

EXISTING BUENA SANITATION SEWER EASEMENT RECORDED ON APRIL 12, 2005 AS INSTRUMENT NO. 2005-0299258 OF OFFICIAL RECORDS.

EXISTING BUENA SANITATION SEWER EASEMENT RECORDED ON NOVEMBER 8, 1965 AS INSTRUMENT NO. 202758 OF OFFICIAL RECORDS.

PRIVATE ROAD AND UTILITY EASEMENT PER FINAL MAP

10' PRIVATE STORM DRAIN EASEMENT PER FINAL MAP

EXISTING POWER POLE TO REMAIN

**COUNTY APPROVED CHANGES**

NO.	DESCRIPTION:	APPROVED BY:	DATE:

**BENCH MARK**

DESCRIPTION: COUNTY OF SAN DIEGO MONUMENT "ES 0263", A BRASS DISK IN CONCRETE MONUMENT  
 LOCATION: NORTHEAST OF THE INTERSECTION OF SOUTH SANTA FE AVE. AND BUENA CREEK ROAD  
 RECORD FROM: COUNTY OF SAN DIEGO  
 ELEVATION: 445.398 DATUM: NGVD 29

**PRIVATE CONTRACT**

SHEET 3 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 8 SHEETS

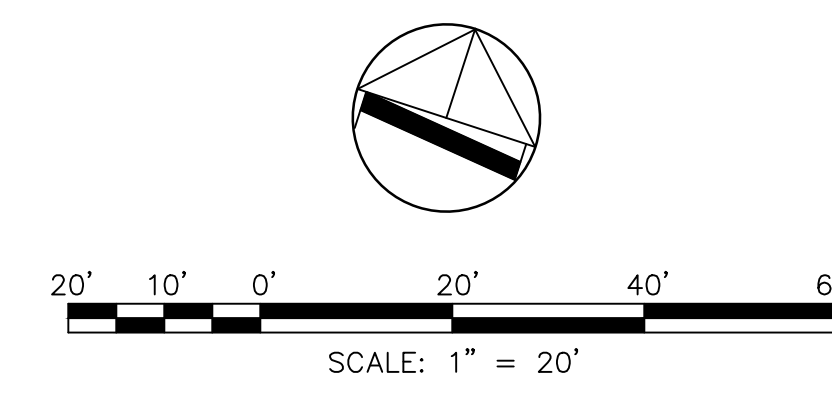
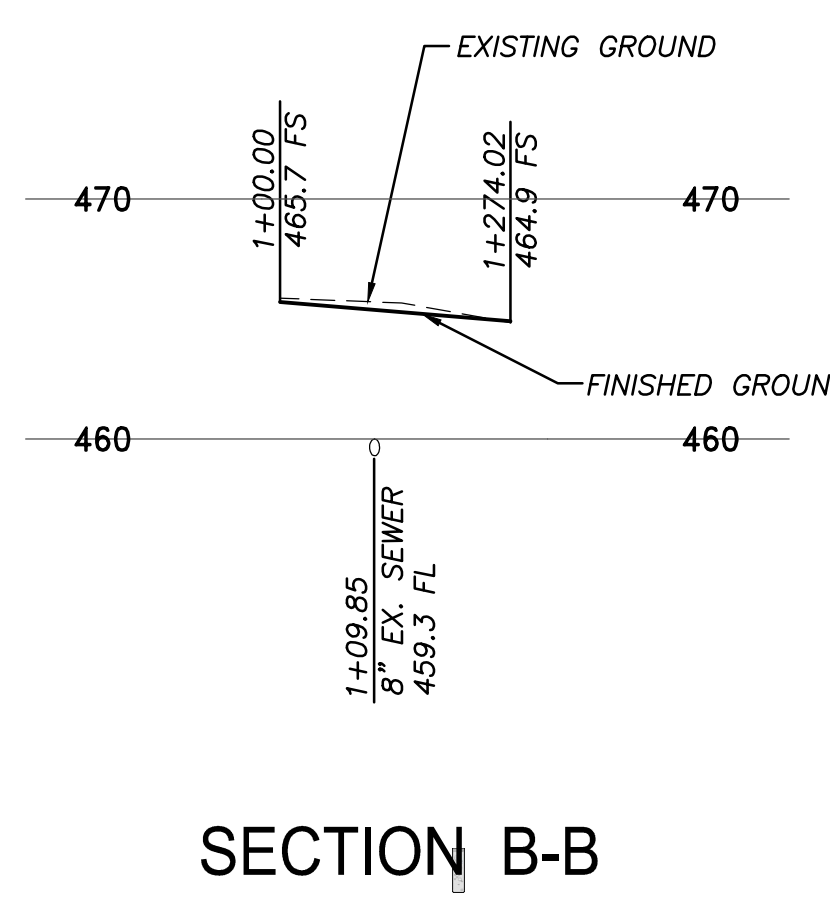
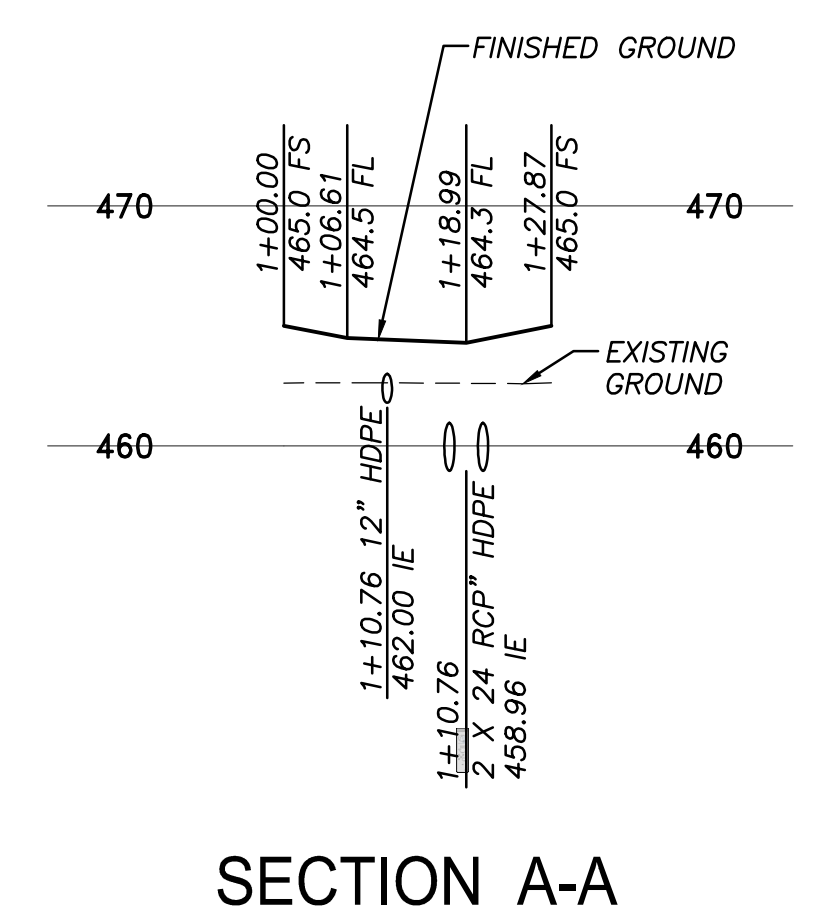
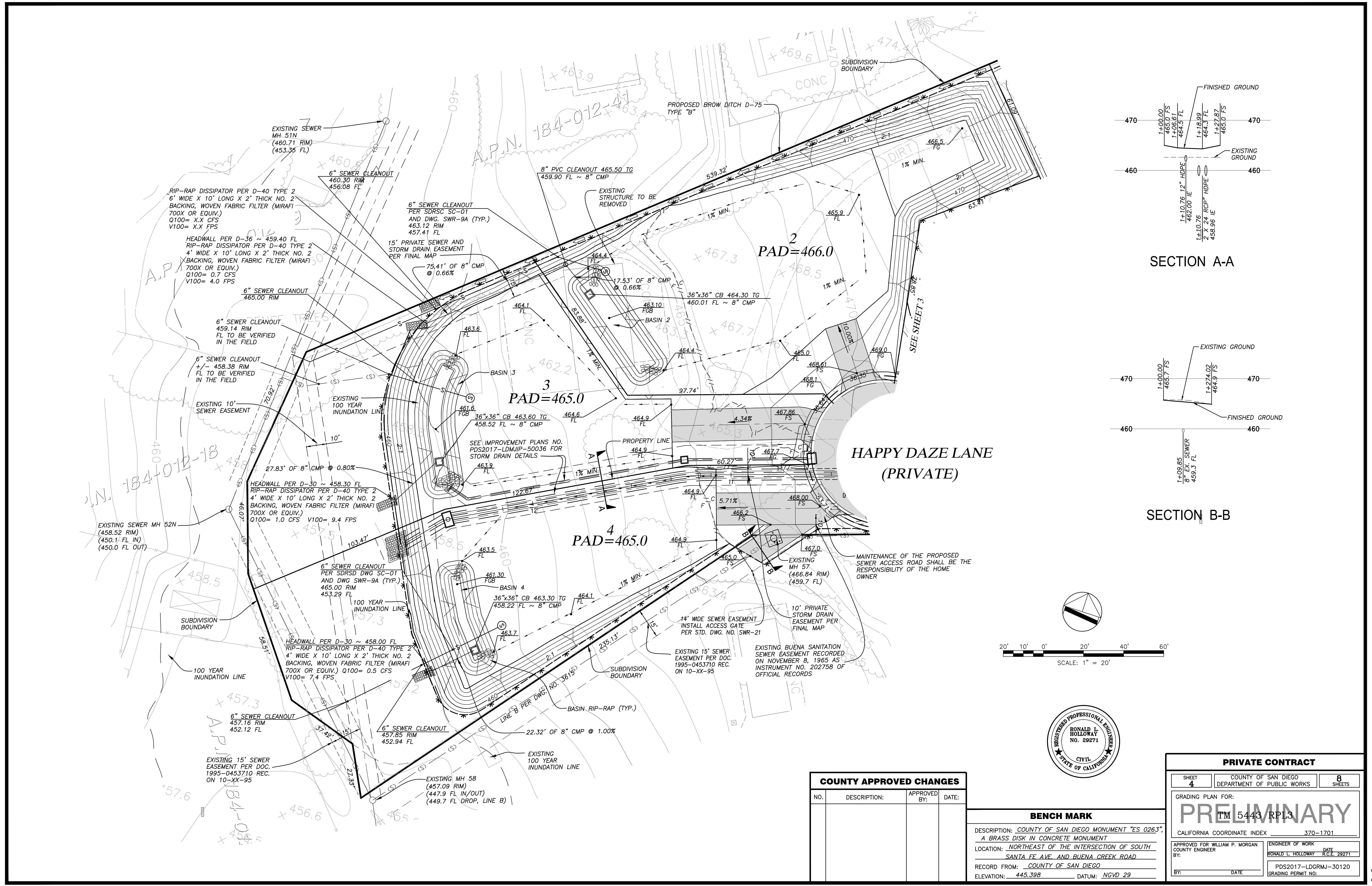
GRADING PLAN FOR: **PRELIMINARY** TM 5443 RPL3

