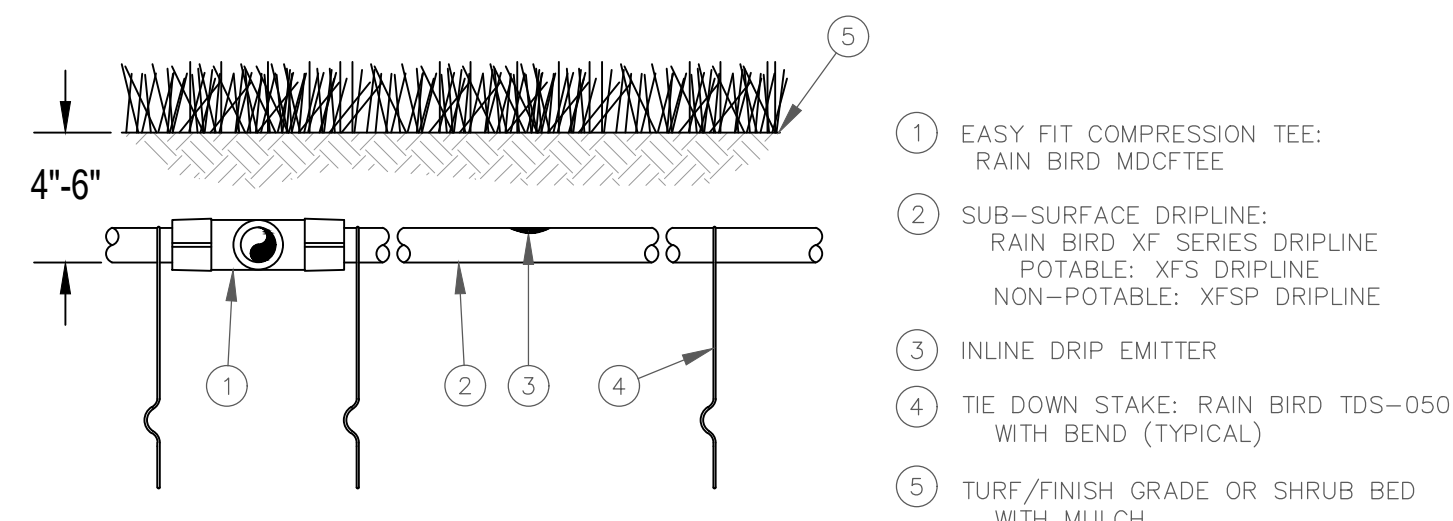
Job # 061

L3.2 OF SHEET

CAROL PERRY BROWN
 Landscape Architecture
 Irrigation Design

530 823 2621
 perrydesign@att.net
 RLA 3941 CID 002624

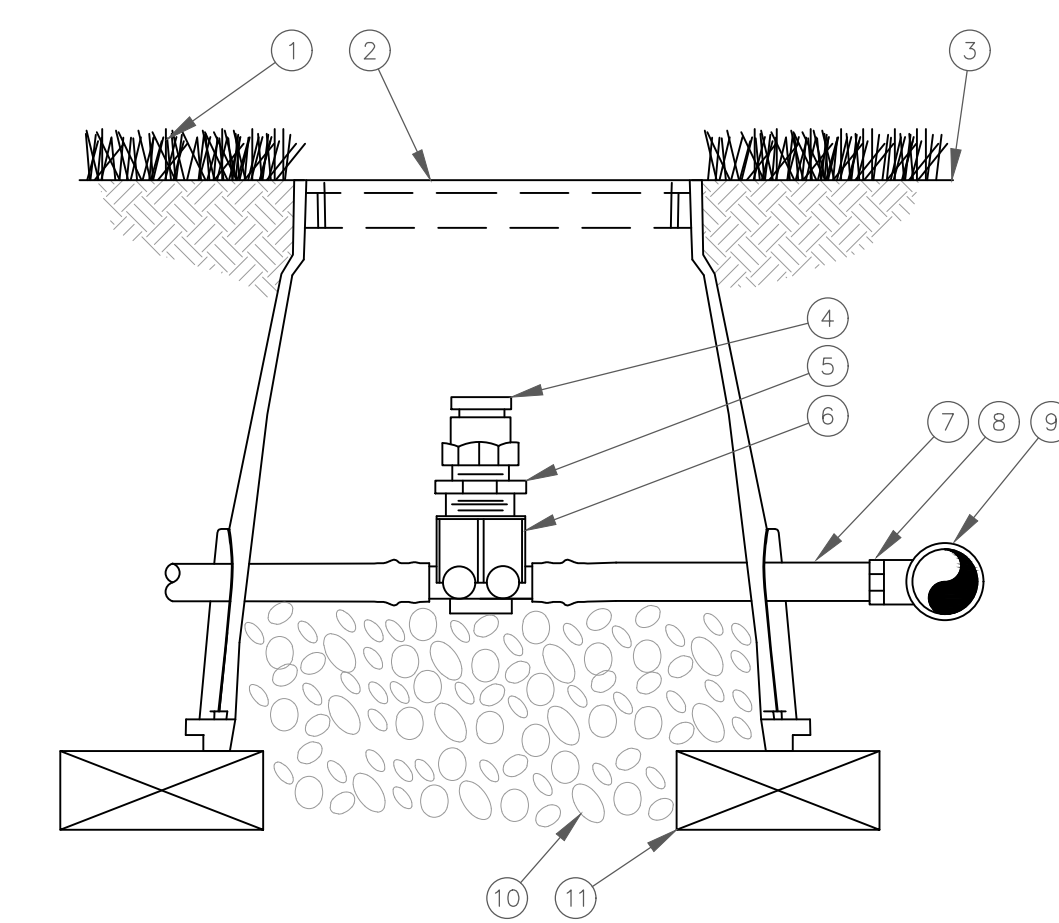
PERRY DESIGN



- NOTES:
1. PLACE TIE-DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
 2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
 3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE-DOWN STAKES.

