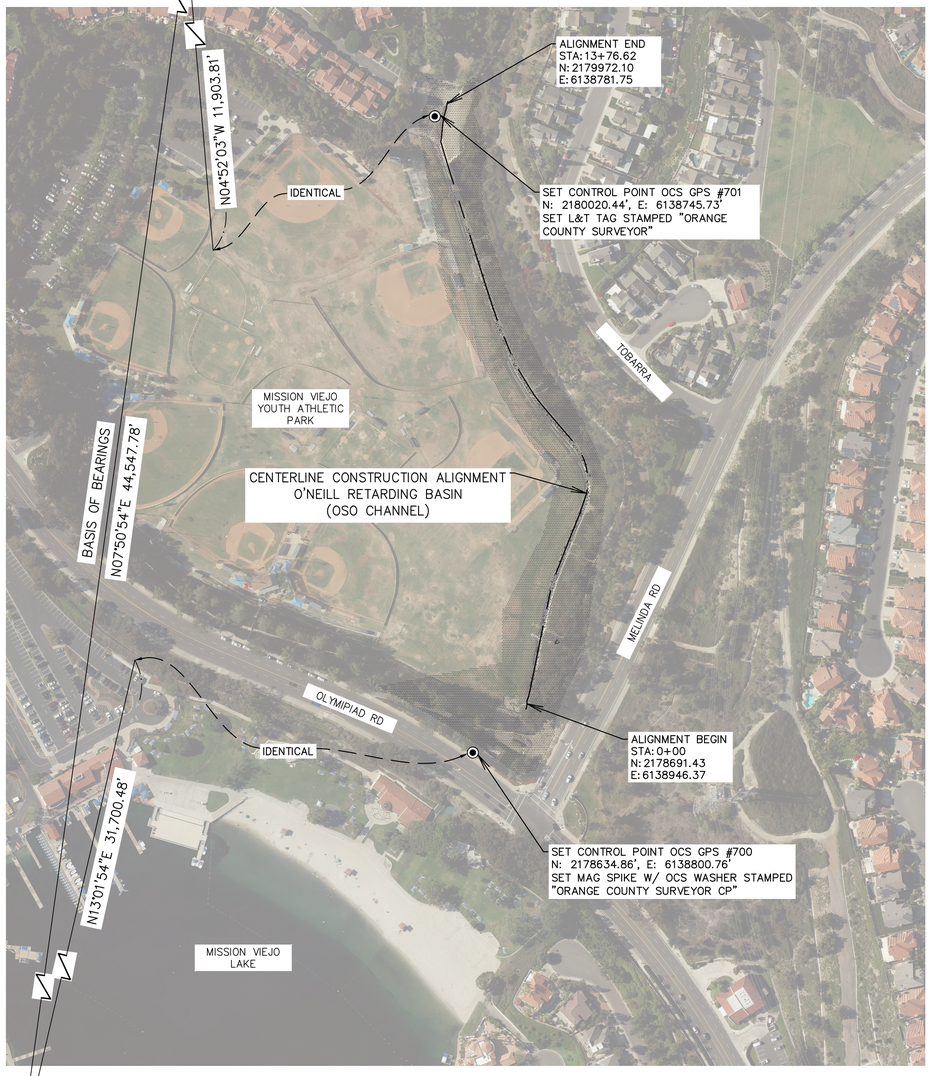
OC PUBLIC WORKS DEPARTMENT

SHANE SILSBY, DIRECTOR

KEVIN HILLS, COUNTY SURVEYOR

O'NEILL RETARDING BASIN
OSO CHANNEL (L03B01)

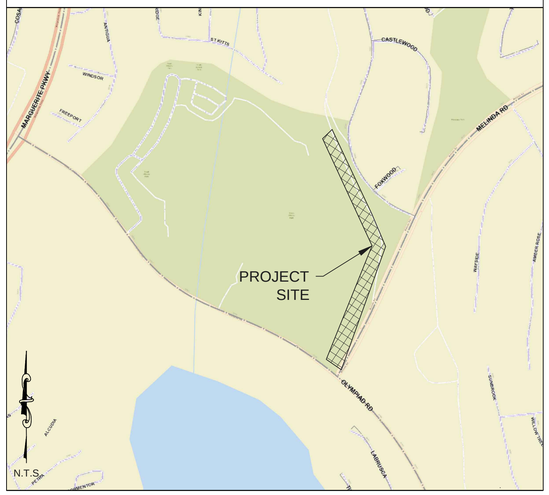
FOUND CGPS WHYT
N: 2191881.31'
E: 6137735.65'
THIS IS A CONTINUOUS GPS STATION (CGPS) AND IS PART OF THE CALIFORNIA SPATIAL PREFERENCE NETWORK (CSRN). FROM WHICH DATA CAN BE DOWNLOADED HERE: HTTP://SOPACCSRC.UCSD.EDU/.



N.T.S.

FOUND CGPS SBCC
N: 2147750.81'
E: 6131652.60'
THIS IS A CONTINUOUS GPS STATION (CGPS) AND IS PART OF THE CALIFORNIA SPATIAL PREFERENCE NETWORK (CSRN). FROM WHICH DATA CAN BE DOWNLOADED HERE: HTTP://SOPACCSRC.UCSD.EDU/.

LOCATION MAP



SENIOR LAND SURVEYOR'S CERTIFICATE:

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYOR'S ACT; THIS 30 DAY OF JULY, 2019.

MICHAEL KUBISTY, PLS SENIOR LAND SURVEYOR

LICENSED LAND SURVEYOR · MICHAEL KUBISTY · No. 8036 · STATE OF CALIFORNIA

DEPUTY COUNTY SURVEYOR'S STATEMENT:

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH THE PROFESSIONAL LAND SURVEYOR'S ACT; THIS 30 DAY OF JULY, 2019.