CALIFORNIA COORDINATE INDEX 370-1701

APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER BY: RONALD L. HOLLOWAY R.C.E. 29271

ENGINEER OF WORK DATE: RONALD L. HOLLOWAY R.C.E. 29271

PDS2017-LDGRMJ-30120 GRADING PERMIT NO. BY: DATE



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SHEET <b>4</b>	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	<b>8</b> SHEETS
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GRADING PLAN FOR:  
**PRELIMINARY**  
 TM 54443 RPL3  
 CALIFORNIA COORDINATE INDEX 370-1701

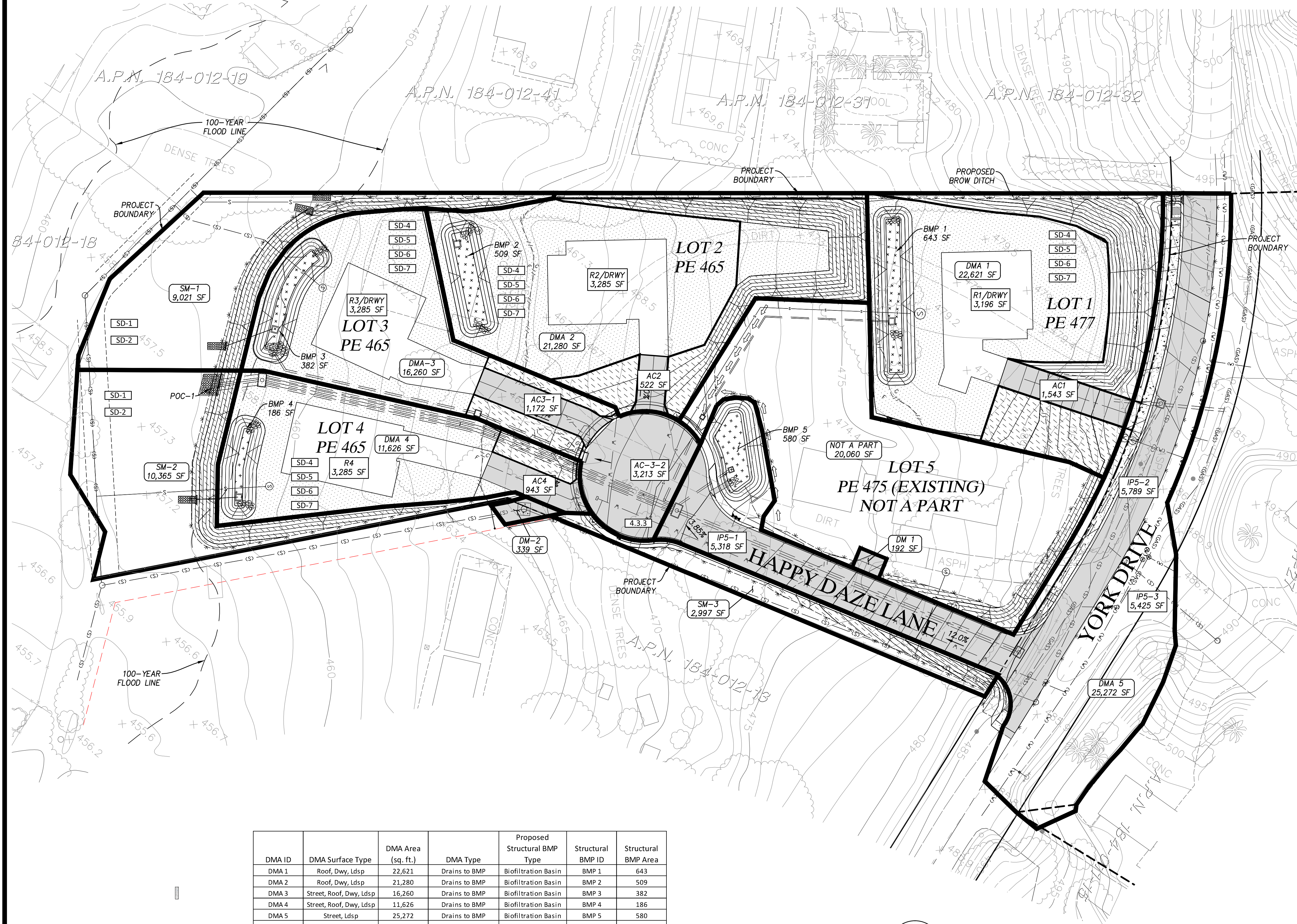
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER	ENGINEER OF WORK RONALD L. HOLLOWAY R.C.E. 29271
BY: _____	DATE _____