A XFS SUB-SURFACE DRIPLINE BURIAL

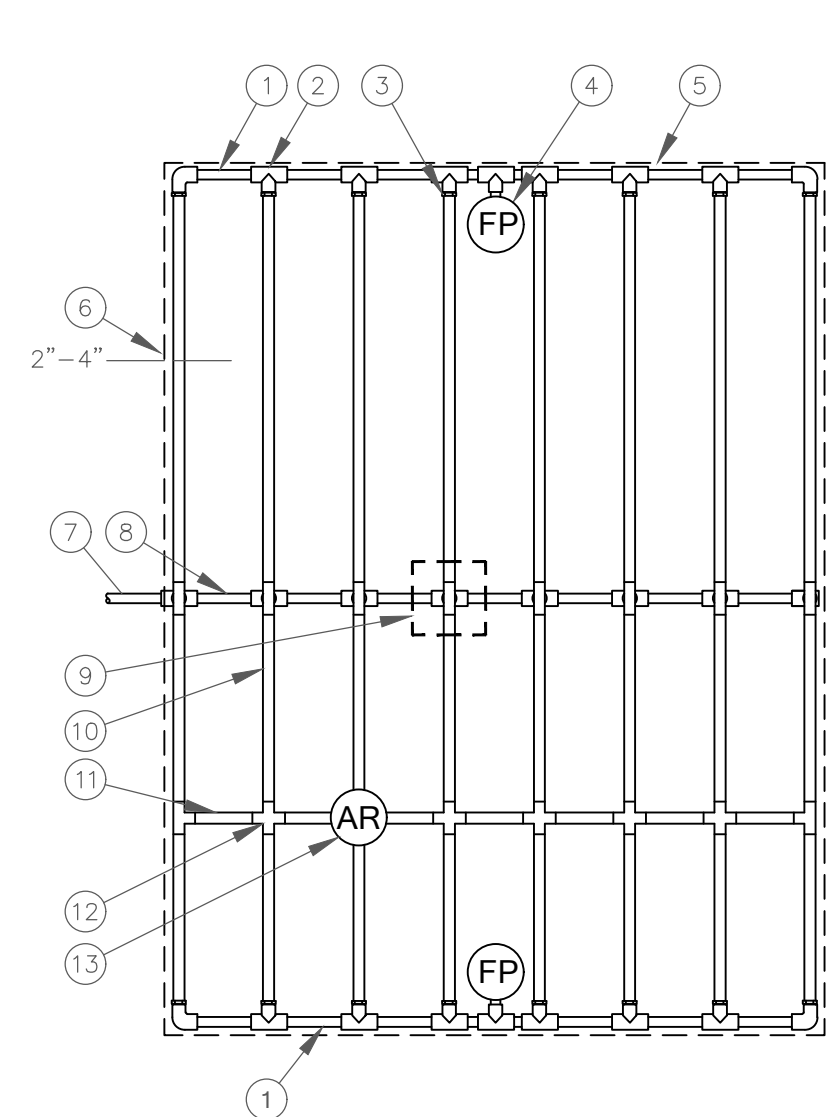
N.T.S.



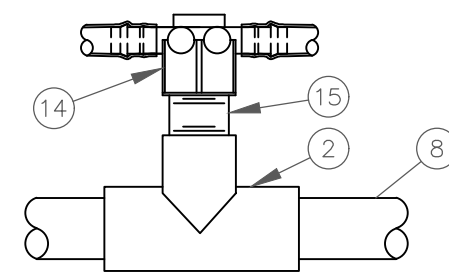
- 1 TURF GRASS
- 2 SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
- 3 FINISH GRADE
- 4 1/2" AIR RELIEF VALVE: RAIN BIRD ARV-12 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
- 5 1/2" X 3/4" PVC REDUCER BUSHING
- 6 BARB X FEMALE THREAD CONNECTOR: RAIN BIRD XFD-TFA FITTING
- 7 1/2" BLANK DRIPLINE TUBING: RAIN BIRD XF SERIES
- 8 BARB X MALE THREAD CONNECTOR: RAIN BIRD XFD-MA FITTING
- 9 PVC TEE CONNECTED TO PVC HEADER PIPE
- 10 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- 11 BRICK (1 OF 2)

B XFS DRIPLINE AIR RELIEF VALVE

N.T.S.



- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARB X MALE FITTING: RAIN BIRD XFD-MA FITTING (TYPICAL)
- 4 FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 7 PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 8 PVC SUPPLY MANIFOLD CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL)- SEE INSET A
- 9 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
- 10 1/2" POLYETHYLENE BLANK TUBING: RAIN BIRD XF SERIES BLANK TUBING
- 11 BARB X BARB INSERT TEE OR CROSS: RAIN BIRD XFD-TEE OR RAIN BIRD XFD-CROSS (TYPICAL)
- 12 AIR RELIEF VALVE: RAIN BIRD AR VALVE KIT SEE RAIN BIRD DETAIL "XFS AIR RELIEF VALVE KIT" OR "XFS AIR RELIEF VALVE KIT IN PVC HEADER"
- 13 BARB X FEMALE FITTING: RAIN BIRD XFD-TFA-075 FITTING
- 14 3/4" PVC NIPPLE, LENGTH AS NECESSARY

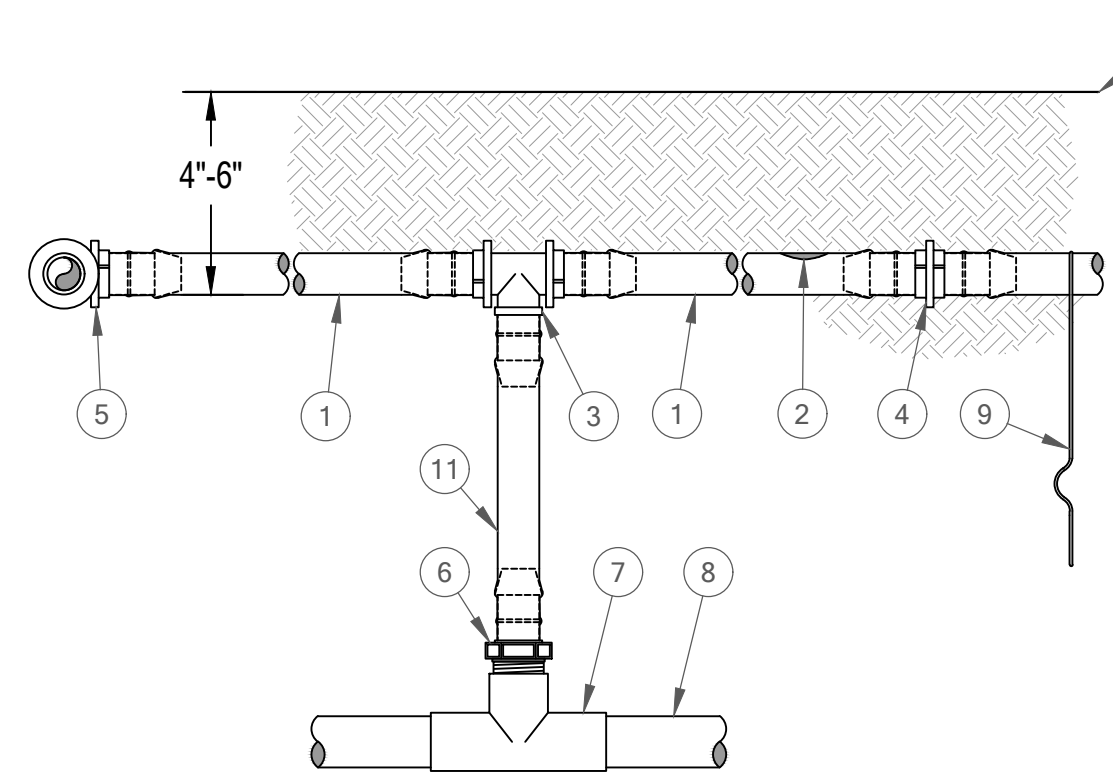


- NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XF-SOI DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
 2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
 3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.