WADE WEAVER, PLS DEPUTY COUNTY SURVEYOR

LICENSED LAND SURVEYOR · WADE D. WEAVER · No. 4337 · STATE OF CALIFORNIA

U.S. *Survey Foot*

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE VI, NAD 83, OCS 2007.00 EPOCH ADJUSTMENT, AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING STATIONS (CGPS) "WHYT" AND "SBCC", BEING NORTH 07°50'54" EAST AS DERIVED FROM THE COORDINATES PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC) ALONG WITH DATA SHEETS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

HORIZONTAL DATUM

COORDINATES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE VI, 1983 NORTH AMERICAN DATUM (2007.00 EPOCH O.C.S. G.P.S. ADJUSTMENT).

ALL DISTANCES SHOWN ARE GRID, UNLESS OTHERWISE NOTED.
MULTIPLY A GRID DISTANCE BY 1.0000607 TO OBTAIN GROUND DISTANCE.

ALL DISTANCES ARE BASED ON THE U.S. SURVEY FOOT.

VERTICAL DATUM

O.C.S. BM. 3HH-13-77 ELEV. = 749.008' YEAR LEVELED: 2004
NAVD 1988 (O.C.S. 1995 ADJUSTMENT)

DESCRIPTION: DESCRIBED BY OCS 2002-FOUND 3 3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3HH-13-77" SET IN THE NORTHEASTERLY CORNER OF A 5.4 FT. BY 6.4 FT. CONCRETE VAULT. MONUMENT IS ST IN THE "T" INTERSECTION OF THE OLYMPIAD ROAD AND MELINDA ROAD, ON LINE WITH THE PROJECTED CENTERLINE OF MELINDA, AND 33 FT. SOUTHERLY OF THE CENTERLINE OF OLYMPIAD. MONUMENT IS SET LEVEL WITH THE SIDEWALK.

NOTES

THE SURVEY INFORMATION SHOWN HEREON IS TO BE USED FOR TOPOGRAPHIC RELATIONSHIPS ONLY AND IS NOT INTENDED FOR LAND ACQUISITION OR BOUNDARY PURPOSES.

SHEET INDEX

TOPOGRAPHIC MAPPING PROJECT

REV NO.	DATE	ITEM
REVISIONS		

COUNTY OF ORANGE
OC PUBLIC WORKS/ENGINEERING SERVICES
OC SURVEY/FIELD SERVICES/BOUNDARY ANALYSIS & MAPPING

O'NEILL RETARDING BASIN TOPO
OSO CHANNEL (L03B01)
TITLE SHEET

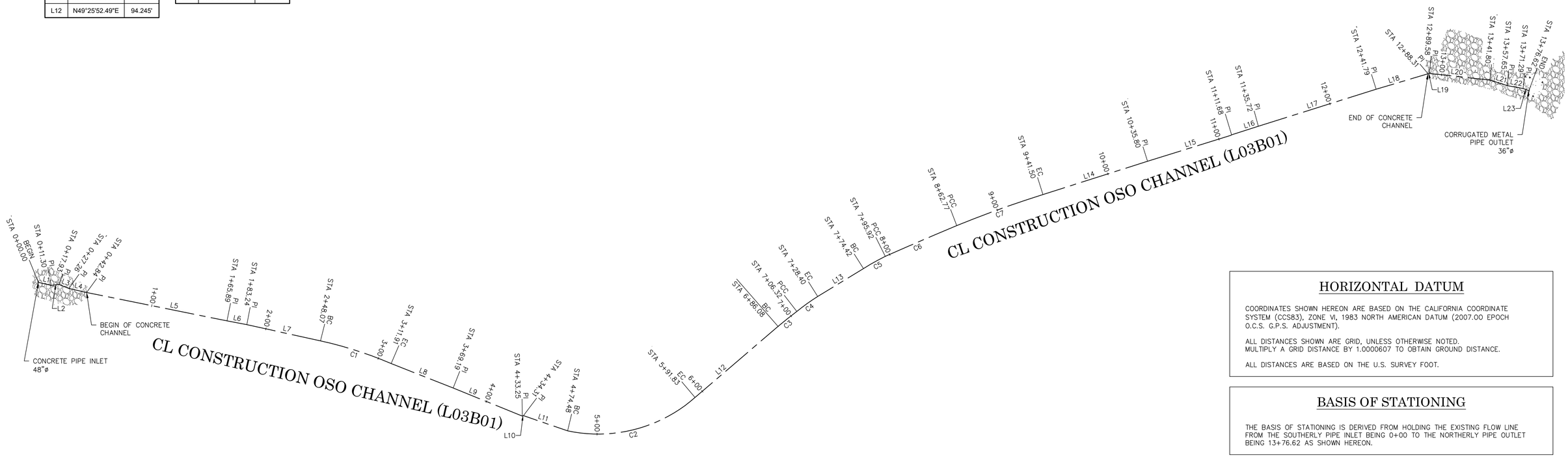
DATE OF SURVEY: 01-22-2019	BY: STROM & PARTY
TOPOGRAPHIC MAPPING	BY: R.BELTRAN
OFFICE CHECK	BY: M. KUBISTY PLS
FIELD CHECK	BY: S. STROM
SCALE: N.T.S	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 1 of 11

Line Table		
LINE	BEARING	LENGTH
L1	N76°33'49.75"W	11.301'
L2	N83°11'48.18"E	6.627'
L3	N68°28'07.65"W	9.332'
L4	N77°10'52.42"W	15.581'
L5	N78°34'31.68"W	123.053'
L6	N79°09'02.84"W	17.341'
L7	N77°36'09.40"W	64.833'
L8	N68°29'47.43"W	57.284'
L9	N67°54'42.33"W	64.061'
L10	N70°08'15.66"E	1.054'
L11	N71°01'12.85"W	40.174'
L12	N49°25'52.49"E	94.245'

Line Table		
LINE	BEARING	LENGTH
L13	N58°40'26.69"E	46.015'
L14	N72°21'35.08"E	94.301'
L15	N72°43'51.59"E	75.016'
L16	N72°10'02.11"E	24.040'
L17	N72°33'59.89"E	106.066'
L18	N73°22'45.97"E	46.523'
L19	N78°18'27.24"E	1.263'
L20	N83°44'03.53"W	52.227'
L21	N72°23'01.92"W	15.844'
L22	N79°37'08.11"W	13.646'
L23	N70°06'31.71"W	5.326'

Curve Table				
CURVE	Δ	RADIUS	LENGTH	TANGENT
C1	010.77	339.48'	63.84'	32.01'
C2	053.36	126.00'	117.35'	63.32'
C3	001.60	726.18'	20.24'	10.12'
C4	006.67	189.81'	22.08'	11.05'
C5	005.97	206.50'	21.50'	10.76'
C6	001.06	3606.36'	66.85'	33.43'
C7	004.70	958.74'	78.73'	39.39'



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ALL DISTANCES ARE BASED ON THE U.S. SURVEY FOOT.