PDS2017-LDGRMJ-30120  
 GRADING PERMIT NO: \_\_\_\_\_

# POST-DEVELOPMENT DRAINAGE MANAGEMENT AREA EXHIBIT

## 1505 YORK DRIVE

### TM 5443 RPL3



DMA ID	DMA Surface Type	DMA Area (sq. ft.)	DMA Type	Proposed Structural BMP Type	Structural BMP ID	Structural BMP Area
DMA 1	Roof, Dwy, Ldsp	22,621	Drains to BMP	Biofiltration Basin	BMP 1	643
DMA 2	Roof, Dwy, Ldsp	21,280	Drains to BMP	Biofiltration Basin	BMP 2	509
DMA 3	Street, Roof, Dwy, Ldsp	16,260	Drains to BMP	Biofiltration Basin	BMP 3	382
DMA 4	Street, Roof, Dwy, Ldsp	11,626	Drains to BMP	Biofiltration Basin	BMP 4	186
DMA 5	Street, Ldsp	25,272	Drains to BMP	Biofiltration Basin	BMP 5	580
SM-1	Ldsp	9,021	Self-Mitigating	-	-	-
SM-2	Ldsp	10,365	Self-Mitigating	-	-	-
SM-3	Ldsp	2,997	Self-Mitigating	-	-	-
DM-1	Dwy	192	De Minimis	-	-	-
DM-2	Dwy	339	De Minimis	-	-	-

PROJECT CHARACTERISTICS	
PROJECT AREA	2.82 ACRES
DISTURBED AREA	2.63 ACRES
PROPOSED IMPERVIOUS AREA	0.85 ACRES
PROPOSED PERVIOUS AREA	1.78 ACRES
SOIL TYPE	A
DEPTH TO GROUNDWATER	> 20 FEET

HYDROLOGIC UNIT CONTRIBUTION (WATERSHED)			
WATERSHED	HYDROLOGIC AREA	HYDROLOGIC SUB-AREA	DOWNSTREAM WATERBODIES
904 CARLSBAD	904.3 AGUA HEDIONDA	904.32 BUENA	AGUA HEDIONDA CREEK, AGUA HEDIONDA LAGOON

IMPAIRED WATER BODIES	
IMPAIRED WATERBODY	CONSTITUENTS OF CONCERN
AGUA HEDIONDA CREEK	ENTEROCOCCUS, FECAL COLIFORM, MANGANESE, PHOSPHORUS, SELENIUM, SULFATES, TOTAL DISSOLVED SOLIDS, TOTAL NITROGEN AS N, TOXICITY
AGUA HEDIONDA LAGOON	INDICATOR BACTERIA, INVASIVE SPECIES, SEDIMENTATION/SILTATION

#### LEGEND

DMA NAME	DMA-1
AREA (SQUARE FEET)	22,621 SF
SELF-MITIGATING DMA	SM-1
DMA POINT OF COMPLIANCE (POC)	POC-1
DMA BOUNDARY	
PROJECT BOUNDARY	
BIOFILTRATION BASIN	
VEGETATED SLOPES	
IMPERVIOUS AREA DISPERSION	
CONCRETE	
ASPHALT	
FLOW DIRECTION	
BROW DITCH	
RIP RAP ENERGY DISSIPATER	

POLLUTANTS OF CONCERN			
POLLUTANT CATEGORY	ANTICIPATED/POTENTIAL	DOWNSTREAM IMPAIRMENT	PRIMARY POLLUTANT OF CONCERN
SEDIMENT	X	X	X
NUTRIENTS	X	X	X
HEAVY METALS	X	X	X
ORGANIC COMPOUNDS	X	X	X
TRASH & DEBRIS	X	X	X
OXYGEN DEMANDING SUBSTANCES	X	X	X
OIL & GREASE	X	X	X
BACTERIA & VIRUSES	X	X	X
PESTICIDES	X	X	X

#### CRITICAL COARSE SEDIMENT YIELD AREAS:

PRIORITY DEVELOPMENT PROJECTS (PDPs) MUST SATISFY CRITICAL COARSE SEDIMENT YIELD AREA (CCSYA) REQUIREMENTS AS ADDRESSED IN APPENDIX H OF THE COUNTY OF SAN DIEGO BMP DESIGN MANUAL.

REGIONAL-LEVEL MAPPING OF POTENTIAL CRITICAL COARSE SEDIMENT YIELD AREAS WAS PREPARED USING REGIONAL DATA SETS INCLUDED IN THE "SAN DIEGO COUNTY REGIONAL WMAA".

PDPs ARE REQUIRED TO CHECK THE MAP INCLUDED IN THE WMAA FOR THE WATERSHED IN WHICH THE PROJECT RESIDES TO DETERMINE IF POTENTIAL CRITICAL COARSE SEDIMENT YIELD AREAS EXIST WITHIN THE PROJECT DRAINAGE BOUNDARIES.

ACCORDING TO THE REGIONAL WMAA, NO PCCSYAS EXIST WITHIN THE PROJECT DRAINAGE BOUNDARIES. THEREFORE THE PROJECT IS (A) ENTIRELY EXEMPT/NOT SUBJECT TO RPO REQUIREMENTS WITHOUT UTILIZATION OF RPO EXEMPTIONS AND (B) AS THERE ARE NO AREAS UPSTREAM OF THE PROJECT TO PROTECT, THEN THE PROJECT IS NOT REQUIRED TO AVOID ONSITE CCSYAS AS NONE WERE IDENTIFIED (IN OTHER WORDS, NO AREAS IDENTIFIED ON THE DMA EXHIBIT ARE PCCSYAS THAT BECOME NON-CCSYAS).