Inlet Pressure	XFS Dripline Maximum Lateral Lengths (Feet)					
	12" Spacing		18" Spacing		24" Spacing	
psi	Nominal Flow (GPH)	Nominal Flow (GPH)	Nominal Flow (GPH)	Nominal Flow (GPH)	Nominal Flow (GPH)	Nominal Flow (GPH)
15	0.6	0.9	0.6	0.9	0.6	0.9
20	255	194	357	273	448	343
30	291	220	408	313	514	394
40	350	266	494	378	622	478
50	396	302	560	428	705	541
	434	333	614	470	775	594

C XFS SUB-SURFACE DRIPLINE CENTER FEED LAYOUT

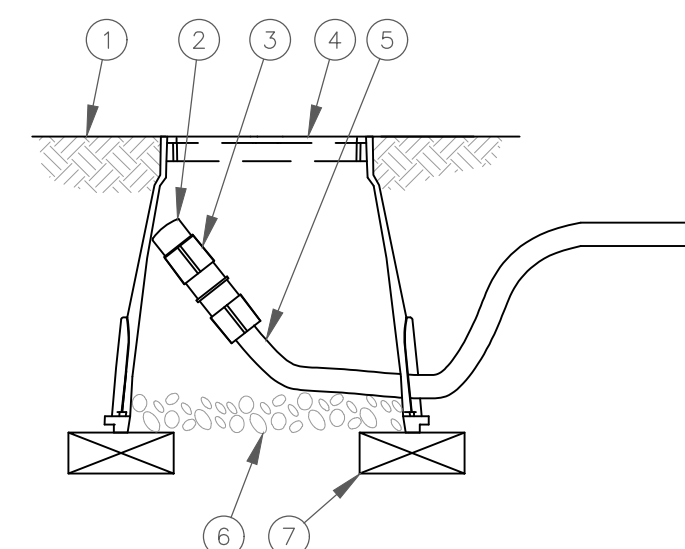
N.T.S.



- NOTES:
1. PLACE TIE-DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
 2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
 3. SAVE YOUR HANDS. USE THE RAIN BIRD FITTINGS-TOOL XF INSERTION TOOL FOR FITTING ASSEMBLY.

D XFS SUB-SURFACE DRIPLINE RISER ASSEMBLY

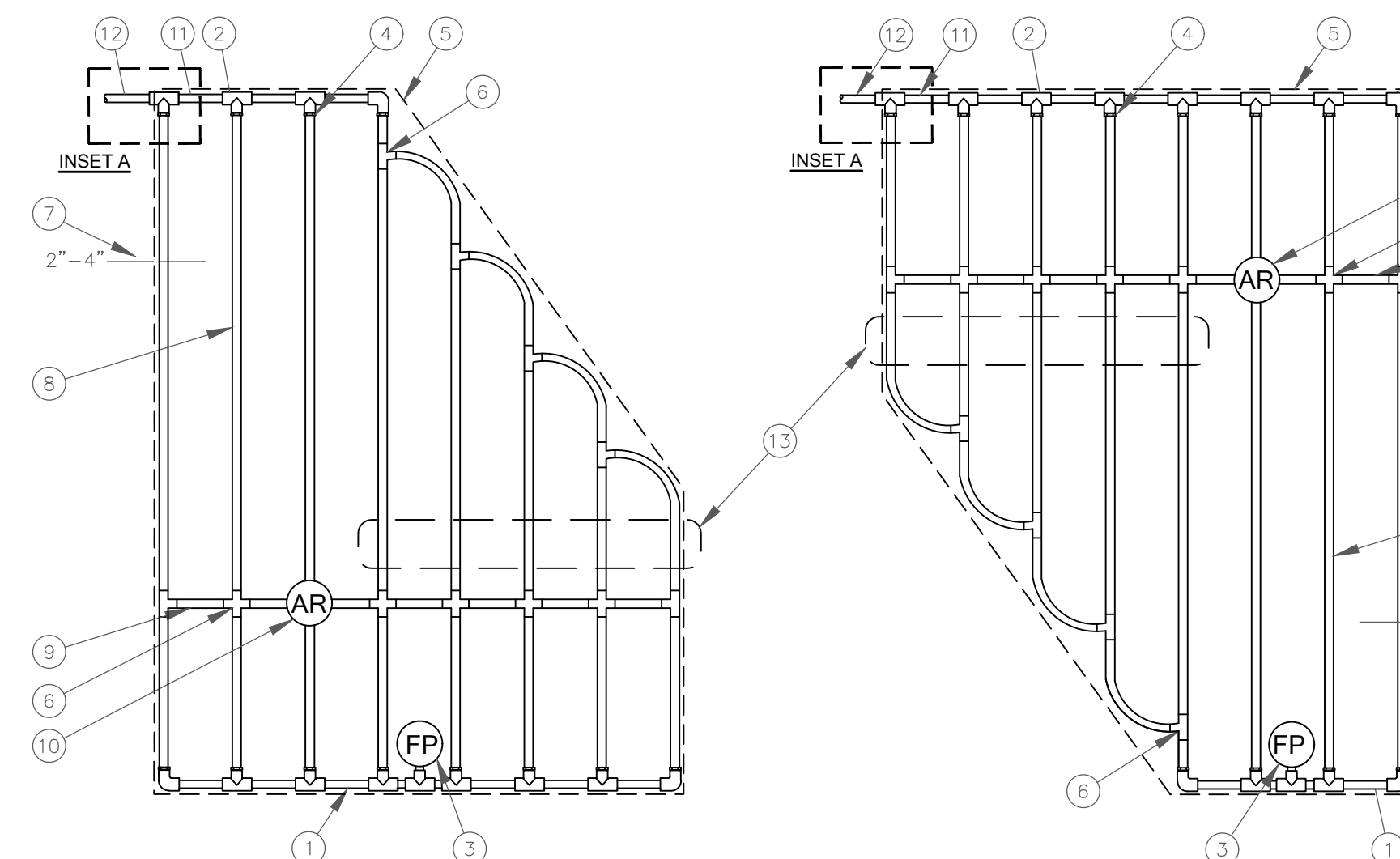
N.T.S.



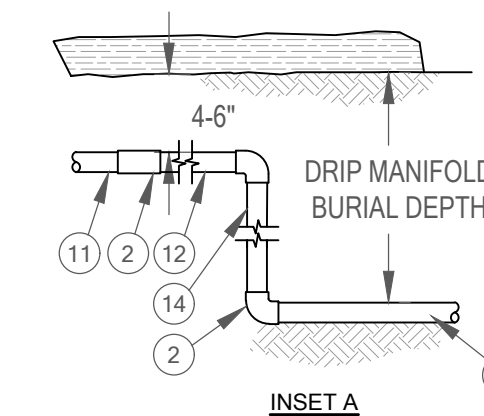
- NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

E XFS SUB-SURFACE DRIPLINE FLUSH POINT

N.T.S.



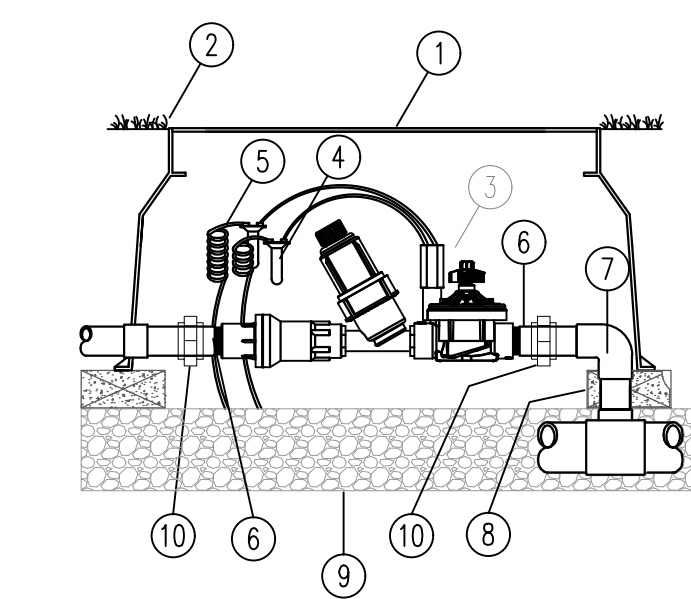
- NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XFS DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
 2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
 3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.