BASIS OF STATIONING

THE BASIS OF STATIONING IS DERIVED FROM HOLDING THE EXISTING FLOW LINE FROM THE SOUTHERLY PIPE INLET BEING 0+00 TO THE NORTHERLY PIPE OUTLET BEING 13+76.62 AS SHOWN HEREON.

ALIGNMENT ESTABLISHMENT NOTE

THE ALIGNMENT SHOWN HEREON WAS DERIVED BY HOLDING THE FLOW LINE AT THE CENTERLINE OF THE EXISTING CHANNEL FROM A CONCRETE PIPE INLET AT THE SOUTHERLY END OF THE CHANNEL TO A PIPE OUTLET AT THE NORTHERLY END OF THE CHANNEL PER DIRECTIVE FROM THE CIVIL ENGINEER FOR THIS PROJECT ROBERT MCLEAN RCE. THIS ALIGNMENT IS SHOWN AS CL CONSTRUCTION ON SHEETS 3–6 PER THIS TOPOGRAPHY.

U.S. *Survey Foot*

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping

REV NO.	DATE	ITEM
REVISIONS		

COUNTY OF ORANGE
OC PUBLIC WORKS/ENGINEERING SERVICES
OC SURVEY/FIELD SERVICES/BOUNDARY ANALYSIS & MAPPING

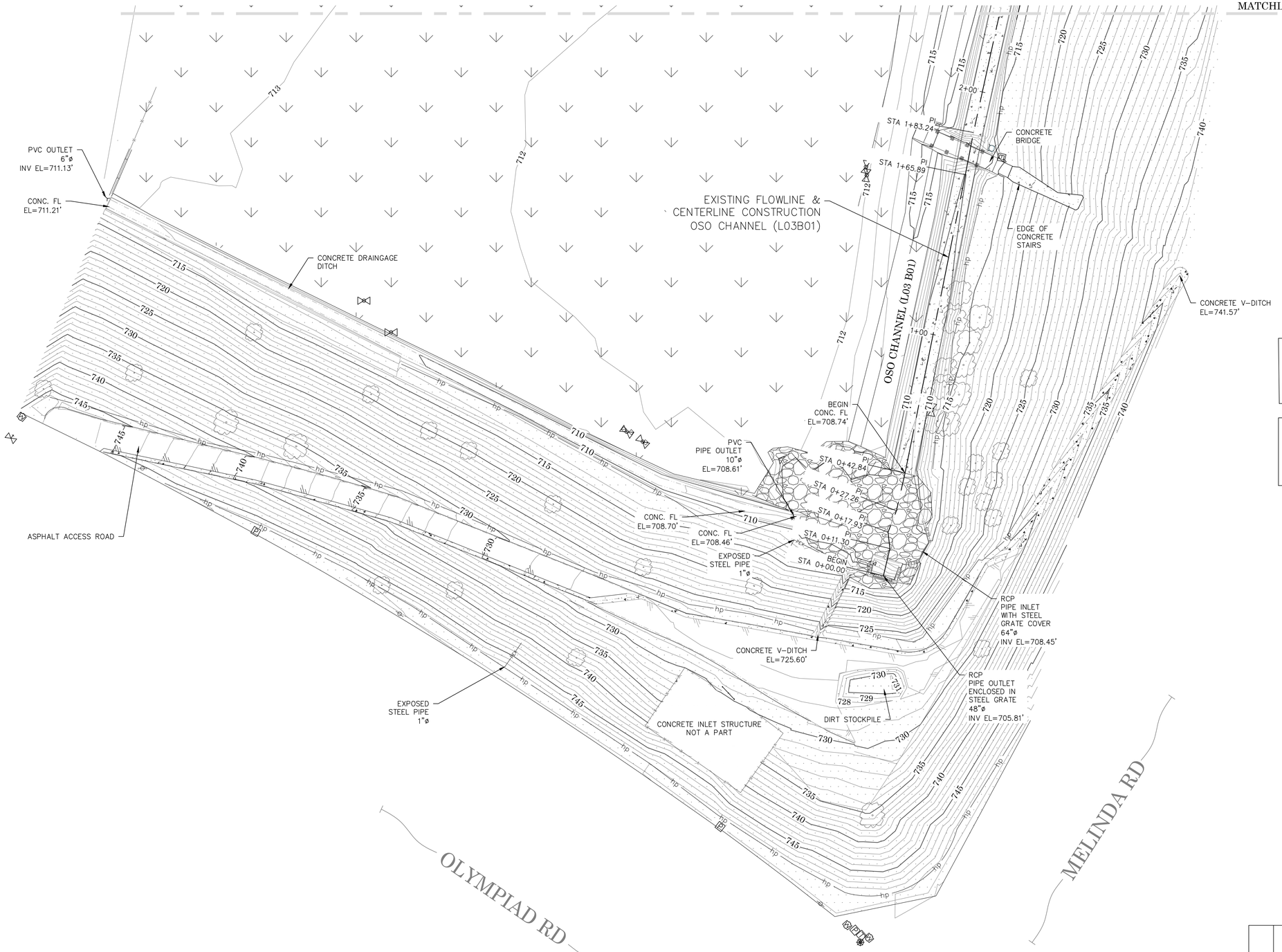
O'NEILL RETARDING BASIN TOPO

OSO CHANNEL (L03B01)