REFER TO THE SWQMP FOR 1505 YORK DRIVE DATED SEPTEMBER 2017 BY BHA, INC. FOR CCSYA EXEMPTION METHODOLOGY.

#### SELF-MITIGATING DMAS:

VEGETATION IN THE NATURAL OR LANDSCAPE AREA IS NATIVE OR NON-NATIVE DROUGHT TOLERANT SPECIES.

SOILS ARE UNDISTURBED NATIVE TOPSOIL, OR DISTURBED SOILS HAVE BEEN AMENDED AND AERATED TO PROMOTE WATER RETENTION CHARACTERISTICS EQUIVALENT TO UNDISTURBED NATIVE TOPSOIL.

INCIDENTAL IMPERVIOUS AREAS ARE LESS THAN 5 PERCENT OF THE SELF-MITIGATING AREA.

IMPERVIOUS AREAS CALCULATED WITHIN THE SELF-MITIGATED AREA SHOULD NOT BE HYDRAULICALLY CONNECTED TO OTHER IMPERVIOUS AREAS UNLESS IT IS A STORM WATER CONVEYANCE SYSTEM (SUCH AS BROW DITCHES).

THE SELF-MITIGATING AREA IS HYDRAULICALLY SEPARATE FROM DMAS THAT CONTAIN PERMANENT STORM WATER POLLUTION CONTROL BMPs.

#### SOURCE CONTROL BMPs:

- SC-1** PREVENTION OF ILLICIT DISCHARGES INTO THE MS4
- SC-2** STORM DRAIN STENCILING AND SIGNAGE
- SC-6** ADDITIONAL BMPs BASED ON POTENTIAL RUNOFF POLLUTANTS:
  - A** ON-SITE STORM DRAIN INLETS
  - D** NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL
  - E** LANDSCAPE/OUTDOOR PESTICIDE USE



**SIGNAGE DETAIL**  
NOT TO SCALE

#### LID AND SITE DESIGN:

- SD-1** MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES
- SD-2** CONSERVE NATURAL AREAS, SOILS, AND VEGETATION
- SD-3** MINIMIZE IMPERVIOUS AREA
- SD-4** MINIMIZE SOIL COMPACTION
- SD-5** IMPERVIOUS AREA DISPERSION
- SD-6** RUNOFF COLLECTION
- SD-7** LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES

#### COUNTY APPROVED CHANGES

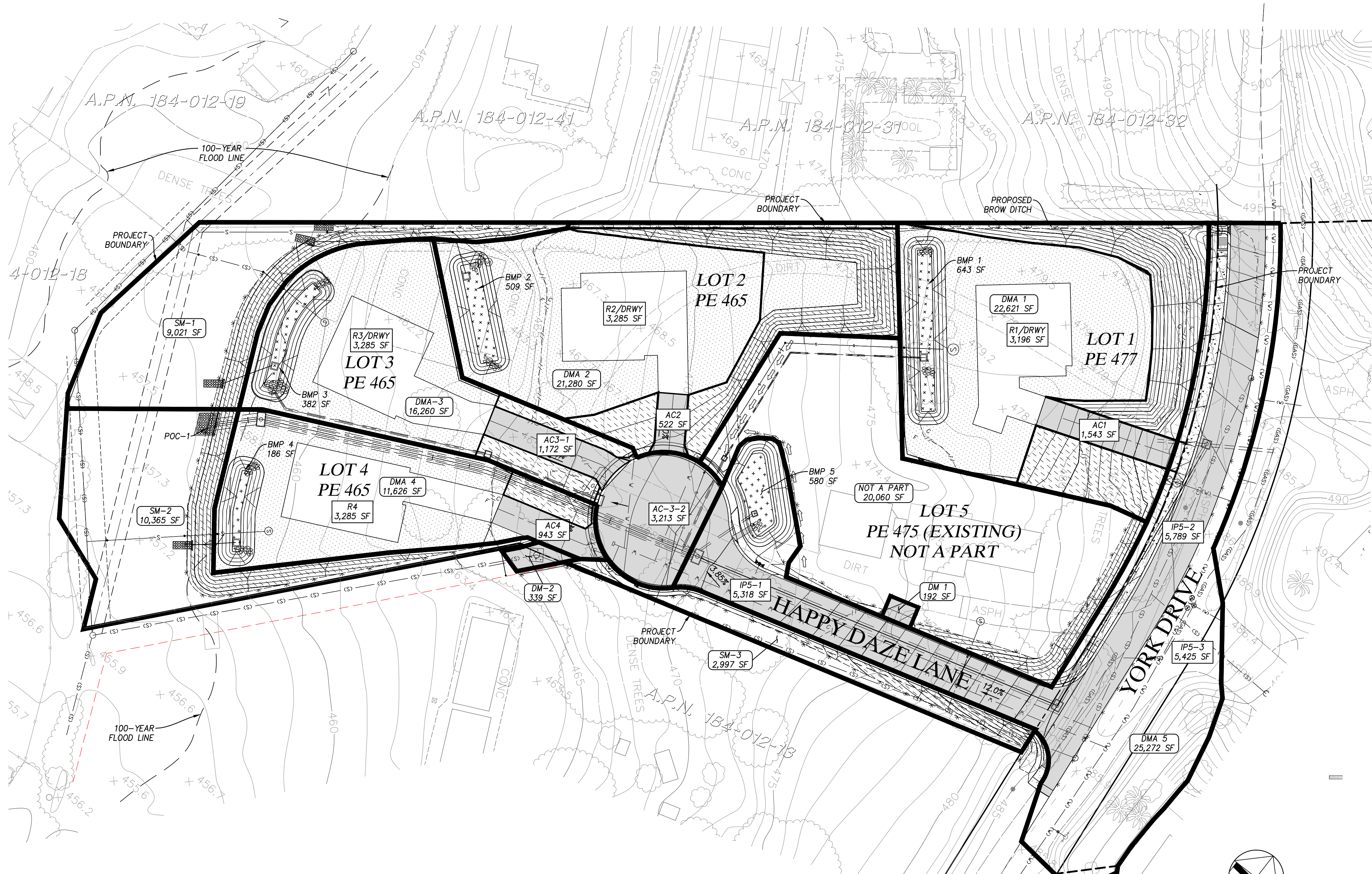
NO.	DESCRIPTION:	APPROVED BY:	DATE:

PRIVATE CONTRACT			
SHEET <b>5</b>	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	8 SHEETS	
POST-DEVELOPMENT DRAINAGE MANAGEMENT AREA EXHIBIT FOR: <b>TM 5443 RPL3</b>			
CALIFORNIA COORDINATE INDEX      370-1701			
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER BY: _____	DATE RONALD L. HOLLOWAY R.C.E. 29271	ENGINEER OF WORK DATE PDS2017-LDGRMJ-30120 GRADING PERMIT NO.:	

# POST-DEVELOPMENT DRAINAGE MANAGEMENT AREA EXHIBIT

## 1505 YORK DRIVE

### TM 5443 RPL3



#### TREATMENT CONTROL BMPS

**DEVELOPED CONDITIONS**  
 STORM WATER RUNOFF FROM THE PROPOSED PROJECT SITE IS ROUTED TO ONE (1) POC, LOCATED AT THE WESTERLY BOUNDARY OF THE PROJECT SITE. RUNOFF FROM THE DEVELOPED PROJECT SITE IS DRAINED TO FIVE (5) ONSITE RECEIVING BIOFILTRATION BMPS. ONCE FLOWS ARE ROUTED VIA THE PROPOSED BIOFILTRATION BMPS, DEVELOPED FLOWS ARE THEN DISCHARGED TO THE EXISTING POINT OF DRAINAGE FROM THE PROJECT SITE.