Inlet Pressure	XFS Dripline Maximum Lateral Lengths (Feet)					
	12" Spacing		18" Spacing		24" Spacing	
psi	Nominal Flow (GPH)	Nominal Flow (GPH)	Nominal Flow (GPH)	Nominal Flow (GPH)	Nominal Flow (GPH)	Nominal Flow (GPH)
15	0.6	0.9	0.6	0.9	0.6	0.9
20	255	194	357	273	448	343
30	291	220	408	313	514	394
40	350	266	494	378	622	478
50	396	302	560	428	705	541
	434	333	614	470	775	594

F XFS SUB-SURFACE DRIPLINE IRREGULAR SHAPED LAYOUT

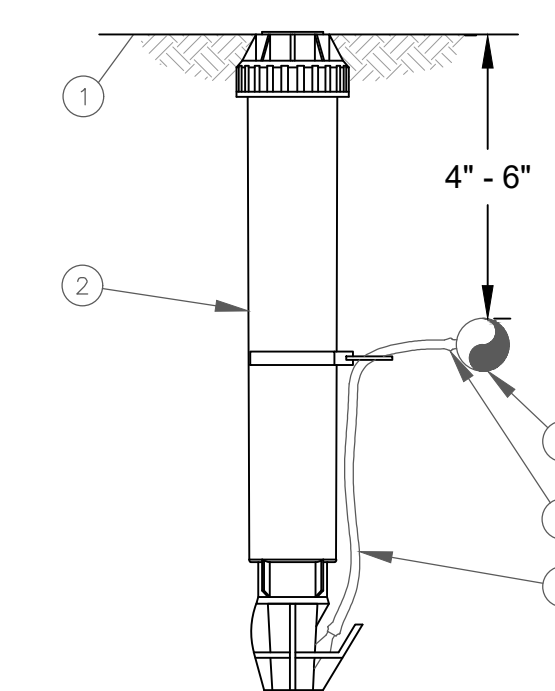
N.T.S.



- 1 JUMBO VALVE BOX
- 2 FINISH GRADE
- 3 DRIP ZONE KIT MODEL ICZ-101-XX WITH FILTER (TIP 45 DEGREES) REGULATOR 25 OR 40 PSI
- 4 WATERPROOF CONNECTORS (2)
- 5 18-24" COILED WIRE
- 6 SCH 80 T.O.E. NIPPLE
- 7 MAIN LINE PIPE & FITTINGS
- 8 BRICK SUPPORTS (4)
- 9 3/4" MINUS WASHED GRAVEL
- 10 PVC SLIP UNIONS (2)

G DRIP CONTROL VALVE ASSEMBLY

NOT TO SCALE



- 1 FINISH GRADE/TURF
- 2 MICRO-SPRAY POP-UP: RAIN BIRD XERI-POP XP-600X WITH 4-VAN NOZZLE
- 3 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
- 4 1/2" BARB TRANSFER FITTING: RAIN BIRD XBFCONN
- 5 1/4" DISTRIBUTION TUBING: RAIN BIRD XQ TUBING (LENGTH AS REQUIRED)

- NOTE:
1. USE XERIMAN TOOL XM-TOOL TO INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.

H XFS SUB-SURFACE OPERATION INDICATOR

N.T.S.

- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
- 4 BARB X MALE FITTING: RAIN BIRD XFD-MA FITTING (TYPICAL)
- 5 PERIMETER OF AREA
- 6 BARB X BARB INSERT TEE OR CROSS: RAIN BIRD XFD-TEE OR RAIN BIRD XFD-CROSS (TYPICAL)
- 7 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 8 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
- 9 1/2" POLYETHYLENE BLANK TUBING: RAIN BIRD XF SERIES BLANK TUBING
- 10 AIR RELIEF VALVE: RAIN BIRD AR VALVE KIT SEE RAIN BIRD DETAIL "XFS AIR RELIEF VALVE KIT"
- 11 PVC SUPPLY MANIFOLD
- 12 PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 13 TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE
- 14 PVC SCH 40 RISER PIPE

C XFS SUB-SURFACE DRIPLINE CENTER FEED LAYOUT

N.T.S.

F XFS SUB-SURFACE DRIPLINE IRREGULAR SHAPED LAYOUT

N.T.S.

KLAUSEN, INC.
 K. CLAUSEN RLA 4169
 LANDSCAPE ARCHITECT
 P.O. Box 8095
 Auburn, CA 95604
 (530) 885-6116 C. (916) 551-5380
 kclausen@kclausenlandscapearchitect.com

LANDSCAPE ARCHITECT
 K. CLAUSEN
 No. 4169
 07/31/2022
 07/01/2020
 STATE OF CALIFORNIA

IRRIGATION DETAILS
 CAMERON RANCH
 GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:

Scale: AS SHOWN

Date: 07/01/2020

Job #: 061

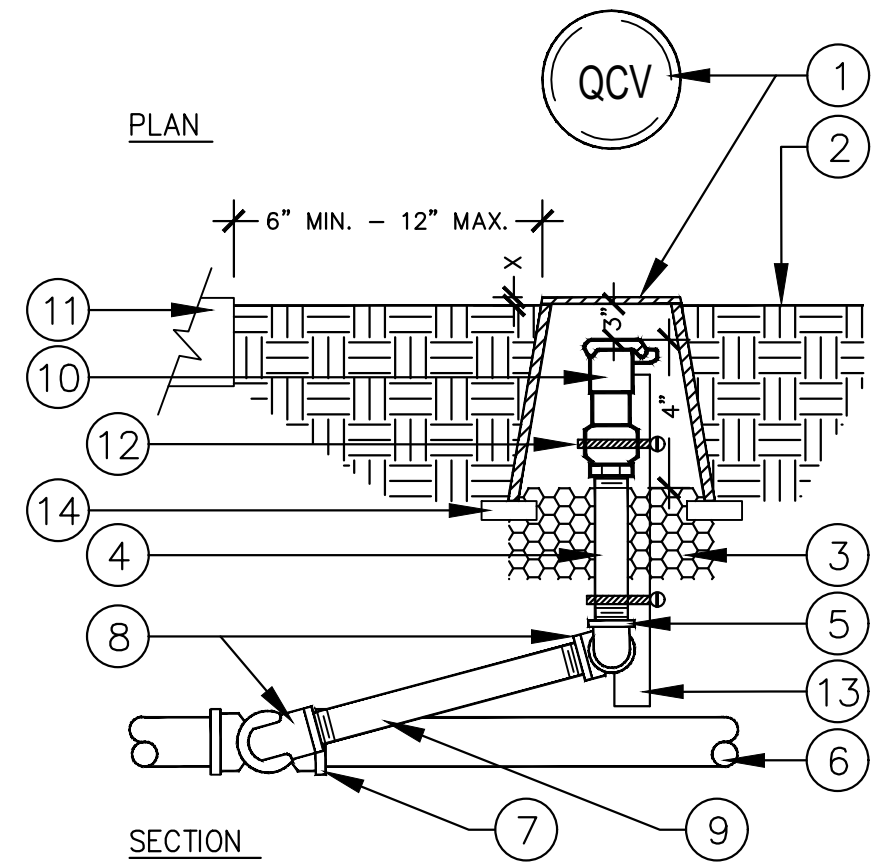
L3.3
 OF SHEET

530 823 2621
 perrydesign@att.net
 RLA 3941 CID 002624

CAROL PERRY BROWN
 Landscape Architecture
 Irrigation Design

PERRY DESIGN
 Creative Irrigation Designer
 CID
 Irrigation Association

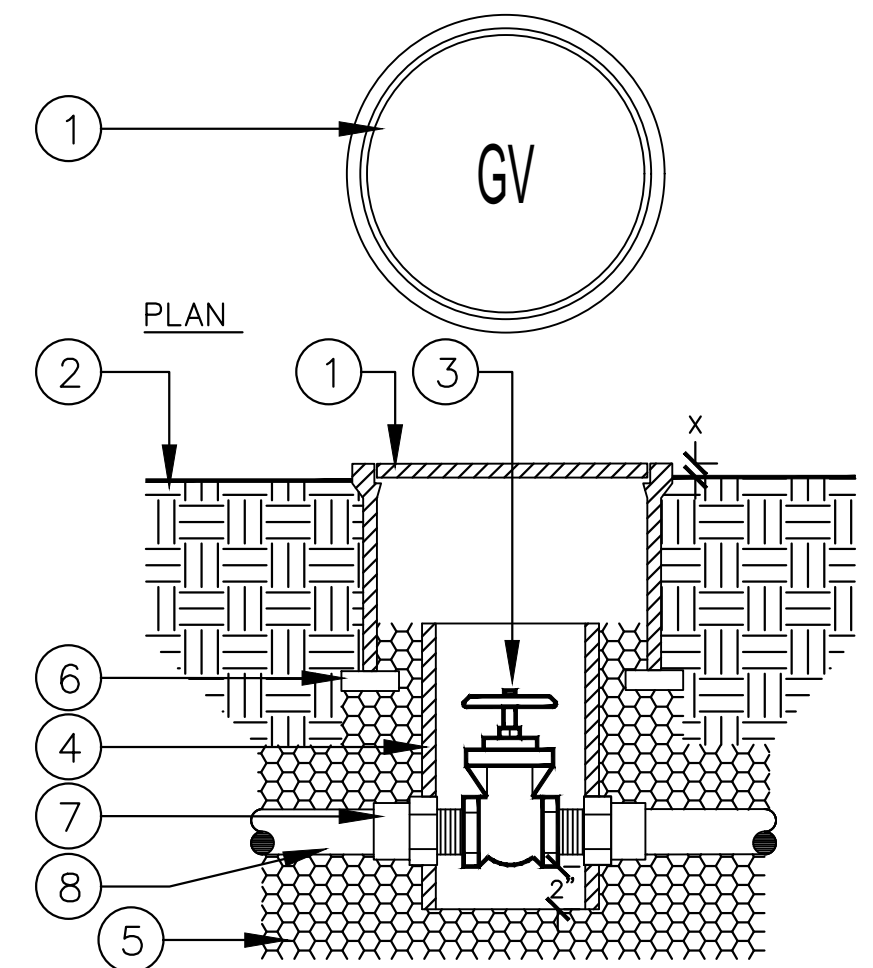
93-0739 G 46 of 48



- LEGEND:**
- 10" ROUND VALVE BOX. HEAT BRAND "QCV" ON LID IN 2" HIGH CHARACTERS.
 - FINISH GRADE.
 - 3/4" CRUSHED ROCK. 6" DEPTH.
 - SCH 80 NIPPLE. LENGTH AS REQUIRED.
 - SCH 40 90° ELL.
 - MAINLINE PIPING.
 - MAINLINE FITTING.
 - SCH 40 90° STREET ELL.
 - SCH 80 NIPPLE. 6" LONG.
 - QUICK COUPLING VALVE.
 - ADJACENT CONCRETE.
 - STAINLESS STEEL CLAMPS.
 - 1" x 3/16" x 30" ANGLE IRON.
 - COMMON BRICK (2 REQUIRED).

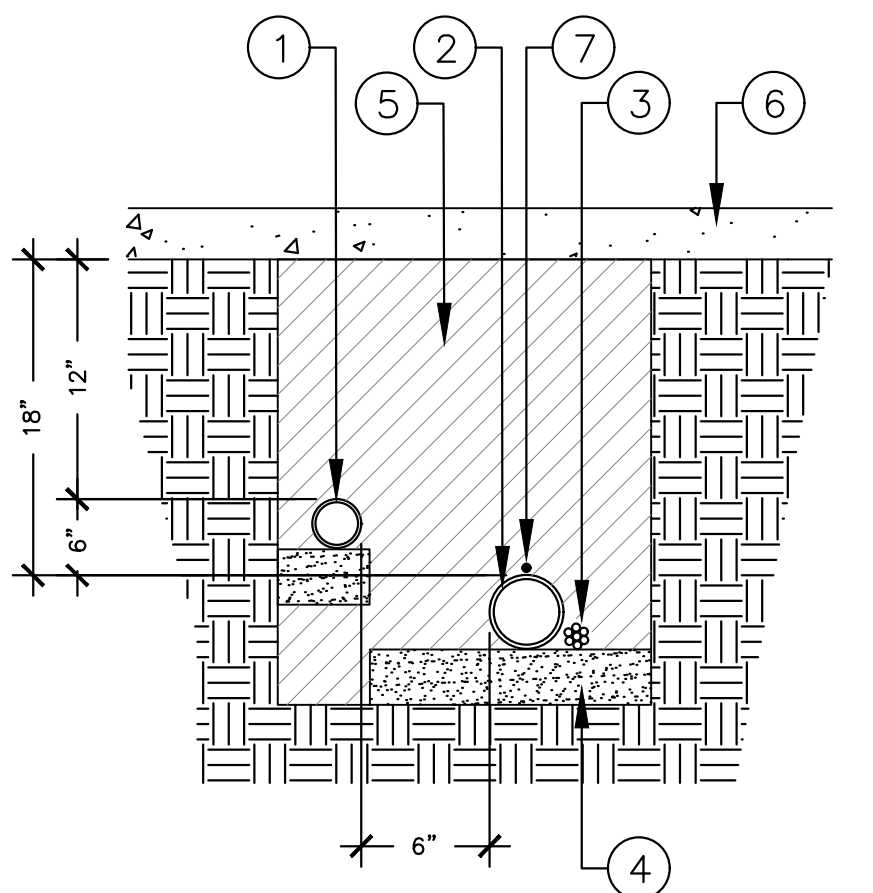
NOTES:
 1. USE TEFLON TAPE ON ALL MALE PIPE THREADS.
 X - 1 1/2" ABOVE FINISH GRADE IN LAWN AREAS
 2 1/2" ABOVE FINISH GRADE IN SHRUB AREAS.

A QUICK COUPLER
 SCALE: N.T.S.