ALIGNMENT ESTABLISHMENT SHEET

DATE OF SURVEY: 01–22–2019	BY: STROM & PARTY
TOPOGRAPHIC MAPPING	BY: R.BELTRAN
OFFICE CHECK	BY: M. KUBISTY PLS
FIELD CHECK	BY: S.STROM
SCALE: N.T.S	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 2 of 11



CONTOUR INTERVAL= 1'

SCALE 1": 20'

20' 0' 20' 40'

GRAPHIC SCALE

U.S. *Survey Foot*

OC Public Works/Engineering Services
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ALIGNMENT NOTES

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LEGEND

SYMBOL

MTRWA	Meter, Water
PBXEL	Pull Box, Traffic
PPO	Pipe Outlet
PBXTL	Pullbox Telephone
PBXTR	Pullbox Traffic
SNN	Sign Post
MHHSW	Sewer Manhole
VLVWA	Valve Water
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SCO	Sewer Clean out
UP2	Utility Pole-2 Light
PBXEL	Pullbox Electrical
SGT	Single Gate
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MTRWA	Water Meter
LPL	Light Pole-Single

PLANT KEY

TRE_	Tree
TREPM	Palm Tree

LINE PATTERN KEY

Centerline
Edge of Conc
Edge of Asplalt Pavement
Flowline
Chainlink Fence
Fence Unknown
Hinge Point
Grade Line
Block Wall
Exposed Pipe
Wing Wall

ABBREVIATION KEY

RCP	REINFORCED CONC. PIPE
PVC	POLYVINYL CHLORIDE PIPE
CMP	CORRUGATED METAL PIPE

AREA PATTERN KEY

Concrete
Dirt
Rip Rap
Grass

REV NO.	DATE	ITEM
REVISIONS		

COUNTY OF ORANGE
OC PUBLIC WORKS/ENGINEERING SERVICES
OC SURVEY/FIELD SERVICES/BOUNDARY ANALYSIS & MAPPING

O'NEILL RETARDING BASIN TOPO

OSO CHANNEL (L03B01)

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FIELD CHECK	BY: S. STROM
SCALE: 1" = 20'	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 3 of 11

CONTOUR INTERVAL= 1'

SCALE 1": 20'

20' 0' 20' 40'

GRAPHIC SCALE

U.S. Survey Foot

OC Public Works/Engineering Services
OC Survey/Field Services
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UP2	Utility Pole-2 Light
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		REVISIONS

COUNTY OF ORANGE
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O'NEILL RETARDING BASIN TOPO

OSO CHANNEL (L03B01)

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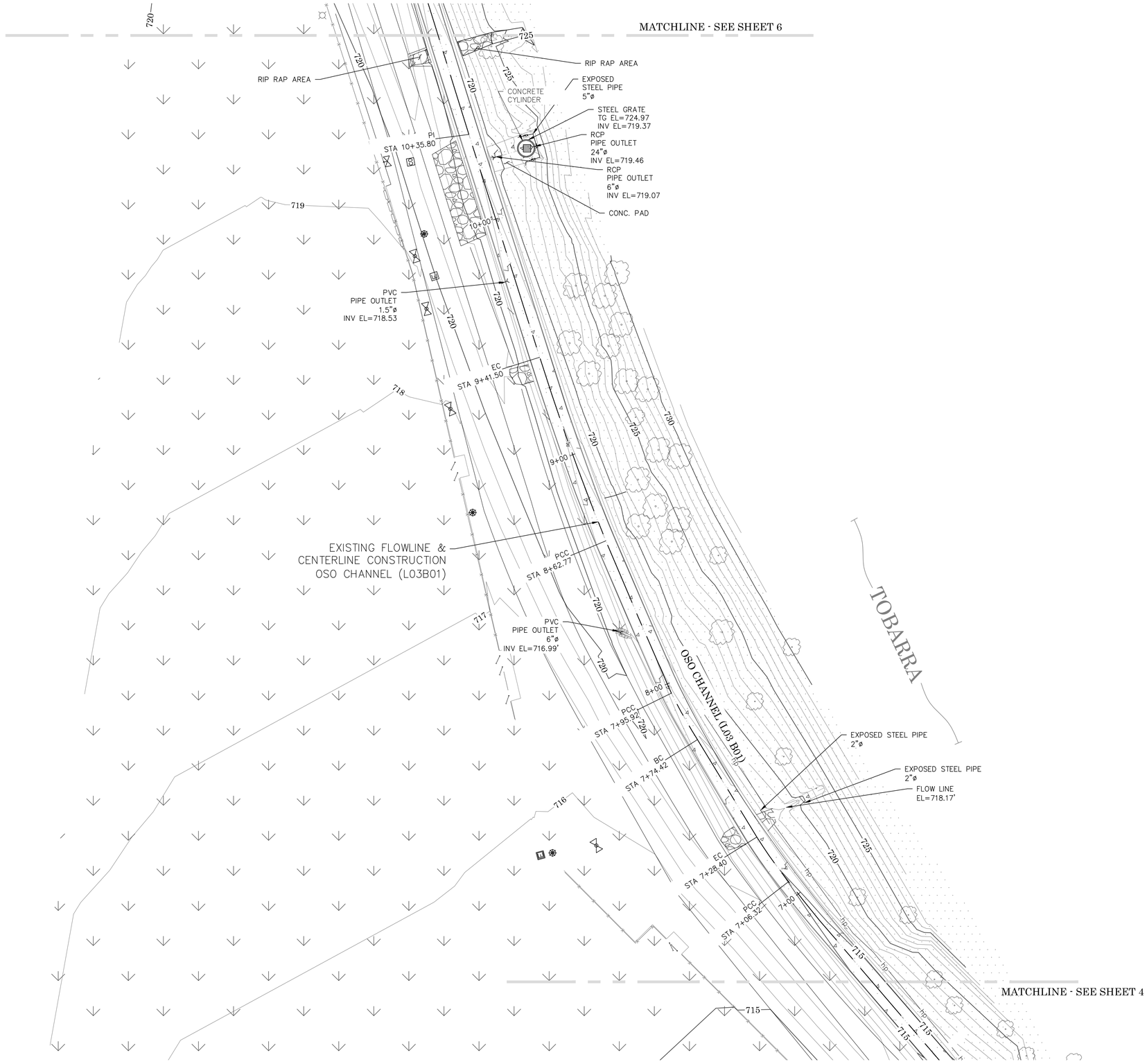
SCALE: 1" = 20'	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 4 of 11