3 SMALL VEGETATION AREAS (SM-1, SM-2, AND SM-3) ARE UNABLE TO DRAIN TO THE RECEIVING BIOFILTRATION BASINS AND BYPASS THESE FACILITIES, DRAINING DIRECTLY TO POC-1.

**TABLE 1 - SUMMARY OF DEVELOPED CONDITIONS**

POC	DMA	Tributary Area, A (Ac)	Impervious
1	DMA-1	22,621	21%
	DMA-2	21,280	18%
	DMA-3	16,260	47%
	DMA-4	11,626	36%
	DMA-5	25,272	65%
	SM-1	9,021	0%
	SM-2	10,365	0%
	SM-3	2,997	0%
	DM-1	192	100%
	DM-2	339	100%

FIVE (5) BIOFILTRATION BASINS WITH NO INFILTRATION ARE LOCATED WITHIN THE PROJECT SITE AND IS RESPONSIBLE FOR HANDLING HYDROMODIFICATION REQUIREMENTS FOR POC-1. IN DEVELOPED CONDITIONS, THE BASINS WILL HAVE A TOTAL DEPTH OF FROM 17 TO 24 INCHES AND AN INTERNAL OUTLET STRUCTURE (SEE DIMENSIONS IN TABLE 2). FLOWS WILL THEN DISCHARGE FROM THE BASIN VIA THE OUTLET STRUCTURE OR INFILTRATE THROUGH THE BASE OF THE FACILITIES TO THE RECEIVING AMENDED SOIL AND LOW FLOW ORIFICE. THE RISER STRUCTURE WILL ACT AS A SPILLWAY SUCH THAT PEAK FLOWS CAN BE SAFELY DISCHARGED TO THE RECEIVING STORM DRAIN SYSTEM.

BENEATH THE BASIN'S INVERT LIES THE PROPOSED LID BIOFILTRATION PORTION OF THE DRAINAGE FACILITY. THIS PORTION OF THE BASIN IS COMPRISED OF A 3-INCH LAYER OF MULCH, AN 18 TO 21-INCH LAYER OF AMENDED SOIL (A HIGHLY SANDY, ORGANIC RICH COMPOSITE WITH AN INFILTRATION CAPACITY OF AT LEAST 5 INCHES/HR) AND A RESERVOIR LAYER OF GRAVEL. AN UNDERDRAIN PIPE WITH LOW FLOW ORIFICE WILL BE PROVIDED AT THE BOTTOM OF THE BASIN TO CARRY WAY FILTERED RUNOFF. THE UNDERDRAIN PIPE WILL BE LOCATED 3 INCHES ABOVE THE GRAVEL LAYER INVERT. THE BOTTOM OF THE BASINS WILL BE LINED WITH AN IMPERMEABLE LINER TO PREVENT INFILTRATION INTO NATIVE SOILS. A RISER STRUCTURE WILL BE CONSTRUCTED WITHIN THE BMPS WITH AN EMERGENCY OVERFLOW WEIR, SUCH THAT PEAK FLOWS CAN BE SAFELY DISCHARGED TO THE RECEIVING STORM DRAIN SYSTEM (SEE DIMENSIONS IN TABLE 3).

SINCE THE PROJECT IS LOCATED UPSTREAM FROM A RECEIVING WATER THAT IS 303d LISTED FOR A NUTRIENT POLLUTANT, NUTRIENT SENSITIVE MEDIA DESIGN (BF-2) WAS SELECTED FOR THE BIOFILTRATION BMPS TO MINIMIZE THE POTENTIAL FOR EXPORT OF NUTRIENTS FROM THE MEDIA.

THE BIOFILTRATION FACILITIES HAVE BEEN MODELED USING SWMM 5.1. THE SWMM USES CONTINUOUS SIMULATION MODELING TO DETERMINE THE MINIMUM REQUIRED HYDROMODIFICATION MANAGEMENT VOLUMES FOR EACH PROPOSED BIOFILTRATION BASIN.

IT IS ANTICIPATED THAT THE BIOFILTRATION BASINS MAY ALSO FULFILL WATER QUALITY REQUIREMENTS. THEREFORE, THE BASINS WILL BE DUAL PURPOSE TO ACHIEVE THE FLOW-DURATION REQUIREMENTS SET FORTH IN THE COUNTY HMP, AS WELL AS ADDRESS THE STORM WATER QUALITY REQUIREMENTS SET FORTH IN THE MS4 PERMIT AS REGIONAL POST-CONSTRUCTION TREATMENT BMPS FOR THE DEVELOPED AREA. SEE ATTACHMENT 1 OF THE "PRIORITY DEVELOPMENT PROJECT (PDP) STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR 1505 YORK DRIVE" FOR POLLUTANT CONTROL COMPLIANCE AS PRESENTED IN APPENDIX B OF THE COUNTY OF SAN DIEGO BMP DESIGN MANUAL.

#### BMP MODELING FOR WATER QUALITY PURPOSES

MODELING OF DUAL PURPOSE WATER QUALITY/HMP BMPS

FIVE (5) BMPS ARE PROPOSED FOR WATER QUALITY TREATMENT FOR THE PROJECT SITE. TABLE 2 ILLUSTRATES THE DIMENSIONS REQUIRED FOR POLLUTANT CONTROL COMPLIANCE.