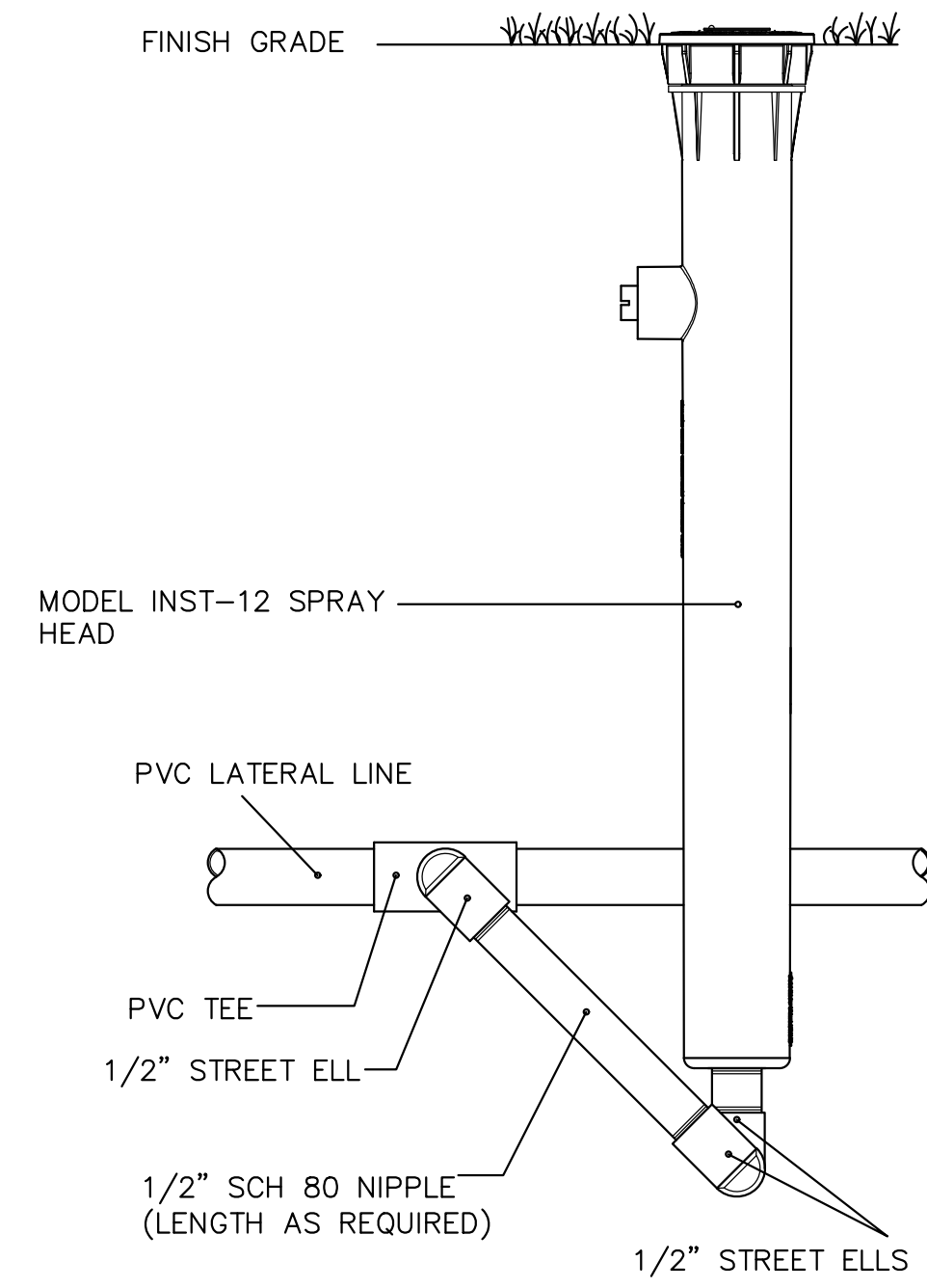
- LEGEND:**
- ROUND VALVE BOX WITH GREEN BOLT DOWN COVER. HEAT BRAND "GV" ON VALVE BOX COVER IN 2" HIGH LETTERS.
 - FINISH GRADE.
 - GATE VALVE WITH BRONZE WHEEL HANDLE OR CROSS- HANDLE.
 - 6" DIA. SCH. 40 PVC PIPE EXTENSION. LENGTH AS REQUIRED.
 - 3/4" CRUSHED ROCK. 8" DEPTH.
 - COMMON BRICK (2 REQUIRED).
 - FLANGED MALE ADAPTER. TYPICAL.
 - PVC MAIN LINE PIPE.
- NOTE:**
 X - 1" IN TURF AREAS
 2" IN SHRUB AREAS

B GATE VALVE
 SCALE: N.T.S.

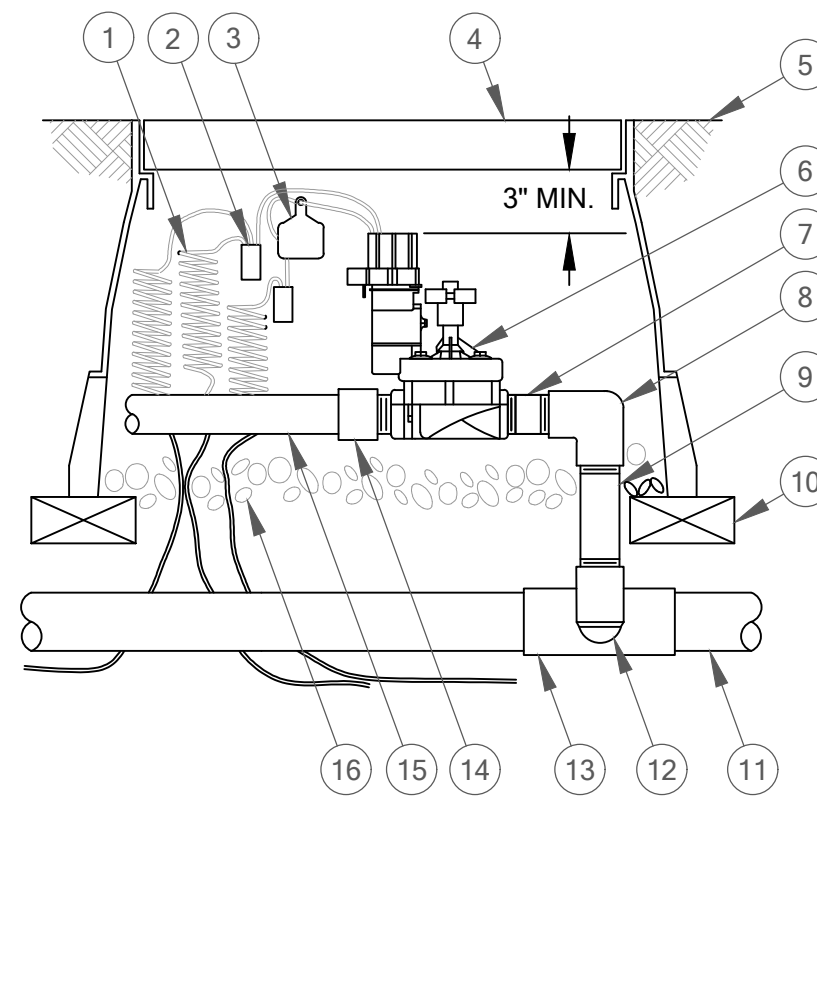


- LEGEND:**
- NON-PRESSURE LATERAL LINE PIPING.
 - PRESSURE MAIN LINE PIPING. SNAKE FROM SIDE TO SIDE.
 - CONTROL WIRES - TAPE AND BUNDLE EVERY 4"-6" FEET. INSTALL ADJACENT TO PRESSURE MAIN LINE.
 - PROVIDE 2" DEPTH OF CLEAN BACKFILL.
 - SEE IRRIGATION SPECS FOR BACKFILL AND COMPACTION REQUIREMENTS.
 - FINISH GRADE OF ASPHALT PAVING CONCRETE OR OTHER IMPERVIOUS MATERIALS.
 - #10 BARE COPPER TRACE WIRE.
- NOTE:**
 PROVIDE 24" OF COVER WHERE PIPING IS UNDER PAVING.

