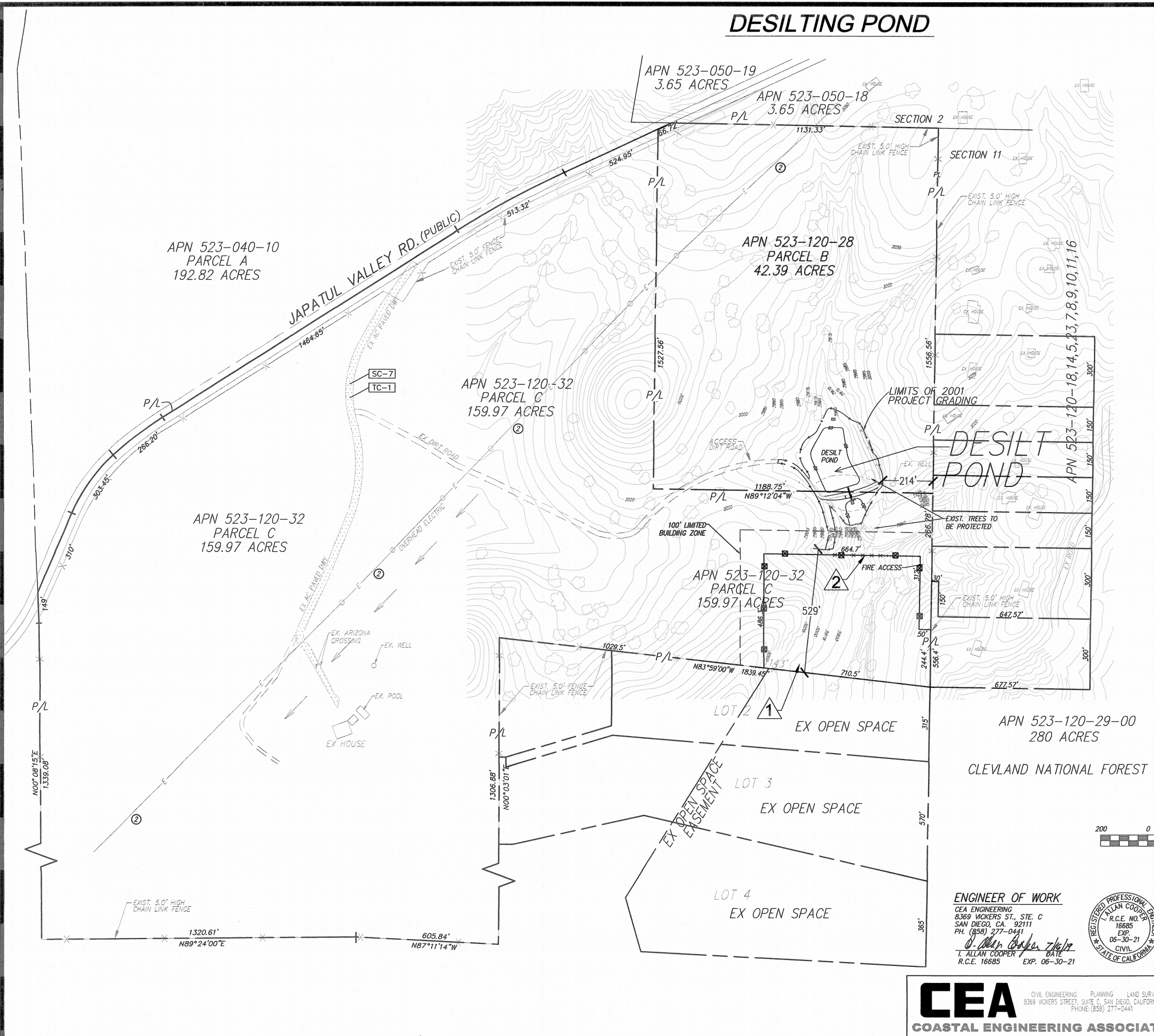


DESILTING POND



- LEGEND**
- PROPERTY LINE P/L
 - EX. 5' HIGH CHAIN LINK FENCE
 - EX. AC PAVED DWY
 - EX. POWER POLE ○
 - SIGN - "OPEN SPACE"
 - 36" HIGH 3 WIRE FENCE FOR "OPEN SPACE" ⊠
- TEMPORARY BMPS LEGEND**
- [SC-7] STREET SWEEPING AND VACUUMING
 - [TC-1] STABILIZED CONSTRUCTION ENTRANCE
EX. PAVED AC PRIVATE DWY
- EXISTING TOPOGRAPHY**
1. EXISTING TOPOGRAPHY PER 1:2400 SCALE COUNTY OF SAN DIEGO USGS QUAD MAP SHEET 226-1875
 2. EXISTING 10' WIDE SD&E ELECTRIC EASEMENT FOR POWER LINES

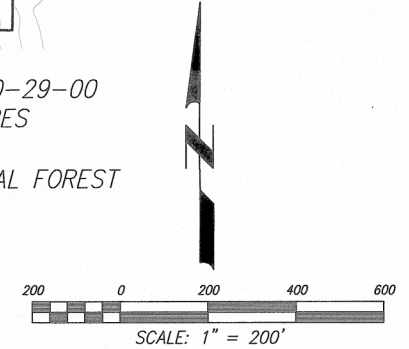
- NOTES**
1. PROPOSED 8.10 ACRE OPEN SPACE EASEMENT DEDICATED IN FAVOR OF THE COUNTY OF SAN DIEGO PER DOC. # _____ RECORDED DATE: _____
 2. 3 WIRE & T-POST FENCING FOR OPEN SPACE