**TABLE 2 - SUMMARY OF DEVELOPED DUAL PURPOSE BMPS: BIOFILTRATION WITH SURFACE PONDING**

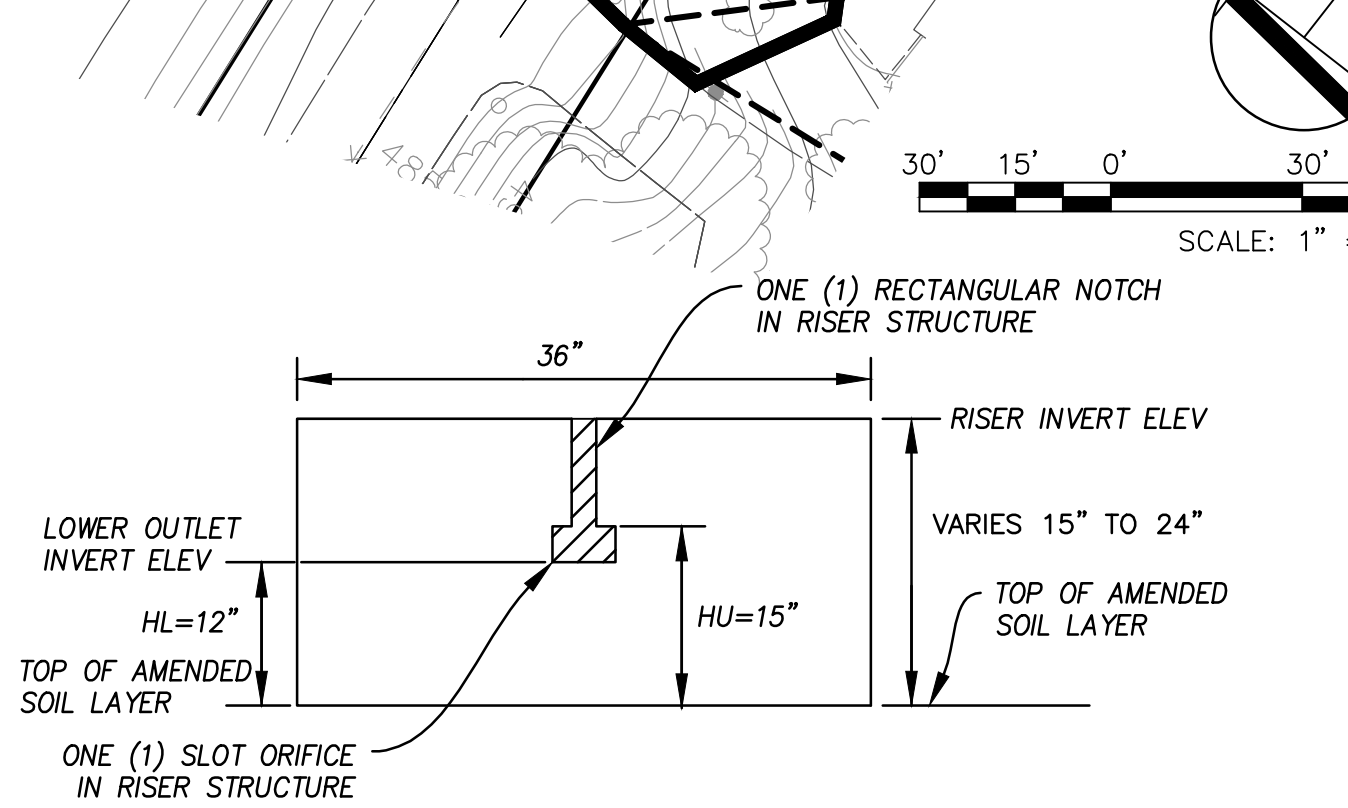
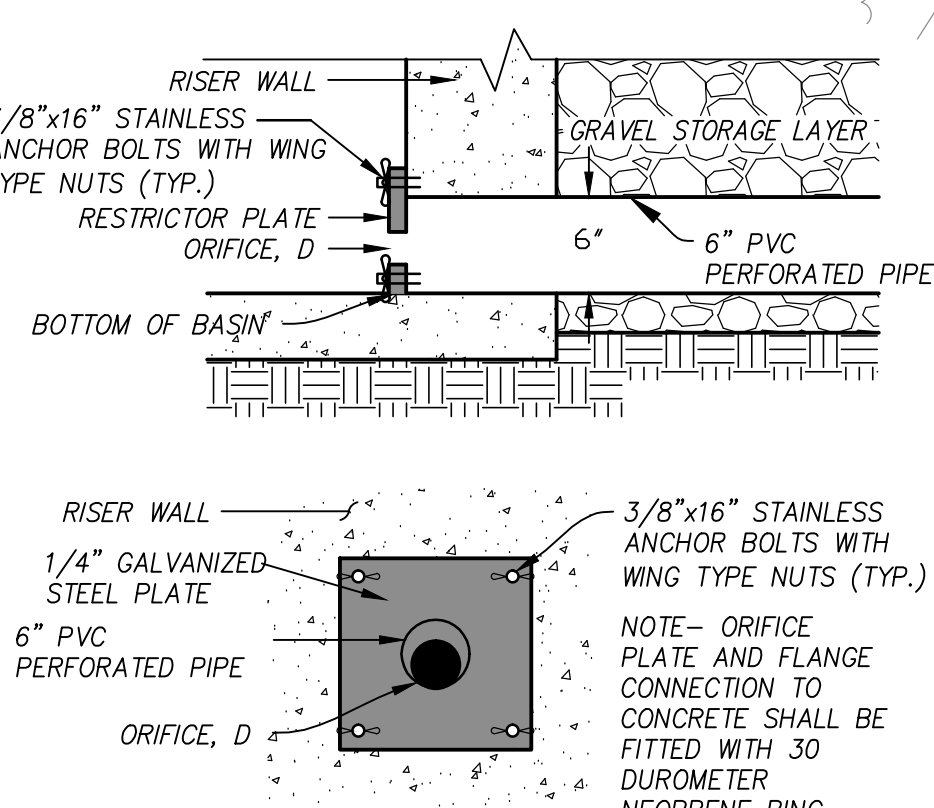
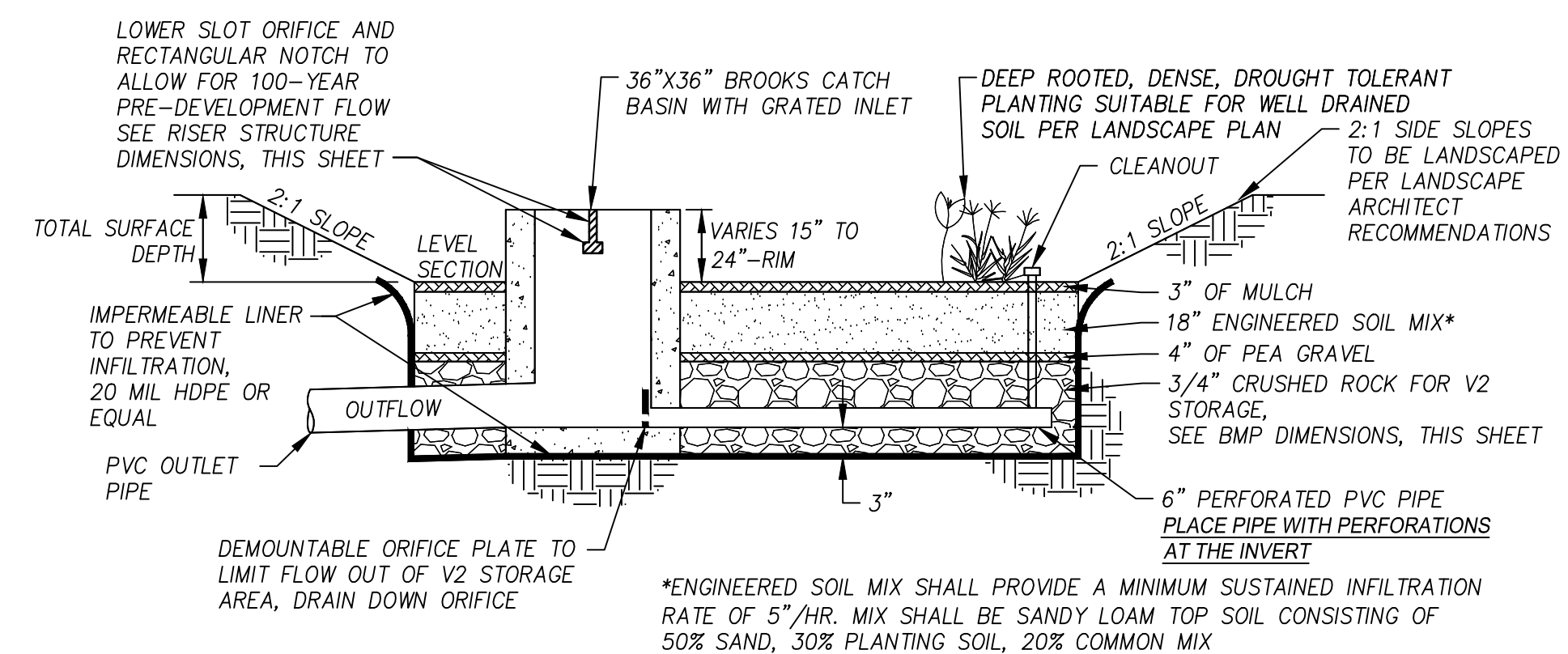
BMP	Tributary Area (ac)	BMP Area <sup>(1)</sup> (ft <sup>2</sup> )	BMP DIMENSIONS			Total Surface Depth <sup>(5)</sup> (ft)	Total Sub-Surface Depth <sup>(6)</sup> (ft)
			Underdrain Orifice, D (in) <sup>(2)</sup>	Gravel Depth (in) <sup>(3)</sup>	Depth Riser Invert <sup>(4)</sup> (in)		
1	0.52	643	0.37"-dia	21	2.00	1.6	3.83
2	0.49	509	0.35"-dia	12	1.25	1.3	3.08
3	0.37	382	0.81"-dia	12	2.00	1.6	3.08
4	0.27	186	0.25"-dia	12	2.00	1.5	3.08
5	0.58	580	0.81"-dia	21	2.00	2.0	3.83