C IRRIGATION TRENCHING: 18" DEPTH
 NOT TO SCALE

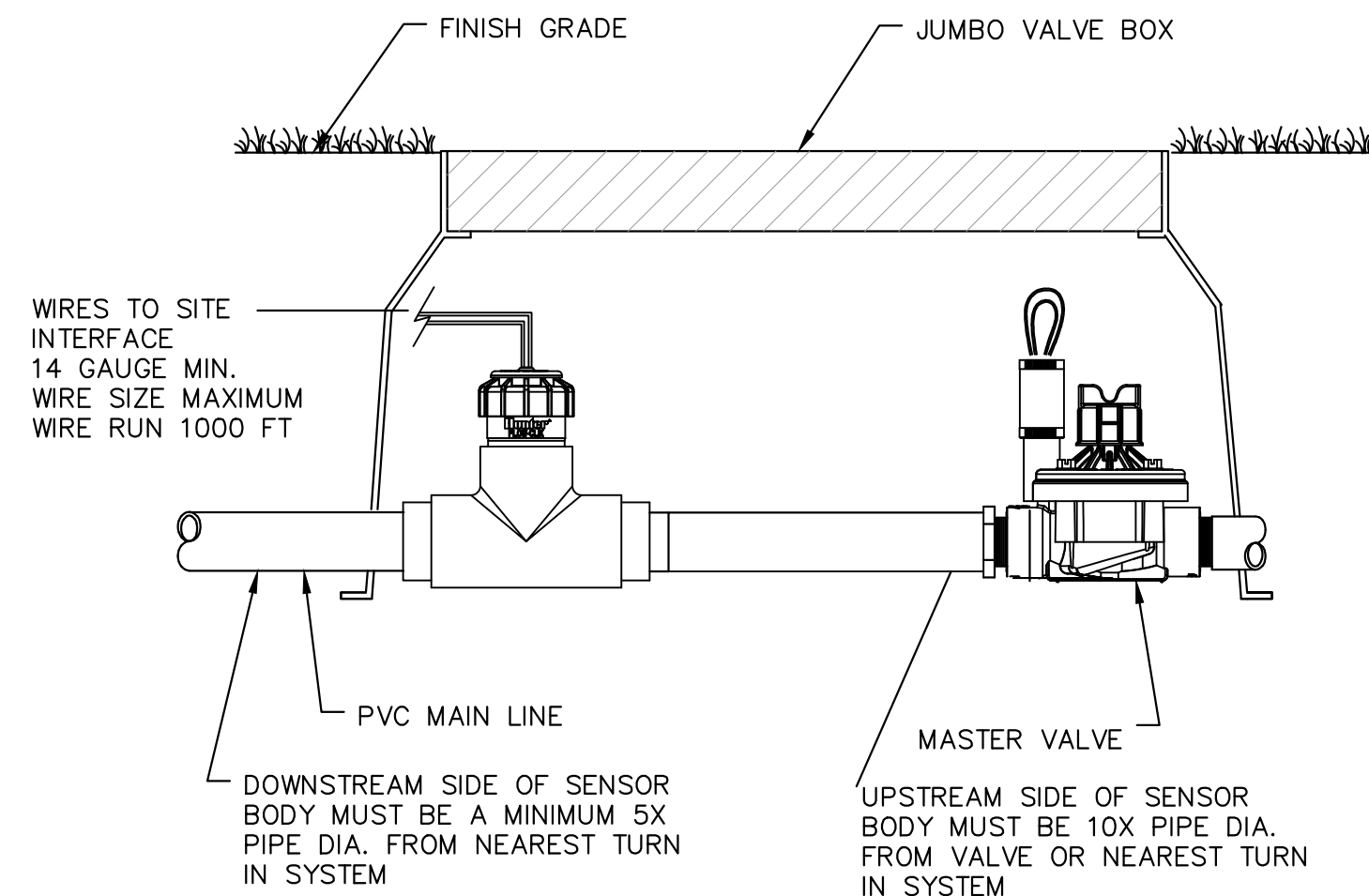


D 12" POP-UP SPRAY HEAD
 NOT TO SCALE

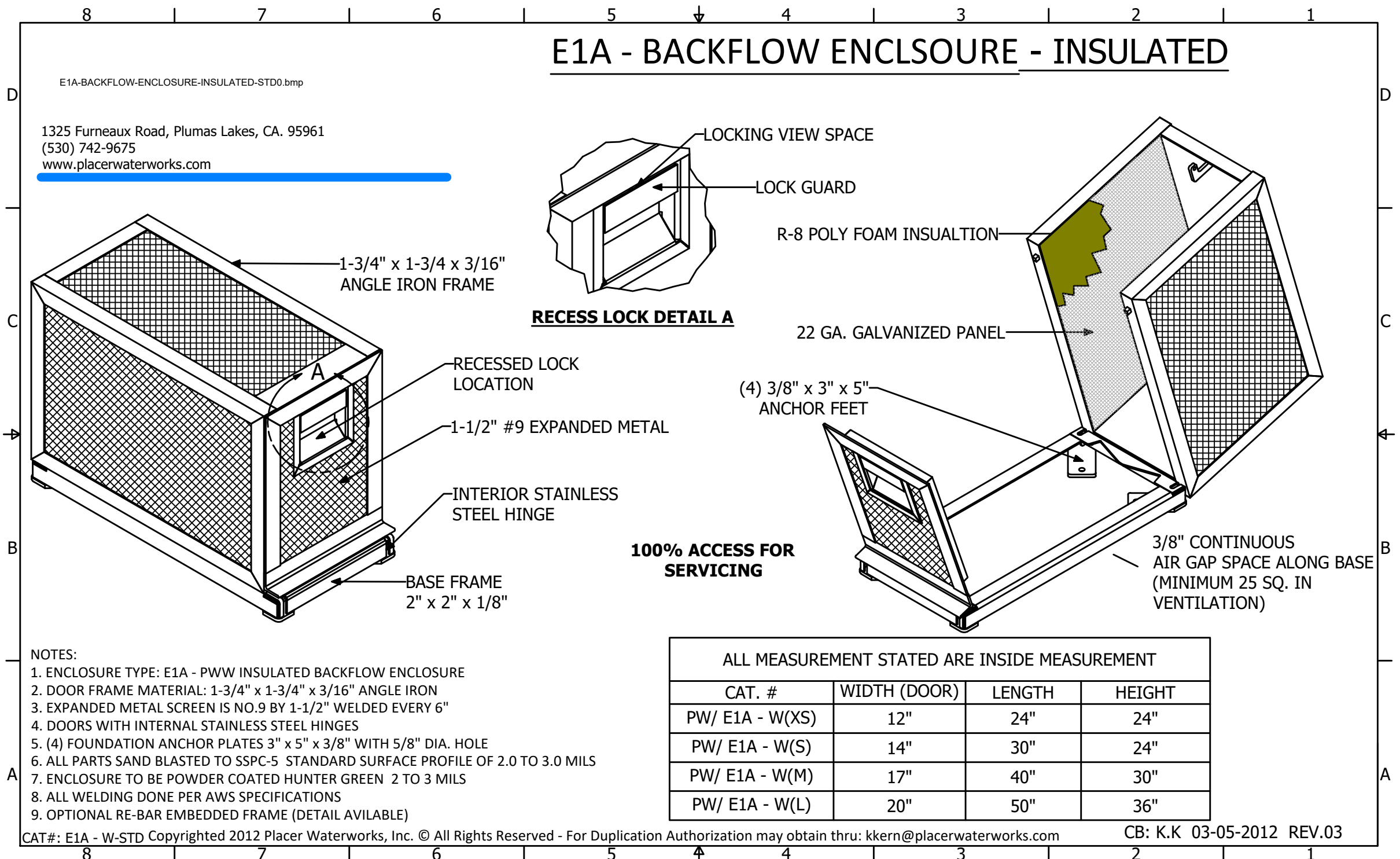


- 30-INCH LINEAR LENGTH OF WIRE, COILED
- WATER PROOF CONNECTION (1 OF 2)
- ID TAG
- VALVE BOX WITH COVER: 12-INCH SIZE
- FINISH GRADE/TOP OF MULCH
- REMOTE CONTROL VALVE: RAIN BIRD PEB
- PVC SCH 80 NIPPLE (CLOSE)
- PVC SCH 40 ELL
- PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- BRICK (1 OF 4)
- PVC MAINLINE PIPE
- SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND SCH 40 ELL
- PVC SCH 40 TEE OR ELL
- PVC SCH 40 MALE ADAPTER
- PVC LATERAL PIPE
- 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

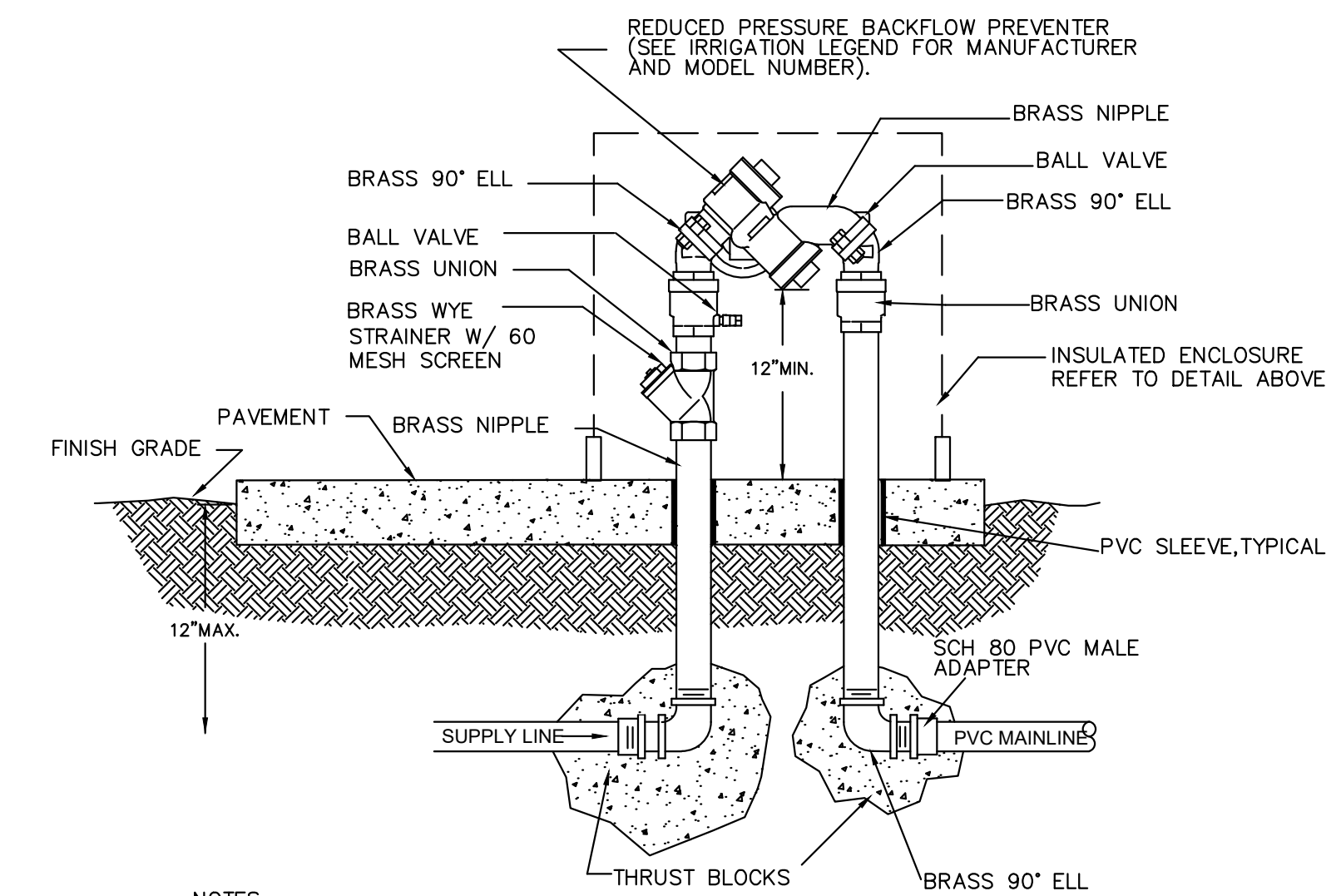
E REMOTE CONTROL VALVE
 NOT TO SCALE



G FLOW SENSOR-MASTER VALVE
 NOT TO SCALE



F PLACER WATERWORKS INSULATED ENCLOSURE
 NOT TO SCALE



- NOTES:**
- EQUIPMENT TO BE INSTALLED A MIN. OF 24" FROM ANY STRUCTURE OR HARDSCAPING
 - WHEN UNIT IS NEAR A STRUCTURE- MOUNT TEST COCK ON OPEN OR NON-OBSTRUCTED SIDE