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O'NEILL RETARDING BASIN TOPO

OSO CHANNEL (L03B01)

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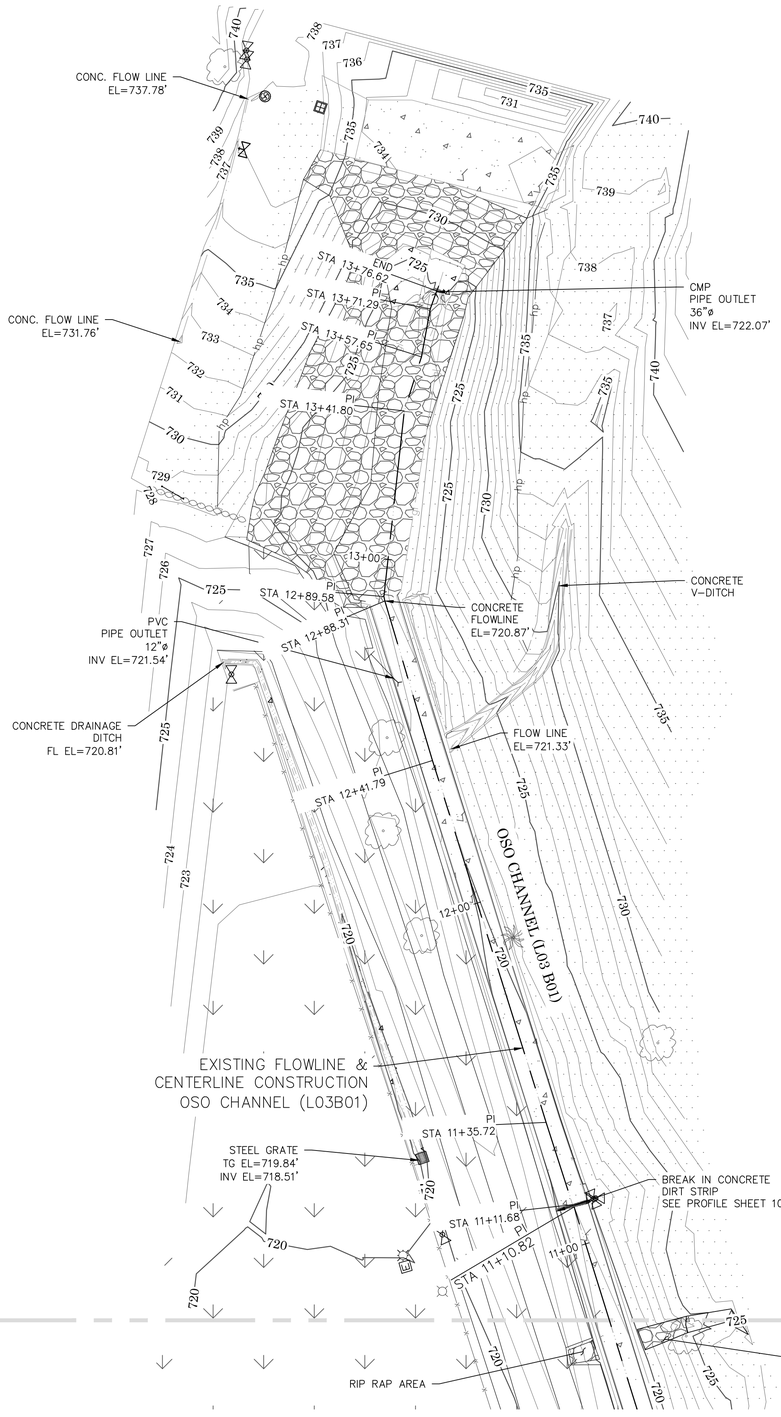
SCALE: 1" = 20'	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 5 of 11



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COUNTY OF ORANGE
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O'NEILL RETARDING BASIN TOPO

OSO CHANNEL (L03B01)