IMPACTS - 2001

BIOLOGICAL RESOURCE	STUDY (ACRE)	IMPACT (ACRE)	RATIO	MITIGATION (ACRE)
NON-NATIVE GRASSLAND	4.0	1.0	2:1	2.0
SOUTHERN COAST LIVE OAK RIPARIAN FOREST	1.0	NONE	3:1	NONE
MIXED OAK WOODLAND	4.5	NONE	3:1	NONE
CHAPARRAL	2.0	NONE	1:1	NONE
FLAT-TOP BUCKWHEAT	5.5	1.0	6:1	6.0
TOTAL 17.0	TOTAL 2.0	TOTAL 8.0		

IMPACTS - 2018 - OVER EXISTING 2001 IMPACTED AREA

BIOLOGICAL RESOURCE	IMPACT (ACRE)	RATIO	MITIGATION (ACRE)
NON-NATIVE GRASSLAND	.04	2:1	.08
TOTAL .04			TOTAL .08
TOTAL REQUIRED OPEN SPACE			8.08 ACRES
TOTAL PROPOSED OPEN SPACE			8.10 ACRES



ENGINEER OF WORK
 CEA ENGINEERING
 8369 VICKERS ST., STE. C
 SAN DIEGO, CA. 92111
 PH. (619) 277-0441
 I. Allan Cooper
 R.C.E. 16685 EXP. 06-30-21

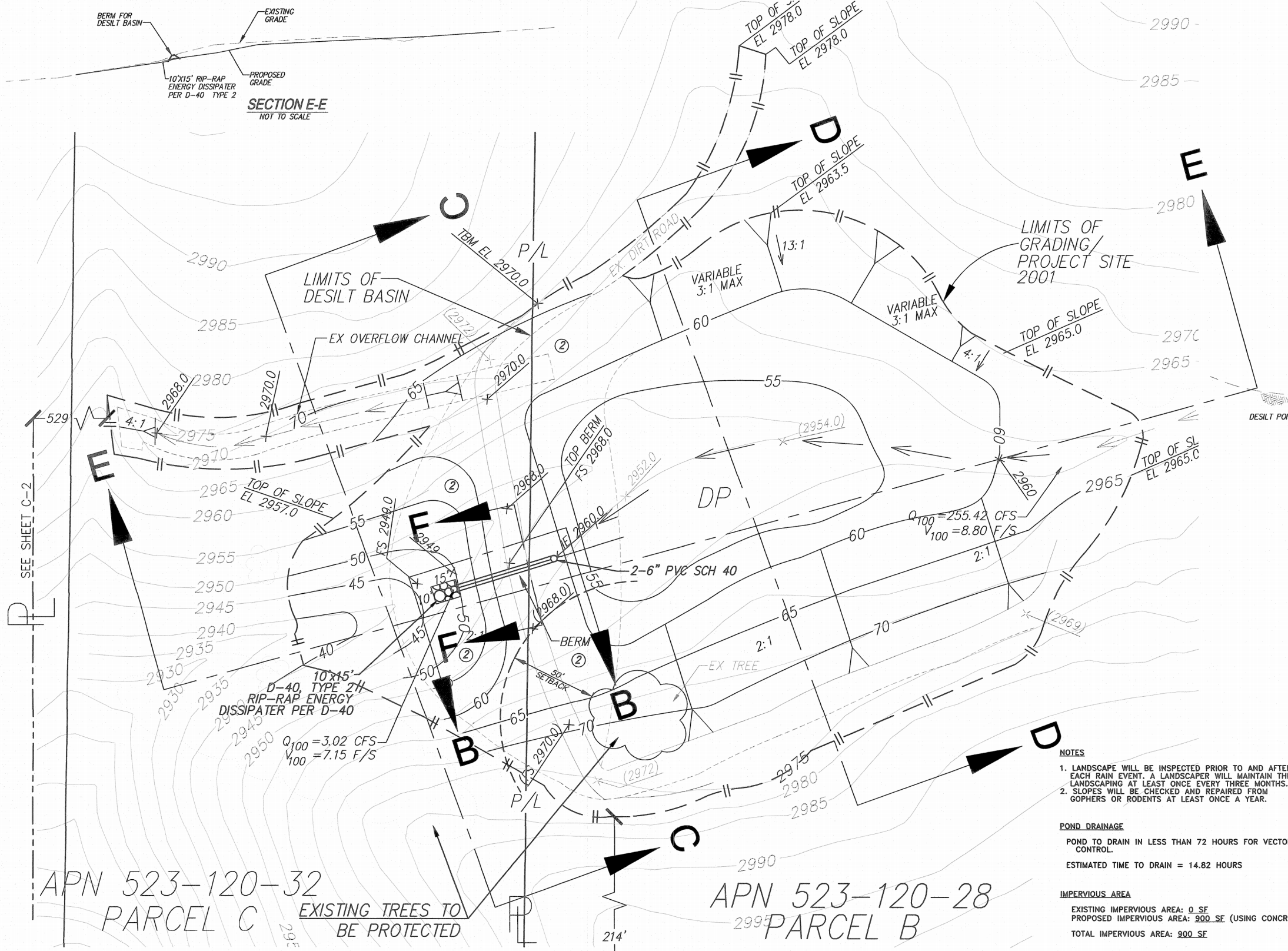


COUNTY APPROVED CHANGES		
DESCRIPTION:	APPROVED BY:	DATE:

PRIVATE CONTRACT		
SHEET 2	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	6 SHEETS
SITE PLAN FOR: DESILT POND - BMP FOR AGRICULTURAL RANCH		
CALIFORNIA COORDINATE INDEX <u>226-1875, 230-1875</u>		
APPROVED FOR WILLIAM P. WOODRUFF COUNTY ENGINEER	ENGINEER OF WORK I. ALLAN COOPER R.C.E. 16685	DATE: 4-8-2018
GRADING PERMIT NO: PDS2002-2700-14369		

CEA CIVIL ENGINEERING PLANNING LAND SURVEYING
 8369 VICKERS STREET, SUITE C, SAN DIEGO, CALIFORNIA 92111
 PHONE: (619) 277-0441
COASTAL ENGINEERING ASSOCIATES

ENGINEER'S NAME: I. ALLAN COOPER
 PHONE NO. (619) 818-3250 // EMAIL: CEENGINEERSD@GMAIL.COM

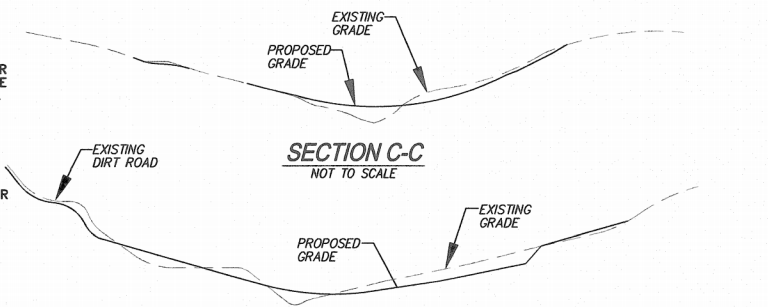
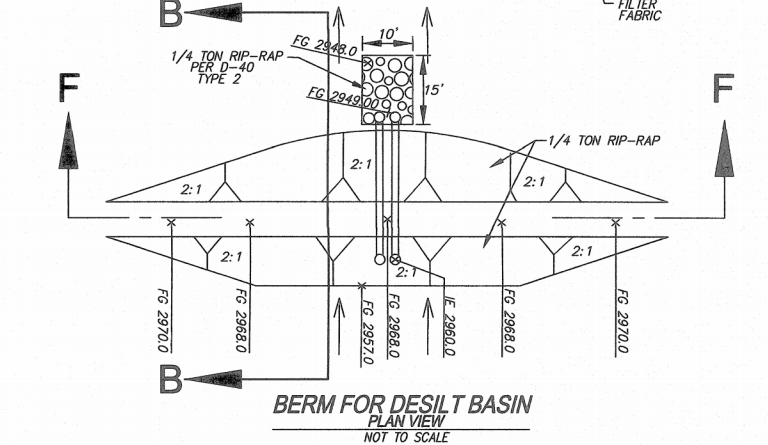
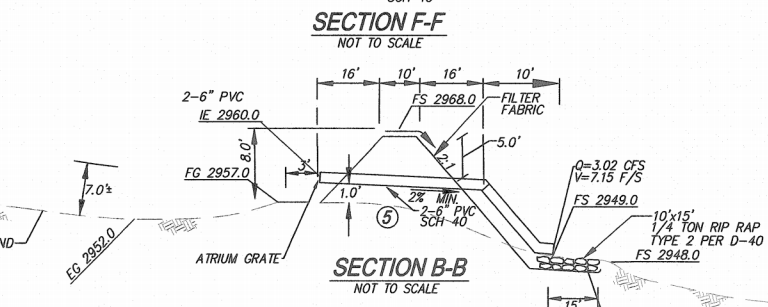
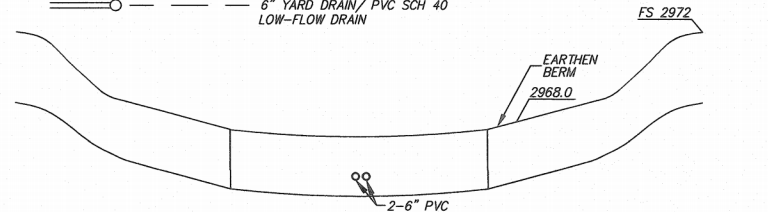


LEGEND - 2001 IMPROVEMENTS

- DP ——— DESILT POND 20'X20'
- EARTHEN BERM
- ② ——— NON-STRUCTURAL FILL

LEGEND - 2018 IMPROVEMENTS

- D-40 TYPE 2 RIP-RAP ENERGY DISSIPATOR
- 6" YARD DRAIN/ PVC SCH 40 LOW-FLOW DRAIN



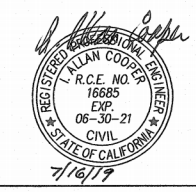
- NOTES**
- LANDSCAPE WILL BE INSPECTED PRIOR TO AND AFTER EACH RAIN EVENT. A LANDSCAPER WILL MAINTAIN THE LANDSCAPING AT LEAST ONCE EVERY THREE MONTHS.
 - SLOPES WILL BE CHECKED AND REPAIRED FROM GOPHERS OR RODENTS AT LEAST ONCE A YEAR.

POND DRAINAGE
 POND TO DRAIN IN LESS THAN 72 HOURS FOR VECTOR CONTROL.
 ESTIMATED TIME TO DRAIN = 14.82 HOURS

IMPERVIOUS AREA
 EXISTING IMPERVIOUS AREA: 0 SF
 PROPOSED IMPERVIOUS AREA: 900 SF (USING CONCRETE DITCH)
 TOTAL IMPERVIOUS AREA: 900 SF

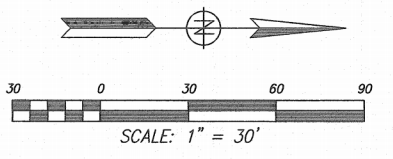
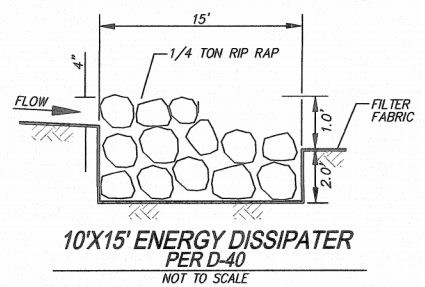
EXISTING TOPOGRAPHY
 EXISTING TOPOGRAPHY PER 1:2400 SCALE USGS QUAD MAP SHEET 226-1875

GRADING NOTE
 ALL GRADING DETAILS WILL BE IN ACCORDANCE WITH THE SAN DIEGO COUNTY STANDARD DRAWINGS DS-8, DS-9, DS-11, AND DS-75.



APN 523-120-32
 PARCEL C

APN 523-120-28
 PARCEL B

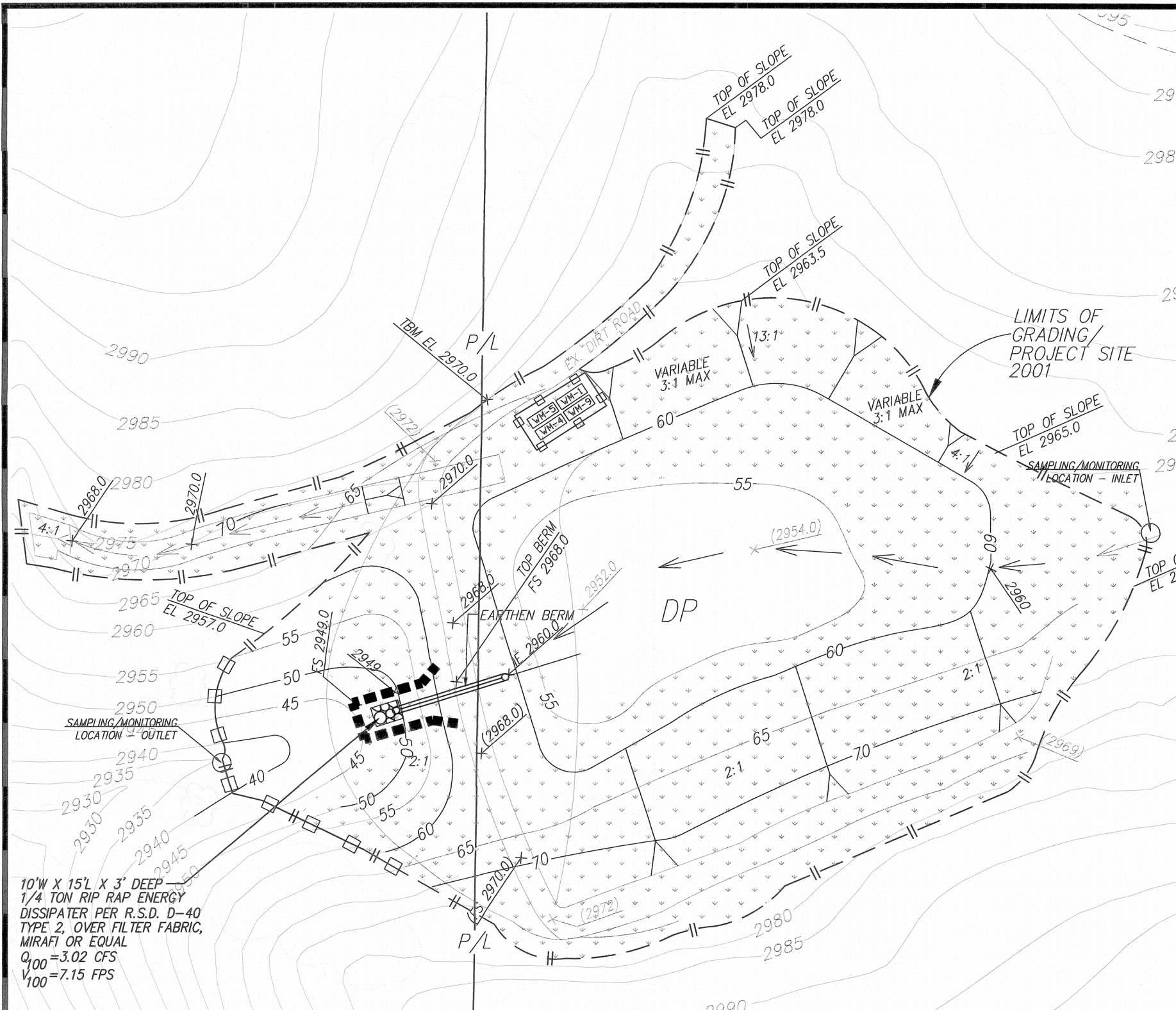


CEA
 CIVIL ENGINEERING PLANNING LAND SURVEYING
 8399 WOODS STREET, SUITE C, SAN DIEGO, CALIFORNIA 92111
 PHONE: (619) 277-0441

COUNTY APPROVED CHANGES		
DESCRIPTION:	APPROVED BY:	DATE:

PRIVATE CONTRACT		
SHEET 3	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	6 SHEETS
GRADING PLAN FOR: DESILT POND - BMP FOR AGRICULTURAL RANCH		
CALIFORNIA COORDINATE INDEX 226-1875, 230-1875		
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER	ENGINEER OF WORK I. ALLAN COOPER R.C.E. 16685	DATE: 4-8-2018
GRADING PERMIT NO: PDS2002-2700-14369		

ENGINEER'S NAME: I. ALLAN COOPER PHONE NO. (619) 818-3250 // EMAIL: CEENGINEERS@GMAIL.COM



LEGEND

TEMPORARY BMP's

- SC-5 STRAW ROLL
- SS-4 GRASS HYDROSEED MIX OR STRAW MAT
- SC-1 SILT FENCE
- SS-2 PRESERVATION OF EXISTING VEGETATION
- SS-3 BONDED OR STABILIZED FIBER MATRIX (WINTER)
- SS-4 HYDROSEEDING (SUMMER)
- SS-6/SS-8 STRAW OR WOOD MULCH
- SS-7 PHYSICAL STABILIZATION (WINTER)
- SS-10 ENERGY DISSIPATOR
- SC-1 SILT FENCE
- SC-2 SEDIMENT / DESILTING BASIN
- SC-5 FIBER ROLLS
- SC-6/SC-8 GRAVEL OR SAND BAGS
- SC-7 STREET SWEEPING AND VACUUMING
- SC-10 STORM DRAIN INLET PROTECTION
- NS-2 DEWATERING FILTRATION
- TC-1 STABILIZED CONSTRUCTION ENTRANCE
- TC-2 CONSTRUCTION ROAD STABILIZATION
- TC-3 ENTRANCE / EXIT TIRE WASH
- PDS 659 BROW DITCH

MATERIALS & WASTE MANAGEMENT BMP's:

- WM-1 MATERIAL DELIVERY & STORAGE
- WM-4 SPILL PREVENTION & CONTROL
- WM-5 SOLID WASTE MANAGEMENT
- WM-9 SANITARY WASTE MANAGEMENT

NOTE

ALL AREAS WILL BE COVERED OR RE-APPLIED WITH STRAW MAT OR JUTE MATTING UNTIL LANDSCAPING HAS BEEN ESTABLISHED AND COVERED 90 PERCENT OF EXPOSED DIRT SURFACES.

LEGEND

PERMANENT POST-CONSTRUCTION BMP's

- 2001 - EXISTING VEGETATION
- 2001 - DESILT POND
- 2018 - 10'X15' ENERGY DISSIPATOR PER RSD D-40
- 2001 - NON-IRRIGATED HYDROSEED (SEE SHT. 3 SLOPE PLANTING PLAN)

PERMANENT POST-CONST SITE DESIGN BMP's

- 4.3.1 MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES
- 4.3.2 CONSERVE NATURAL AREAS, SOILS, AND VEGETATION
- 4.3.3 MINIMIZE IMPERVIOUS AREA
- 4.3.4 MINIMIZE SOIL COMPACTION
- 4.3.6 RUNOFF COLLECTION

NOTE

SEE SHT. 3 FOR EROSION CONTROL AND SLOPE PLANTING.

EROSION CONTROL NOTES

1. TOPS OF ALL SLOPES TO BE DIKED OR TRENCHED TO PREVENT WATER FROM FLOWING OVER THE CREST OF SLOPES.
2. MANUFACTURED SLOPES AND PADS SHALL BE ROUNDED VERTICALLY AND HORIZONTALLY AS APPROPRIATE TO BLEND WITH THE SURROUNDING TOPOGRAPHY.
3. AS SOON AS CUTS OR EMBANKMENTS ARE COMPLETED, BUT NOT LATER THAN OCTOBER 1 ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITH A HYDROMULCH MIXTURE OR AN EQUAL TREATMENT APPROVED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS BETWEEN OCTOBER 1 AND APRIL 15. APPROVED SLOPE PROTECTION MEASURES SHALL PROCEED IMMEDIATELY BEHIND THE EXPOSURE OF CUT SLOPES AND/OR THE CREATION OF EMBANKMENT SLOPES.
4. CATCH BASINS, DESILTING BASINS AND ROCK RIP RAP SHALL BE INSTALLED TO THE SATISFACTION OF THE COUNTY DEPARTMENT OF PUBLIC WORKS.
5. SAND BAG CHECK DAMS TO BE PLACED IN A MANNER APPROVED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS IN UNPAVED STREETS WITH GRADIENTS IN EXCESS OF 2% AND ON OR IN OTHER GRADED OR EXCAVATED AREAS AS REQUIRED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS.
6. THE DEVELOPER TO MAINTAIN THE PLANTING AND EROSION CONTROL MEASURES DESCRIBED ABOVE UNTIL RELIEVED OF THE SAME BY THE COUNTY DEPARTMENT OF PUBLIC WORKS. THE DEVELOPER TO REMOVE ALL SOIL INTERCEPTED BY THE SAND BAGS, CATCH BASINS AND DESILTING BASINS AND KEEP THESE FACILITIES CLEAN AND FREE OF SILT AND SAND AS DIRECTED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS. THE DEVELOPER SHALL REPAIR ANY ERODED SLOPES AS DIRECTED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS.

SILTATION AND SEDIMENT CONTROL MEASURES NOTES

1. THE SEDIMENT BASINS SHALL BE PROVIDED AT THE LOWER END OF EVERY DRAINAGE AREA PRODUCING SEDIMENT RUNOFF. THE BASINS SHALL BE MAINTAINED AND CLEANED TO DESIGN CONTOURS AFTER EVERY RUNOFF PRODUCING STORM. THE BASINS SHOULD BE SEMI-PERMANENT STRUCTURES THAT WOULD REMAIN UNTIL SOIL STABILIZING VEGETATION HAS BECOME WELL ESTABLISHED ON ALL ERODIBLE SLOPES.
2. SEDIMENTATION BASINS MAY NOT BE REMOVED OR MADE INOPERATIVE WITHOUT PRIOR APPROVAL OF THE COUNTY ENGINEER.
3. SEWER OR STORM DRAIN TRENCHES THAT ARE CUT THROUGH BASIN DIKES OR BASIN INLET DIKES SHALL BE PLUGGED WITH SANDBAGS FROM TOP OF PIPE TO TOP OF DIKE.
4. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED GRADED CHANNELS AT THE MINIMUM INTERVALS INDICATED BELOW:

GRADE OF CHANNEL	INTERVALS BETWEEN CHECK DAMS
LESS THAN 3%	100 FEET
3% TO 6%	50 FEET
OVER 6%	25 FEET
5. SANDBAGS AND FILL MATERIAL SHALL BE STOCKPILED AT INTERVALS, READY FOR USE WHEN REQUIRED.
6. ALL EROSION CONTROL DEVICES WITHIN THE DEVELOPMENT SHOULD BE MAINTAINED DURING AND AFTER EVERY RUNOFF PRODUCING STORM. IF POSSIBLE, MAINTENANCE CREWS WOULD BE REQUIRED TO HAVE ACCESS TO ALL AREAS.
7. PROVIDE ROCK RIPRAP ON CURVES AND STEEP DROPS IN ALL EROSION PRONE DRAINAGE CHANNELS DOWNSTREAM FROM THE DEVELOPMENT. THIS PROTECTION WOULD REDUCE EROSION CAUSED BY THE INCREASED FLOWS THAT MAY BE ANTICIPATED FROM DENUDED SLOPES, OR FROM IMPERVIOUS SURFACES.
8. ANY PROPOSED ALTERNATE CONTROL MEASURES MUST BE APPROVED IN ADVANCE BY ALL RESPONSIBLE AGENCIES: I.E., COUNTY ENGINEER, DEPARTMENT OF SANITATION AND FLOOD CONTROL, OFFICE OF ENVIRONMENTAL MANAGEMENT, ETC.

GENERAL NOTES

1. THIS PLAN ONLY COVERS SURFACE RUNOFF EROSION. A GEOTECHNICAL ENGINEER WILL BE REQUIRED, UNDER SEPARATE CONTRACT, FOR SUBSURFACE SEEPAGE, GROUNDWATER, ETC.
2. EXISTING AGRICULTURE POND WAS NOT DESIGNED BY CEA. CEA WILL BE HELD HARMLESS FOR ANY AND ALL LIABILITY ARISING OUT OF THE OPERATION, MAINTENANCE, AND/OR REPAIR OF THE EXISTING AGRICULTURE POND, DAM, AND EXISTING GRADED CHANNEL.
3. EXISTING TOPOGRAPHY IS THE COUNTY OF SAN DIEGO 200 SCALE TOPOGRAPHY. A FIELD SURVEY IS REQUIRED TO FIELD VERIFY EXISTING AGRICULTURE POND AND TOPOGRAPHY.

DECLARATION OF ENGINEER'S LIMITED RESPONSIBILITY

1. THIS PLAN HAS BEEN PREPARED AT THE REQUEST OF THE OWNER TO PREPARE AN EROSION CONTROL PLAN TO AN EXISTING AGRICULTURAL POND, DAM, AND EXISTING GRADED CHANNEL.
2. THE PURPOSE OF THE PLAN IS TO REDUCE EROSION AND SEDIMENT GENERATION DURING NORMAL RAINFALL CONDITIONS INTO THE SWALE DOWNSTREAM OF THE DAM.
3. THE CONTRACTOR WILL PROVIDE PUMPING OF THE EXISTING AGRICULTURE POND UPSTREAM OF THE DAM BEFORE, DURING, AND AFTER RAINFALL EVENTS TO MAINTAIN TEMPORARY PONDING UPSTREAM OF THE DAM.
4. THE ENGINEER TAKES NO RESPONSIBILITY FOR THE OPERATION, MAINTENANCE, AND REPAIR OF THE EXISTING AGRICULTURE POND, DAM AND EXISTING GRADED CHANNEL.

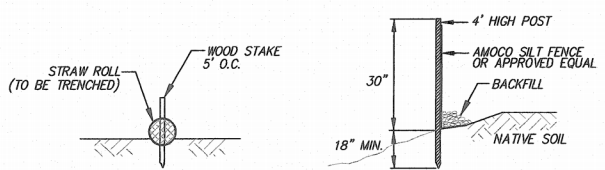
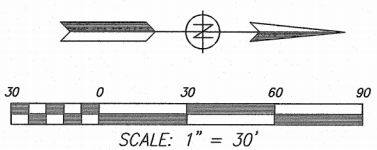
10'W X 15'L X 3' DEEP
1/4 TON RIP RAP ENERGY DISSIPATOR PER R.S.D. D-40 TYPE 2, OVER FILTER FABRIC, MIRAFI OR EQUAL
Q₁₀₀ = 3.02 CFS
V₁₀₀ = 7.15 FPS

OPTIONAL HYDROSEED MIX

BOTANICAL/COMMON NAME	% PURITY	% GERM	LBS./ACRE
GAMASSONIA CHEIRANTHIFOLIA - "BEACH PRIMROSE"	70	50	3
ISOCOMA MENSIESII - "MENZIES' GOLDENBUSH"	70	50	3
OENOTHERA ELATA - "EVENING PRIMROSE"	70	50	3
BACCHARIS SAROTHRIDES - "DESERT BROOM"	70	50	3
PLANTAGO ERRECTA - "CALIFORNIA PLANTAIN"	98	75	25
ERIOGONUM FASCICULATUM - "CALIFORNIA BUCKWHEAT"	10	65	10
HELIOTROPUM CURASSAVICUM - "HELIOTROPE"	70	50	2
LOTUS SCOPARIUS - "DEER WEED"	10	25	1
AMBROSIA PSILOSTACHYA - "CUMAN RAGWEED"	10	25	1

FIBER MULCH - 2,000 LBS./ACRE
COMMERCIAL FERTILIZER:
"GRO-POWER 5-3-1 PLUS" - 1,200 LBS./ACRE
AZTEC BINDER - 130 LBS./ACRE
SARVON (WETTING AGENT) - 6 GALLONS

IF HYDROSEED IS NOT ESTABLISHED PRIOR TO RAIN EVENTS AND THERE IS EROSION, INSTALL STRAW MAT ON ALL GRADED (MANUFACTURED) SLOPES.



DETAIL STRAW ROLL (TYP.)
NO SCALE

DETAIL TEMPORARY SILT FENCE (TYP.)
NO SCALE

CEA
COASTAL ENGINEERING ASSOCIATES
CIVIL ENGINEERING PLANNING LAND SURVEYING
8369 VICKERS STREET, SUITE C, SAN DIEGO, CALIFORNIA 92111
PHONE: (858) 277-0441

ENGINEER OF WORK
CEA ENGINEERING
8369 VICKERS ST., STE. C
SAN DIEGO, CA. 92111
PH. (858) 277-0441
I. Allan Cooper 7/16/19
I. ALLAN COOPER
R.C.E. 16685 EXP. 06-30-21



COUNTY APPROVED CHANGES		
DESCRIPTION:	APPROVED BY:	DATE:

PRIVATE CONTRACT

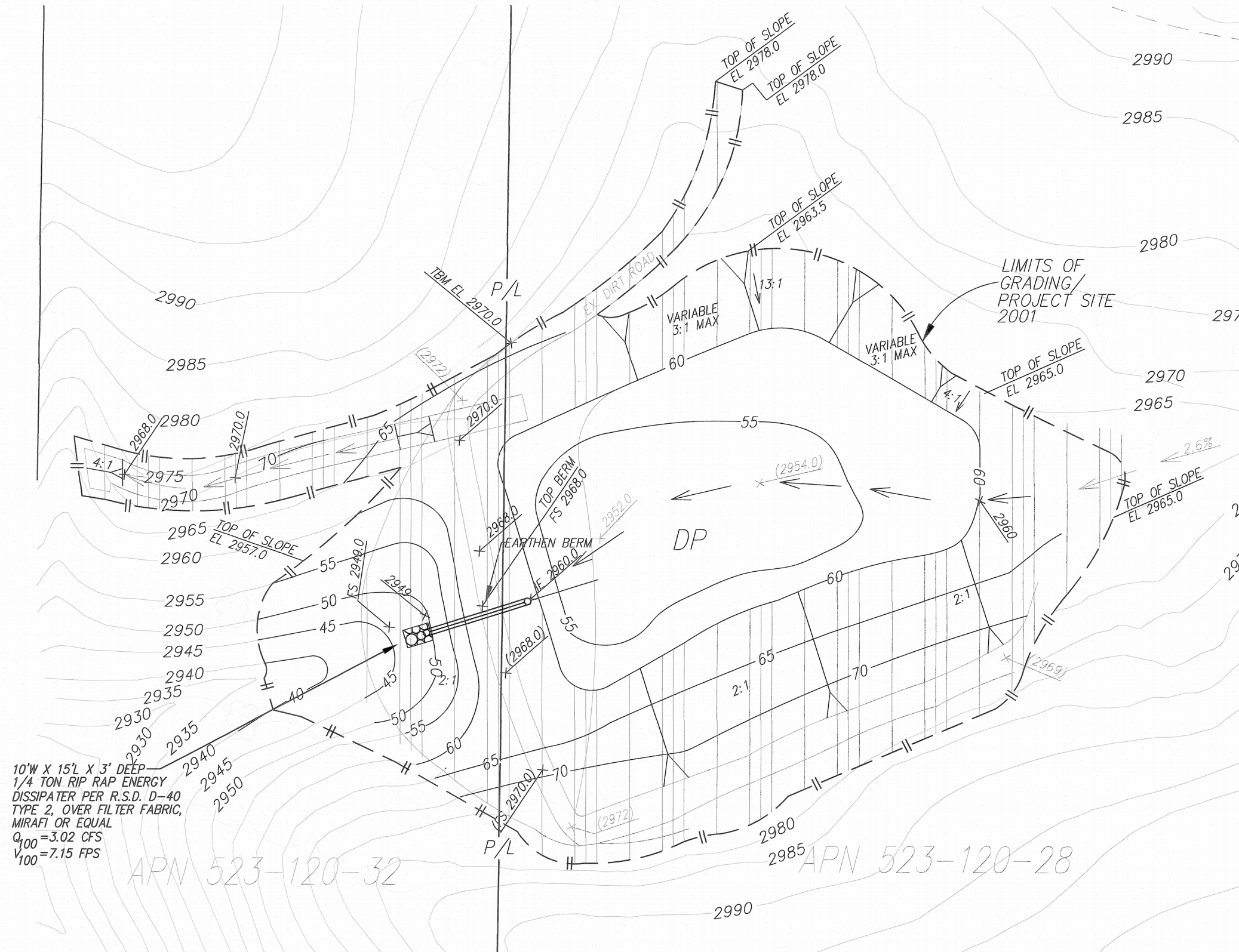
SHEET 5	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	6 SHEETS
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EROSION CONTROL AND CONSTRUCTION BMP PLAN FOR:
DESILT POND - BMP FOR AGRICULTURAL RANCH

CALIFORNIA COORDINATE INDEX 226-1875, 230-1875

APPROVED FOR WILLIAM P. NORRAN COUNTY ENGINEER	ENGINEER OF WORK I. ALLAN COOPER R.C.E. 16685	DATE: 4-6-2018 R.C.E. 16685
GRADING PERMIT NO:	PDS2002-2700-14369	

ENGINEER'S NAME: I. ALLAN COOPER
PHONE NO. (619) 818-3250 // EMAIL: CEENGINEERS@GMAIL.COM



PLANT LIST

SYMBOL BOTANICAL/Common Name QUANTITY SIZE

NON-IRRIGATED HYDROSEED

PLANTING NOTES

1. PLANTING SHALL BE IN CONFORMANCE WITH THE COUNTY OF SAN DIEGO'S LANDSCAPE REQUIREMENTS.
2. TREES THAT ARE IMPACTED BY THIS PROJECT SHALL BE MITIGATED AT A 5:1 RATIO, 15 GALLON MINIMUM SIZE.

NON-IRRIGATED HYDROSEED PLANTING
LBS./ACRE PUR/GER

Botanical/Common Name	Quantity	Size
(CAMISSONIA CHEIRANTHIFOLIA) BEACH PRIMROSE	3	70/50
(SISYRINCHIA MENZIESII) MENZIES' GOLDENBUSH	3	70/50
(OENOTHERA ELATA) EVENING PRIMROSE	3	70/50
(BACCHARIS SAROTHIODES) DESERT BROOM	3	70/50
(PLANTAGO ERRECTA) CALIFORNIA PLANTAIN	25	98/75
(ERIOGONUM FASCICULATUM) CALIFORNIA BUCKWHEAT	10	10/65
(HELIOTROPUM CURASSAVICUM) HELIOTROPE	2	70/50
(LOTUS SCOPARIUS) DEER WEED	1	10/25
(AMBROSIA PSILOSTACHYA) CUMAN RAGWEED	1	10/25

TOTAL SEED = 51 LBS.

IF HYDROSEED IS NOT ESTABLISHED PRIOR TO RAIN EVENTS AND THERE IS EROSION, INSTALL STRAW MAT ON ALL GRADED (MANUFACTURED) SLOPES.

- FIBER MULCH ----- 2,000 LBS./ACRE
- COMMERCIAL FERTILIZER: "GRO-POWER" (5-3-1 PLUS) ----- 1,200 LBS./ACRE
- AZTEC BINDER ----- 130 LBS./ACRE
- SARVON (WETTING AGENT) ----- 6 GALLONS

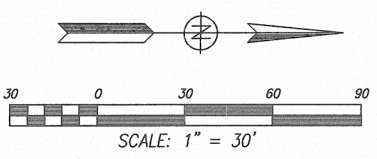
10'W X 15'L X 3' DEEP
1/4 TON RIP RAP ENERGY
DISSIPATER PER R.S.D. D-40
TYPE 2, OVER FILTER FABRIC,
MIRAFI OR EQUAL
Q₁₀₀ = 3.02 CFS
V₁₀₀ = 7.15 FPS

APN 523-120-32

APN 523-120-28

NOTES

1. LANDSCAPE WILL BE INSPECTED PRIOR TO AND AFTER EACH RAIN EVENT. A LANDSCAPER WILL MAINTAIN THE LANDSCAPING AT LEAST ONCE EVERY THREE MONTHS.
2. SLOPES WILL BE CHECKED AND REPAIRED FROM GOPHERS OR RODENTS AT LEAST ONCE A YEAR.



ENGINEER OF WORK

CEA ENGINEERING
8369 WICKERS ST., STE. C
SAN DIEGO, CA. 92111
PH. (858) 277-0441
I. Allan Cooper 7/16/19
I. ALLAN COOPER DATE
R.C.E. 16685 EXP. 06-30-21



PRIVATE CONTRACT

COUNTY APPROVED CHANGES			SHEET 6	COUNTY OF SAN DIEGO	6 SHEETS
DESCRIPTION:	APPROVED BY:	DATE:	LANDSCAPING PLAN FOR: DESILT POND - BMP FOR AGRICULTURAL RANCH		
			CALIFORNIA COORDINATE INDEX 226-1875, 230-1875		
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER			ENGINEER OF WORK I. ALLAN COOPER R.C.E. 16685		
			GRADING PERMIT NO: PDS2002-2700-14369		

ENGINEER'S NAME: I. ALLAN COOPER
PHONE NO. (619) 818-3250 // EMAIL: CEAENGINEERS@GMAIL.COM