 - ALL ABOVE GROUND ASSEMBLY SHALL RECEIVE TWO(2) COATS OF RED PRIMER & ONE COAT OF EXT. BLACK ENAMEL
 - REFER TO SPECIFICATIONS & PLAN SHEET FOR MORE INFORMATION
 - PROVIDE A POLAR PARKA INSULATION BLANKET, OR CITY APPROVED EQUAL.
 - PROVIDE A LOCKABLE, EXPANDED METAL PROTECTIVE ENCLOSURE BY PLACER WATER WORKS.

G 3/4" REDUCED PRESSURE BACKFLOW PREVENTER
 NOT TO SCALE

"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans".

 Licensed Landscape Architect Date 07/01/2020

Carroll Perry Brown
 Landscape Architecture
 Irrigation Design
 CID
 Certified Irrigation Designer
 Irrigation Association
 530 823 2621
 perrydesign@att.net
 RLA 3941 CID 002624

KLAUSEN, INC.
 K. CLAUSEN RLA 4169
 LANDSCAPE ARCHITECT
 P.O. Box 8065
 Auburn, CA 95604
 (530) 885-4169 C. (916) 551-5380
 kclausen@kclausenlandscapearchitect.com



IRRIGATION DETAILS
CAMERON RANCH
 GREEN VALLEY RD * EL DORADO COUNTY, CA

Revisions:

Scale: AS SHOWN

Date: 07/01/2020

Job #: 061

L3.4
OF SHEET