TOPOGRAPHIC MAP

DATE OF SURVEY: 01-22-2019	BY: STROM & PARTY
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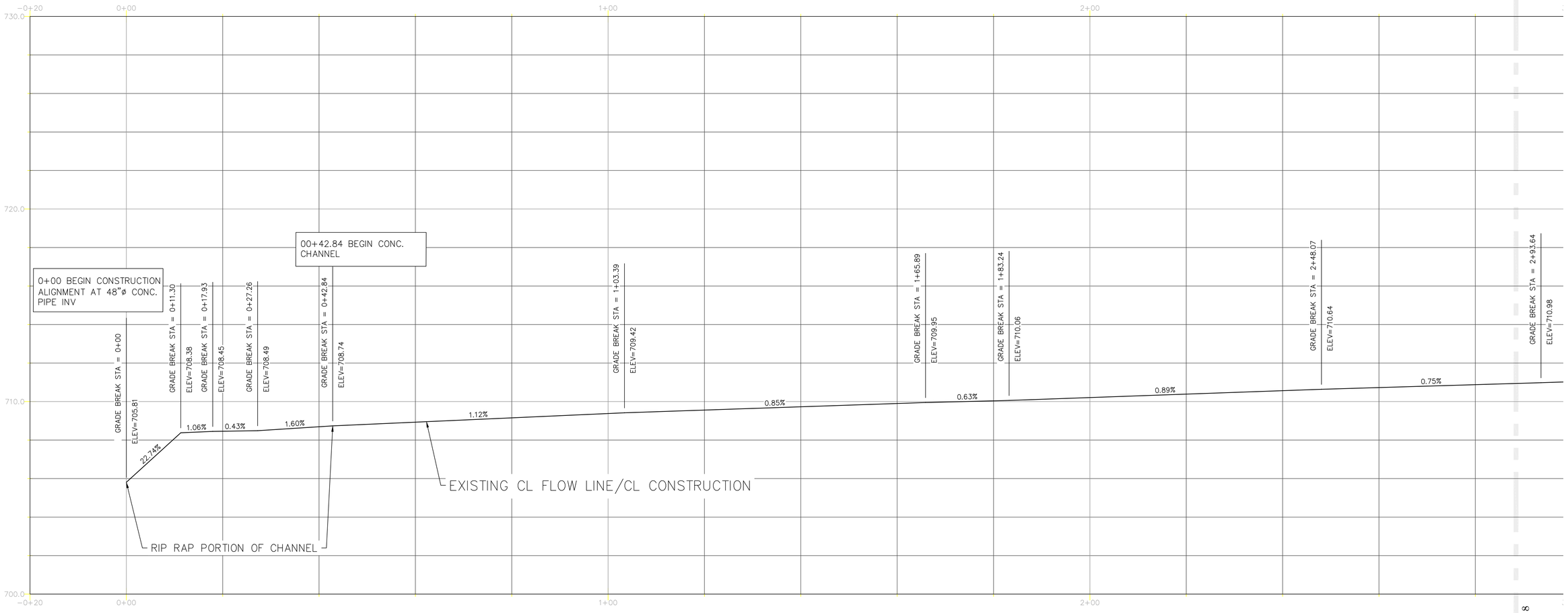
FIELD CHECK	BY: S. STROM
SCALE: 1" = 20'	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 6 of 11

O'NEILL RETARDING BASIN (OSO CHANNEL) PROFILE
STA 0+00 TO 13+76.62
Vert. Scale 1"=5'
Horiz. Scale 1"=20'



MATCHLINE - SEE SHEET 8

THE PROFILE SHOWN HEREON WAS DEVELOPED BY HOLDING THE C/L FLOWLINE GRADES OF THE EXISTING CHANNEL PER THIS TOPOGRAPHY.
SURVEYED 01/22/19
Date Prepared: 07/18/2019

U.S. *Survey Foot*
OC Public Works/Engineering Services
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O'NEILL RETARDING BASIN TOPO

OSO CHANNEL (L03B01)

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FIELD CHECK	BY: S. STROM
SCALE: AS NOTED	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

O'NEILL RETARDING BASIN (OSO CHANNEL) PROFILE
STA 0+00 TO 13+76.62
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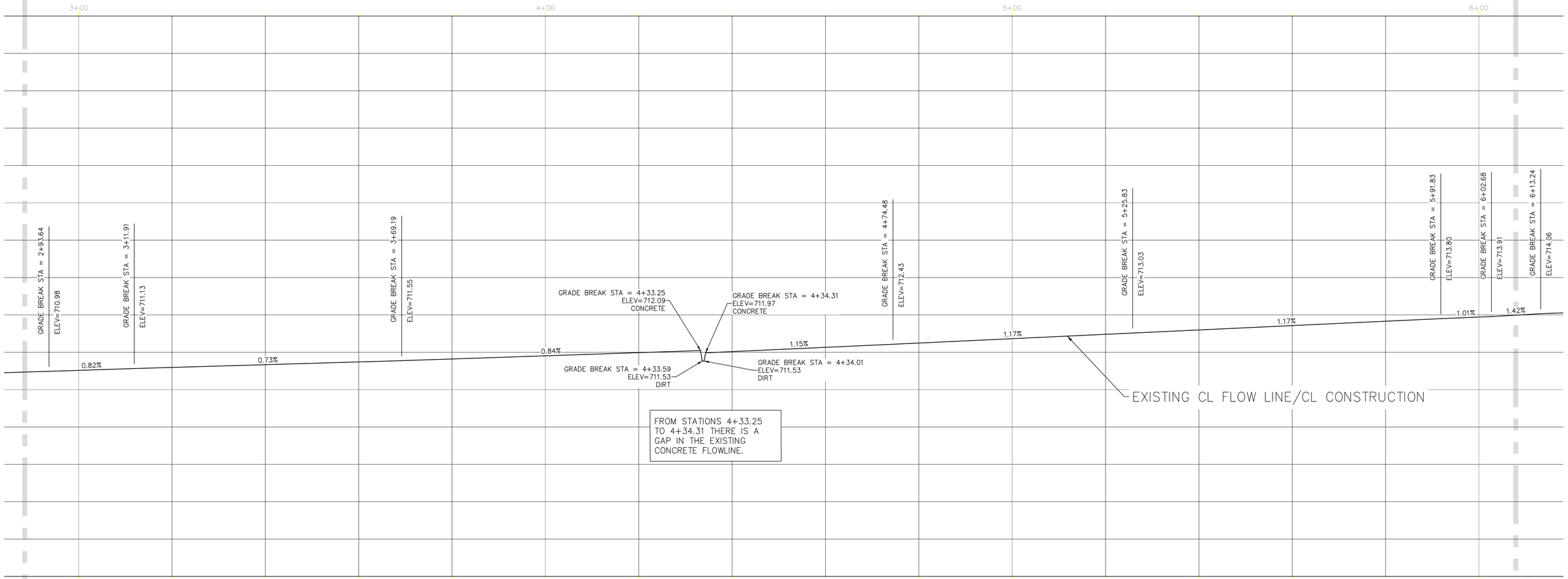

MATCHLINE - SEE SHEET 7

MATCHLINE - SEE SHEET 9

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SURVEYED 01/22/19
Date Prepared: 07/18/2019

U.S. *Survey Foot*
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O'NEILL RETARDING BASIN TOPO

OSO CHANNEL (L03B01)

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FIELD CHECK	BY: S. STROM
SCALE: AS NOTED	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 8 of 11

O'NEILL RETARDING BASIN (OSO CHANNEL) PROFILE
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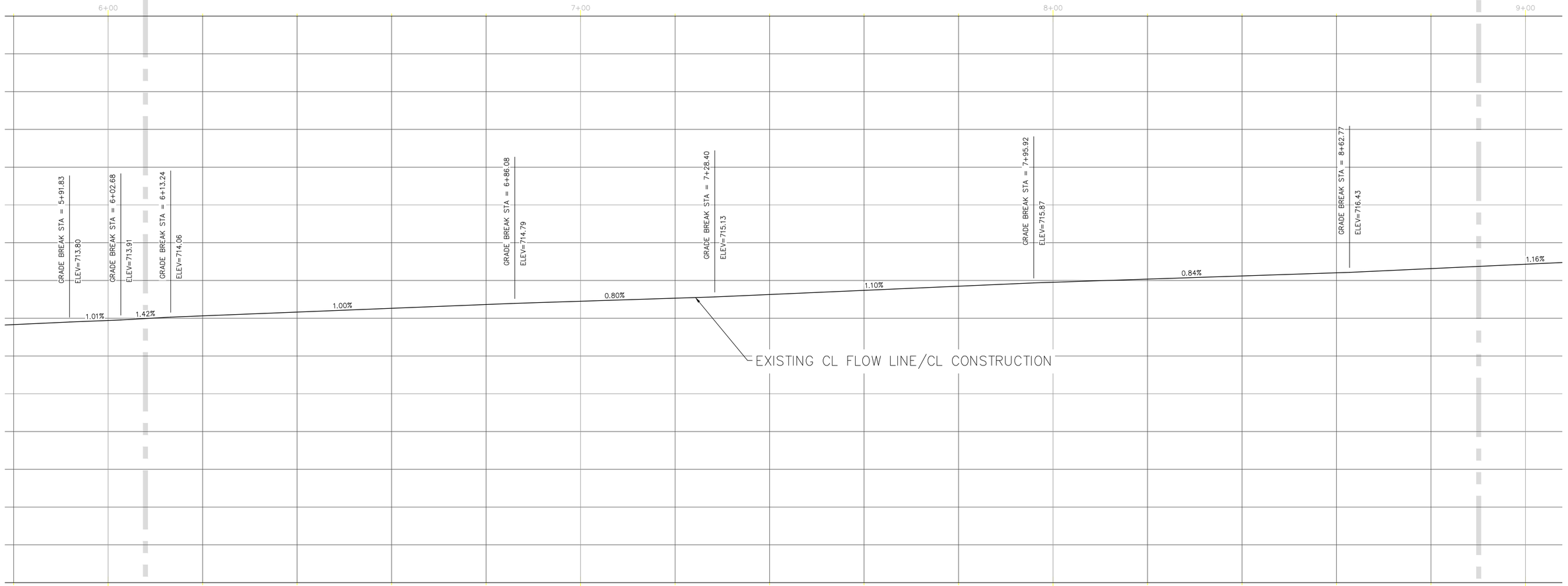
Vert. Scale 1"=5'
Horiz. Scale 1"=20'



MATCHLINE - SEE SHEET 8

MATCHLINE - SEE SHEET 10

THE PROFILE SHOWN HEREON WAS DEVELOPED BY HOLDING THE C/L FLOWLINE GRADES OF THE EXISTING CHANNEL PER THIS TOPOGRAPHY.
SURVEYED 01/22/19
Date Prepared: 07/18/2019

U.S. *Survey Foot*
OC Public Works/Engineering Services
OC Survey/Field Services
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OSO CHANNEL (L03B01)

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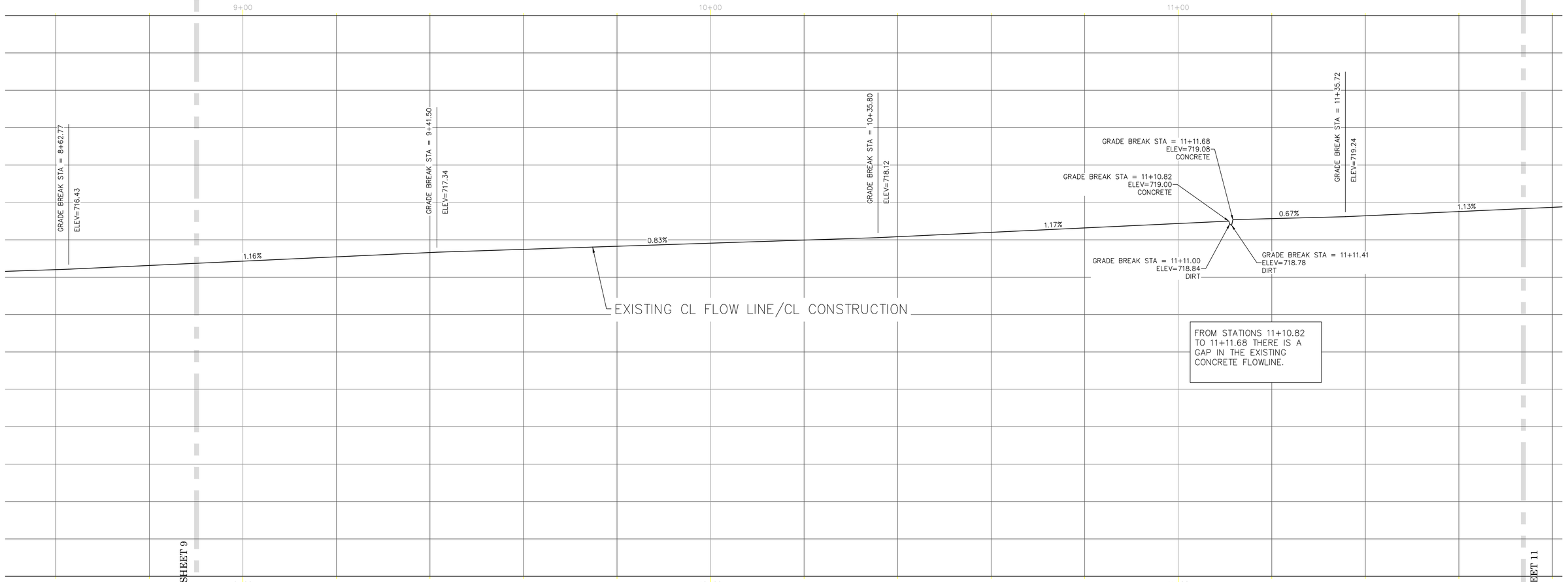
SCALE: AS NOTED	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 9 of 11