- Notes: (1): BMP Area = Gravel Area + Amended Soil Area. Amended soil depth equal to 18 inches for the BMPS.  
 (2): Diameter of the orifice in gravel layer with invert at bottom of layer; tied with hydromod min threshold (10%Q<sub>2</sub>).  
 (3): Total depth of gravel layer including 3 inches of saturated storage below underdrain pipe.  
 (4): Depth from top of amended soil layer to invert of emergency overflow weir.  
 (5): The total surface ponding depth from the top of amended soil layer.  
 (6): The total sub-surface depth from the invert of the gravel layer to top of amended soil layer.

**TABLE 3 - SUMMARY OF RISER DIMENSIONS**

BMP	Lower Orifice Dimensions			Upper Orifice Dimensions		Emergency Weir	
	Outlet Type <sup>(1)</sup>	Invert Elev, HL <sup>(2)</sup> (in)	Dimensions Length x Height <sup>(3)</sup>	Outlet Type <sup>(1)</sup>	Invert Elev, HU <sup>(2)</sup> (in)	Riser Invert Elev, Htop <sup>(4)</sup> (in)	Weir Perimeter Length <sup>(5)</sup> (ft)
1	Slot	12	(1) 3" x 6"	Vertical Notch	15	2" Wide x 9" High	24
2	Slot	12	(1) 3" x 3"	N/A	N/A	N/A	15
3	Slot	12	(1) 3" x 9"	Vertical Notch	15	2" Wide x 9" High	24
4	Slot	12	(1) 3" x 9"	Vertical Notch	15	2" Wide x 9" High	24
5	Slot	12	(1) 3" x 12"	Vertical Notch	15	2" Wide x 9" High	24

- Notes: (1): Shape of orifice opening in riser structure.  
 (2): Depth from top of amended soil layer to invert of lower orifice or weir.  
 (3): Number of orifices - (#).  
 (4): Depth from bottom of pond to invert of emergency overflow weir.  
 (5): Overflow length, the internal perimeter of the riser is 12 ft (3 ft x 3 ft internal dimensions).