O'NEILL RETARDING BASIN (OSO CHANNEL) PROFILE
STA 0+00 TO 13+76.62
Vert. Scale 1"=5'
Horiz. Scale 1"=20'



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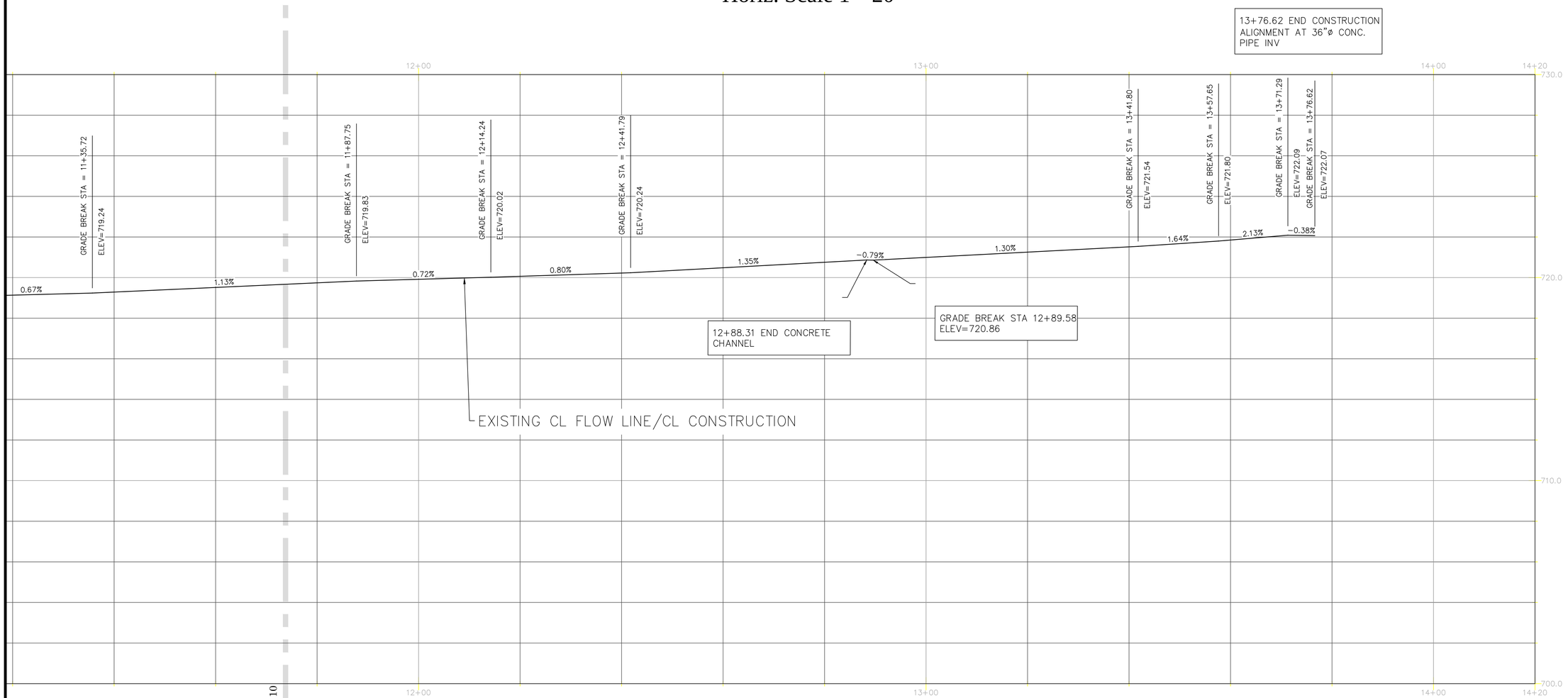
FIELD CHECK	BY: S. STROM
SCALE: AS NOTED	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 10 of 11

O'NEILL RETARDING BASIN (OSO CHANNEL) PROFILE
STA 0+00 TO 13+76.62
Vert. Scale 1"=5'
Horiz. Scale 1"=20'



MATCHLINE - SEE SHEET 10

THE PROFILE SHOWN HEREON WAS DEVELOPED BY HOLDING THE C/L FLOWLINE GRADES OF THE EXISTING CHANNEL PER THIS TOPOGRAPHY. SURVEYED 01/22/19

Date Prepared: 07/18/2019

U.S. *Survey Foot*

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping

REV NO.	DATE	ITEM
REVISIONS		

COUNTY OF ORANGE
OC PUBLIC WORKS/ENGINEERING SERVICES
OC SURVEY/FIELD SERVICES/BOUNDARY ANALYSIS & MAPPING

O'NEILL RETARDING BASIN TOPO

OSO CHANNEL (L03B01)

ALIGNMENT PROFILE

DATE OF SURVEY: 01-22-2019	BY: STROM & PARTY
TOPOGRAPHIC MAPPING	BY: R.BELTRAN
OFFICE CHECK	BY: M. KUBISTY PLS
FIELD CHECK	BY: S. STROM
SCALE: AS NOTED	
FILE: O'NEILL_BASIN_TOPO_2019.DWG	

SHEET NO. 11 of 11