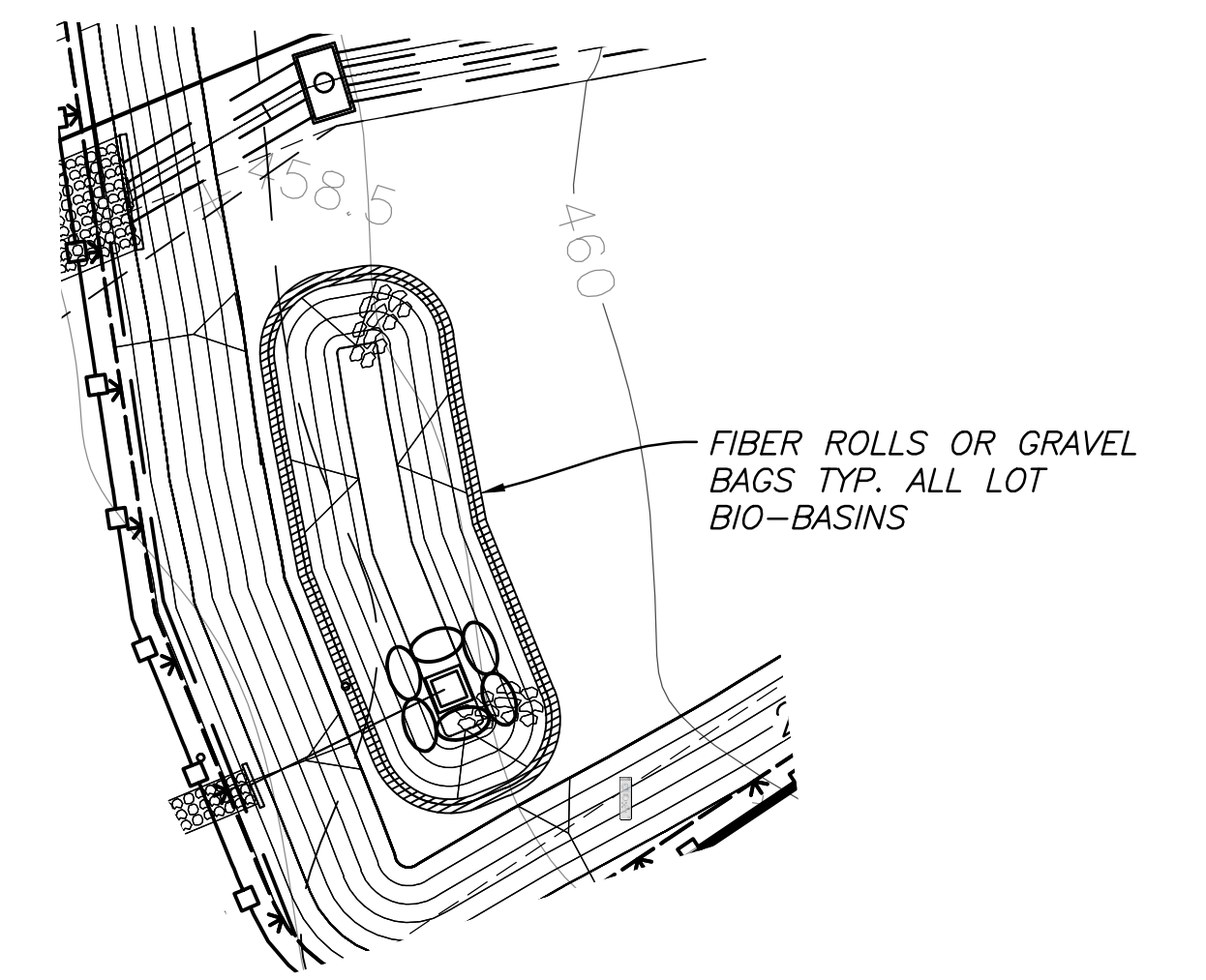
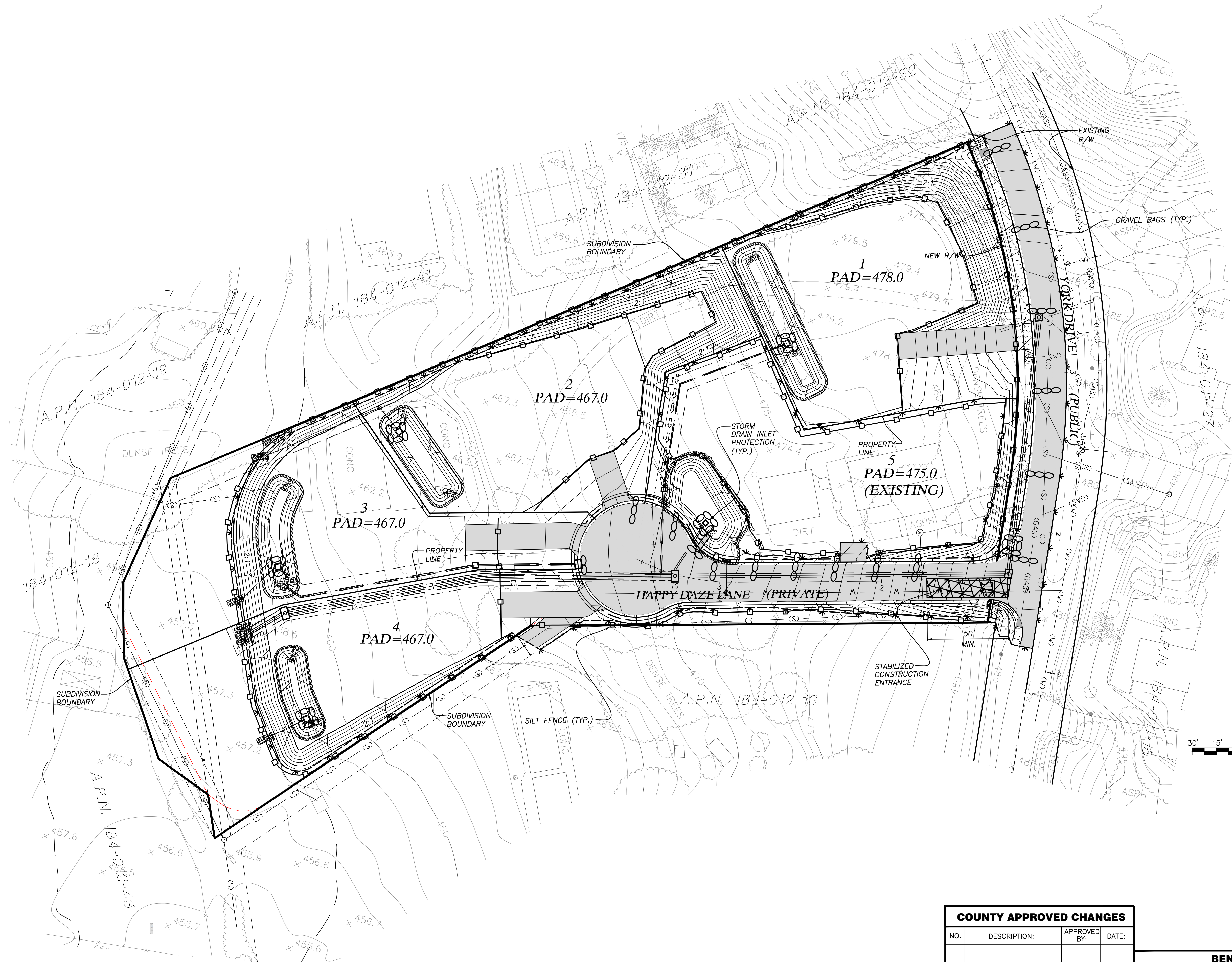
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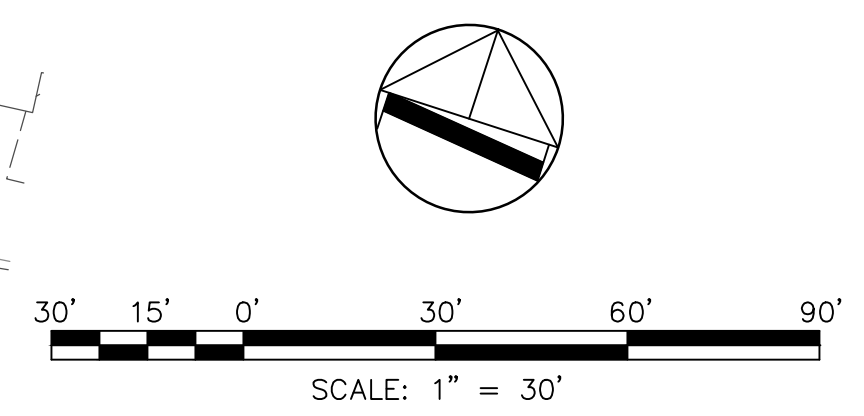
#### PRIVATE CONTRACT

SHEET 8	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	8 SHEETS
POST-DEVELOPMENT DRAINAGE MANAGEMENT AREA EXHIBIT FOR: TM 5443 RPL3		
CALIFORNIA COORDINATE INDEX 370-1701		
APPROVED FOR COUNTY ENGINEER BY: WILLIAM P. MORGAN	ENGINEER OF WORK DATE: RONALD L. HOLLOWAY R.C.E. 29271	PDS2017-LDGRMJ-30120 GRADING PERMIT NO.





**TYPICAL LOT BIO-BASIN BMP**  
 SCALES: 1"=20'



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<b>PRIVATE CONTRACT</b>		
SHEET <b>8</b>	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	<b>8</b> SHEETS
EROSION CONTROL PLAN FOR: <b>TM 5443 R.P. 13</b>		
CALIFORNIA COORDINATE INDEX 370-1701		
APPROVED FOR BY: WILLIAM P. MORGAN	ENGINEER OF WORK DATE: RONALD L. HOLLOWAY R.C.E. 29271	
BY:	DATE:	PDS2017-LDGRMJ-30120 GRADING PERMIT NO: