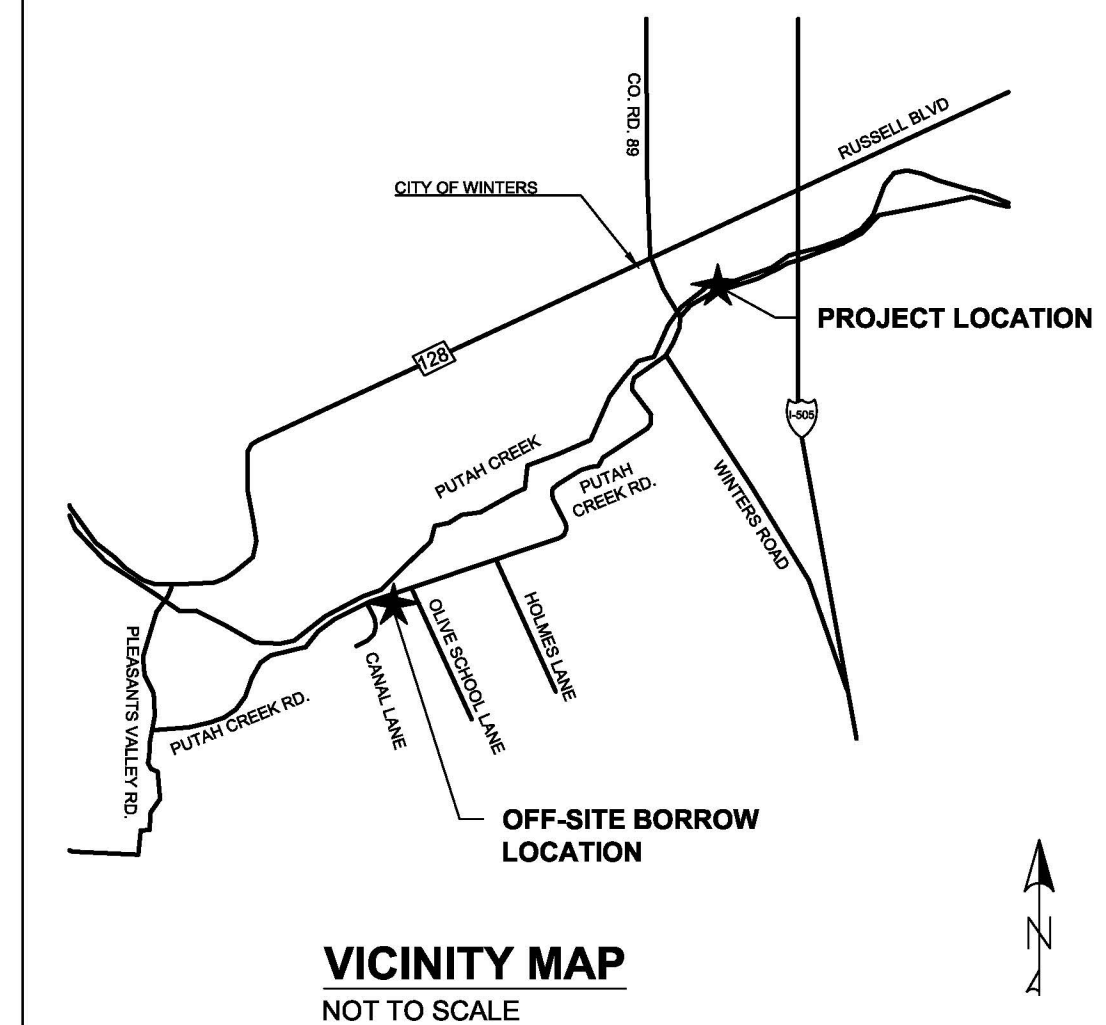


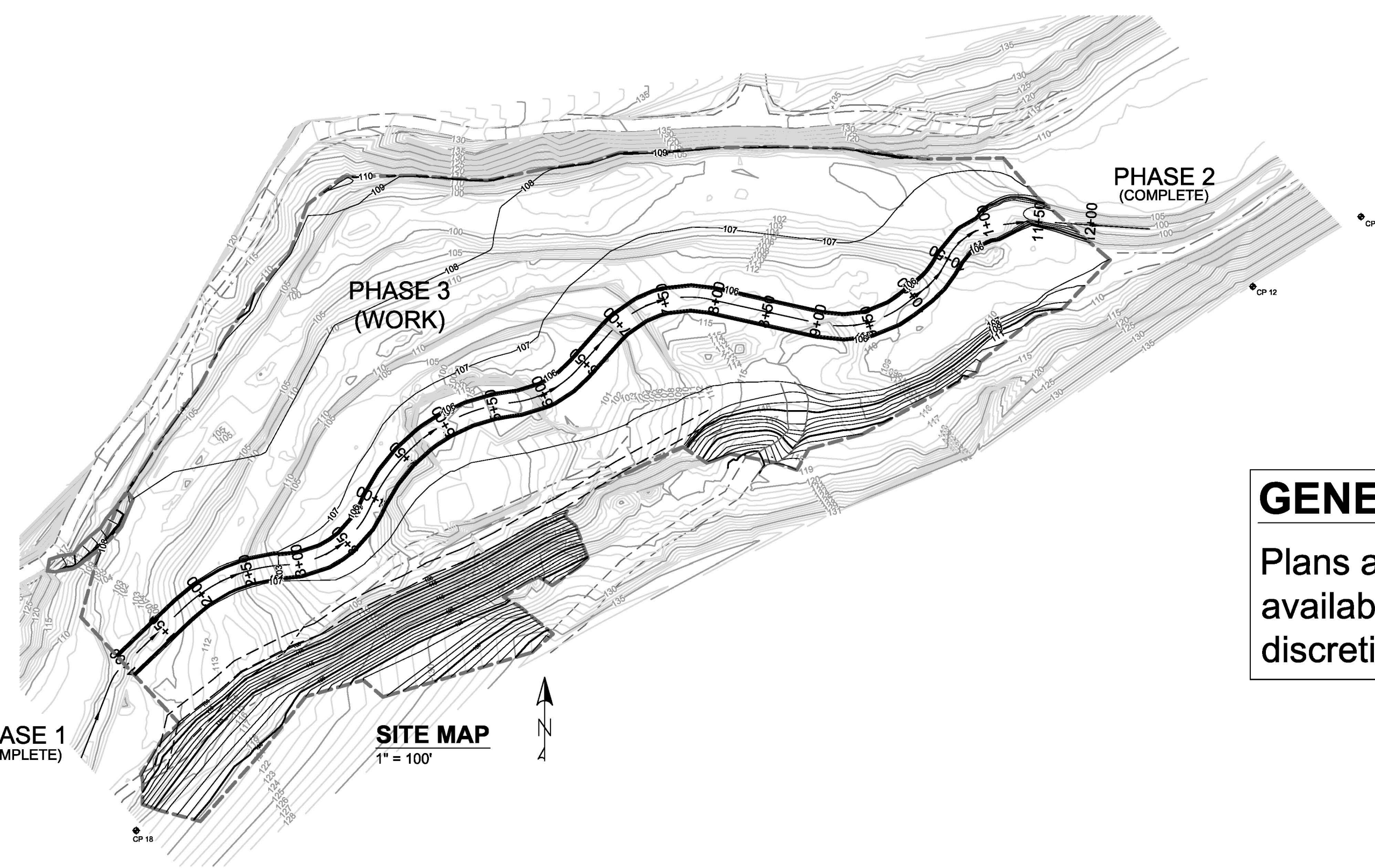
IMPROVEMENT PLANS FOR WINTERS PUTAH CREEK PARK FLOODPLAIN RESTORATION, PHASE 3

SOLANO COUNTY WATER AGENCY &
LOWER PUTAH CREEK COORDINATING COMMITTEE
SOLANO COUNTY, CALIFORNIA
FEBRUARY 2015



SHEET INDEX

1. Title Sheet
2. Site Plan
3. Design Channel & Floodplain Grading: Plan & Profile
4. Design Channel & Floodplain Grading: Cross-Sections
5. South Drain Improvement
6. North Access Ramp
7. South Access Road Improvement
8. Erosion Control Plan

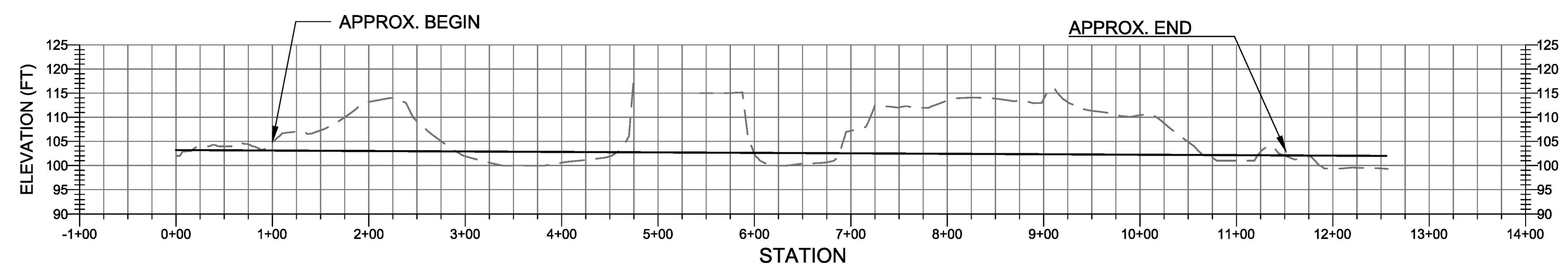


GENERAL NOTES

Plans are conceptual and are as accurate as the available data. Field modifications may be made at discretion of Agency.

ABBREVIATIONS

AB	AGGREGATE BASE	GB	GRADE BREAK	PUE	PUBLIC UTILITY EASEMENT
AGG	AGGREGATE	GV	GATE VALVE	PVMT	PAVEMENT
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	GALV.	GALVANIZED	R	RADIUS
AWWA	AMERICAN WATER WORKS ASSOCIATION	HC	HANDICAP	R/W	RIGHT OF WAY
ANG. PT.	ANGLE POINT	HDPE	HIGH DENSITY POLYETHYLENE	RD	ROAD
AC	ASPHALT CONCRETE	HP	HIGH POINT	RP	RADIUS POINT
BC	BEGINNING OF CURVE	HPS	HIGH PRESSURE SODIUM	RCP	REINFORCED CONCRETE PIPE
BLVD.	BOULEVARD	HORIZ.	HORIZONTAL	RT	RIGHT
BLDG.	BUILDING	INTX	INTERSECTION	S	SLOPE, SEWER, SOUTH, SANITARY LINE
BOC	BACK OF CURB	INV, IE	INVERT ELEVATION	SB	SIGNAL PULL BOX
BOW, B/W	BACK OF WALK	IRR	IRRIGATION	SD	STORM DRAIN
BOV	BLOW OFF VALVE	L	LENGTH	SERV	SERVICE
BMP	BEST MANAGEMENT PRACTICES	LD	LANDSCAPE DRAIN	SF	SQUARE FEET
CC	CENTER ON CENTER	LF	LINEAL FEET	SHT	SHEET
CIPCP	CAST-IN-PLACE CONCRETE PIPE	LN	LANE	SPEC	SPECIFICATION
CL	CENTERLINE, CLASS	LP	LOW POINT	SS	SANITARY SEWER
C.O.	CLEAN OUT, COMPANY	LT	LEFT	ST	STREET
CONC.	CONCRETE	LTB	LIME TREATED BASE	STA	STATION
CONST	CONSTRUCT	MAX	MAXIMUM	STD	STANDARD
CORP.	CORPORATION	MH	MAINTENANCE HOLE	STE	SUITE
CP	CONCRETE PIPE	SDMH	STORM DRAIN MAINTENANCE HOLE	SUBD.	SUBDIVISION
CR	CURB RETURN	SSMH	SANITARY SEWER MAINTENANCE HOLE	S.L.	STREET LIGHT
CT	COURT	MIN	MINIMUM	S/W	SIDEWALK
D	DRAIN LINE	N	NORTH	TA	TOP OF APRON
DI	DRAIN INLET	NG	NATURAL GROUND	TBD	TO BE DETERMINED
DIP	DUCTILE IRON PIPE	N.I.C.	NOT IN CONTRACT	TBW	TOP BALK OF WALK
DR.	DRIVE	NO	NUMBER	TC	TOP OF CURB
DT	DRAINAGE TILE	NPTC	NOT PART OF THIS CONTRACT	TI	TRAFFIC INDEX
D/W	DRIVEWAY ENTRANCE	NTS	NOT TO SCALE	TPM	TENTATIVE PARCEL MAP
E	EAST, ELECTRIC	OC	ON CENTER	TRANS	TRANSITION
EA	EACH	OHE	OVERHEAD ELECTRIC	TV	TELEVISION
EC	END OF CURVE	PB	ELECTRIC PULL BOX	TYP.	TYPICAL
ELEV, EL	ELEVATION	PCC	PORTLAND CEMENT CONCRETE	USGS	UNITED STATES GEOLOGICAL SURVEY
E.P.	EDGE OF PAVEMENT	POC	POINT OF COMPOUND CURVE	VC	VERTICAL CURVE
ESMT.	EASEMENT	PED	PEDESTAL, PEDESTRIAN	VCP	VITRIFIED CLAY PIPE
ETC.	ETCETERA	PI	POINT OF INTERSECTION	VERT.	VERTICAL
EXIST, EX.	EXISTING	PG&E	PACIFIC GAS & ELECTRIC COMPANY	W	WEST, WATER
FF	FINISHED FLOOR	PKWY	PARKWAY	WM	WATER MAIN
FH	FIRE HYDRANT	PL	PROPERTY LINE, PLACE	WTR	WATER
FIN	FINISH	POC	POINT OF CONNECTION	W/	WITH
FL	FLOW LINE	PRC	POINT OF REVERSE CURVE	XING	CROSSING
FM	FORCE MAIN	PSI	POUNDS PER SQUARE INCH		
FOC	FACE OF CURB	PT	POINT, POINT OF TANGENCY		



CLIENT:
Solano County Water Agency
810 Vaca Valley Parkway
Suite 203
Vacaville, CA 95688
(707) 451-6090

PROPERTY OWNER:
City of Winters
318 First Street
Winters, CA 95618
(530) 758-2026

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JB	JB	TP					

COMMENTS:

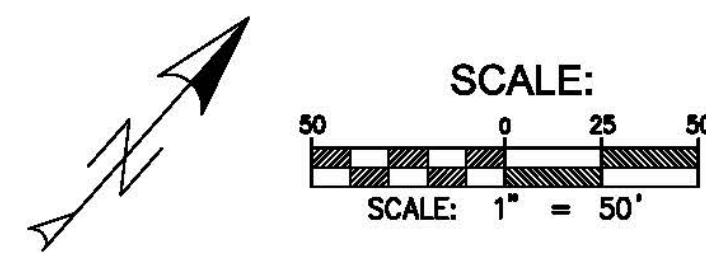
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TITLE SHEET
WINTERS PUTAH CREEK PARK
DESIGN CONDITION: PHASE 3

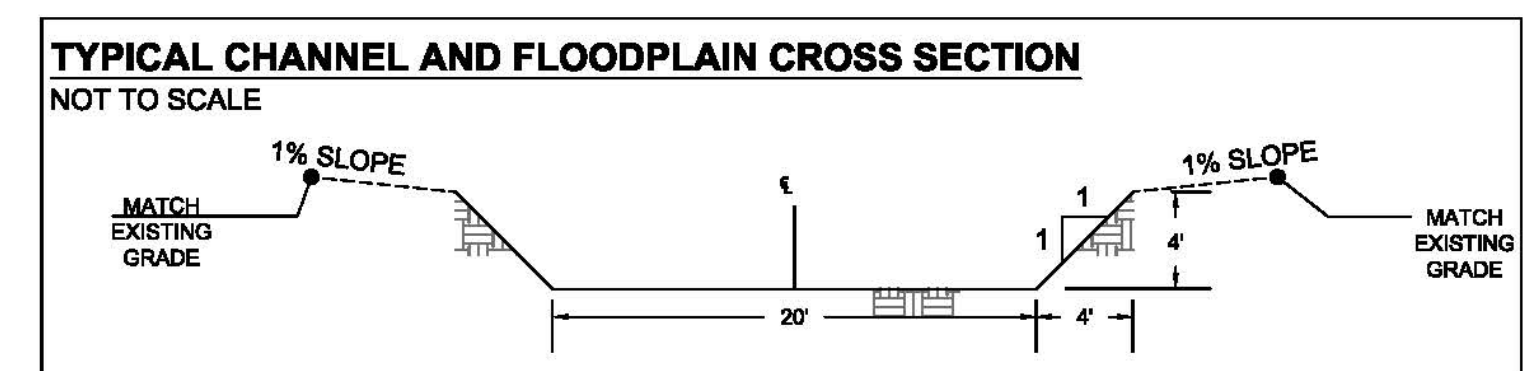
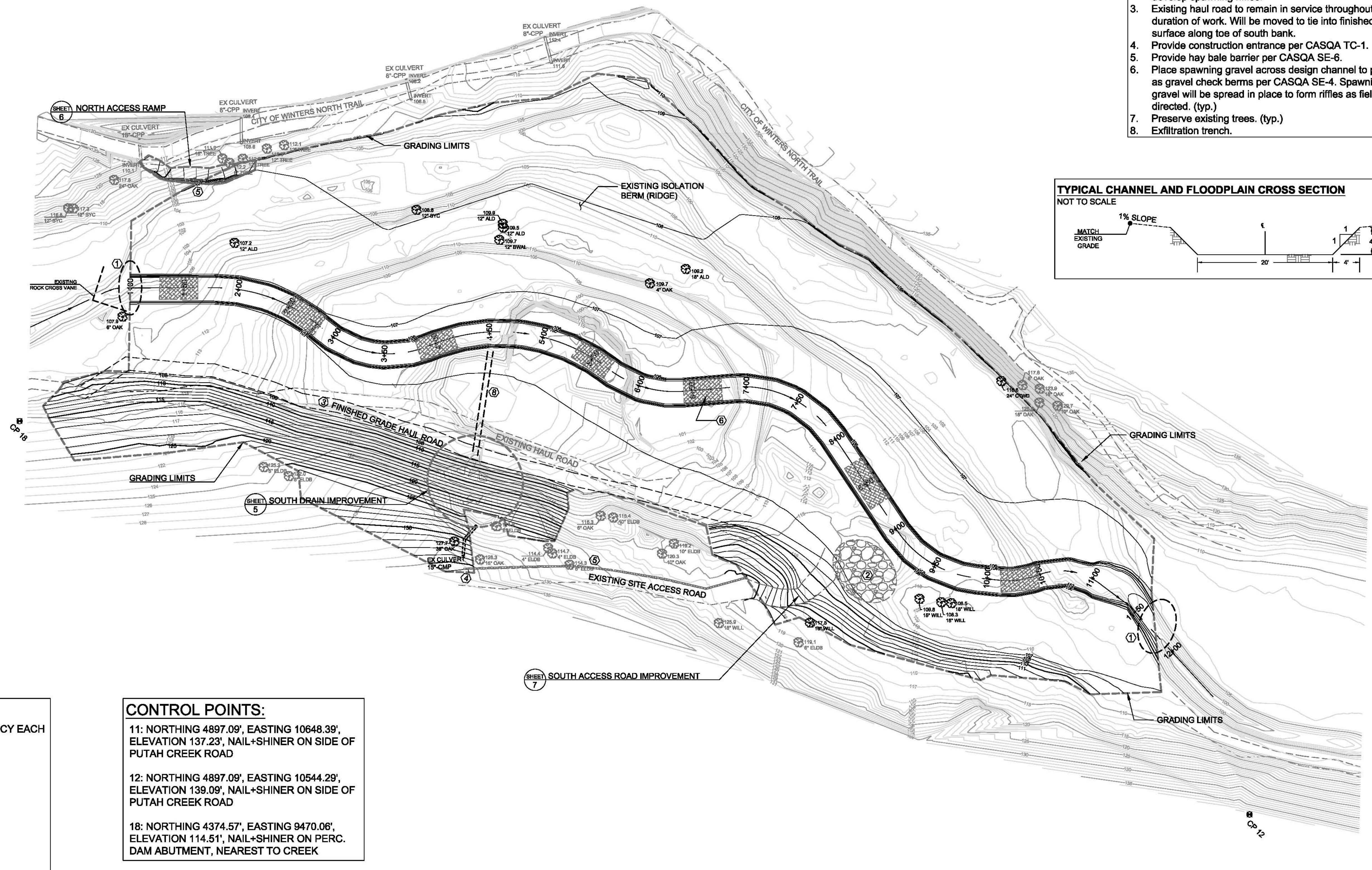
SOLANO COUNTY CALIFORNIA

SCALE	SHEET
VARIES	1 OF 8
DATE: 02-17-2015	
FILE NO. L-119	

WINTERS PUTAH CREEK PARK - PHASE 3 - SITE PLAN



- GENERAL NOTES:**
1. Transition to existing channel, field directed.
 2. Spawning gravel stockpile provided by Agency, approx. 200 CY, initially for check dams. Use ultimately to develop spawning riffles.
 3. Existing haul road to remain in service throughout duration of work. Will be moved to tie into finished grade surface along toe of south bank.
 4. Provide construction entrance per CASQA TC-1.
 5. Provide hay bale barrier per CASQA SE-6.
 6. Place spawning gravel across design channel to perform as gravel check berms per CASQA SE-4. Spawning gravel will be spread in place to form riffles as field directed. (typ.)
 7. Preserve existing trees. (typ.)
 8. Exfiltration trench.



- LEGEND:**
- CHANNEL RIFFLE, APPROX. 30 CY EACH
 - CONTROL POINT
 - LARGE TREE / VEGETATION
ELEVATION (FT)
DIAMETER (APPROX.), TYPE
TYPES: OAK = OAK
SYC = SYCAMORE
ALD = ALDER
ELDB = ELDERBERRY
CTWD = COTTONWOOD
BWAL = BLACK WALNUT
WILL = WILLOW
TREE = UNDETERMINED

- CONTROL POINTS:**
- 11: NORTHING 4897.09', EASTING 10648.39', ELEVATION 137.23', NAIL+SHINER ON SIDE OF PUTAH CREEK ROAD
 - 12: NORTHING 4897.09', EASTING 10544.29', ELEVATION 139.09', NAIL+SHINER ON SIDE OF PUTAH CREEK ROAD
 - 18: NORTHING 4374.57', EASTING 9470.06', ELEVATION 114.51', NAIL+SHINER ON PERC. DAM ABUTMENT, NEAREST TO CREEK

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REV.	DATE	DESCRIPTION	BY	APP'D	

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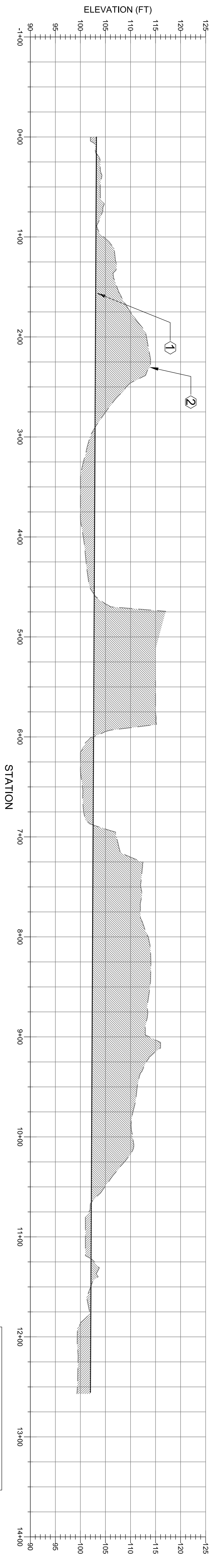
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SITE PLAN
WINTERS PUTAH CREEK PARK
DESIGN CONDITION: PHASE 3

SOLANO COUNTY CALIFORNIA

SCALE	1" = 50'	SHEET	2
DATE:	02-17-2015	OF	8
FILE NO.	L-119		

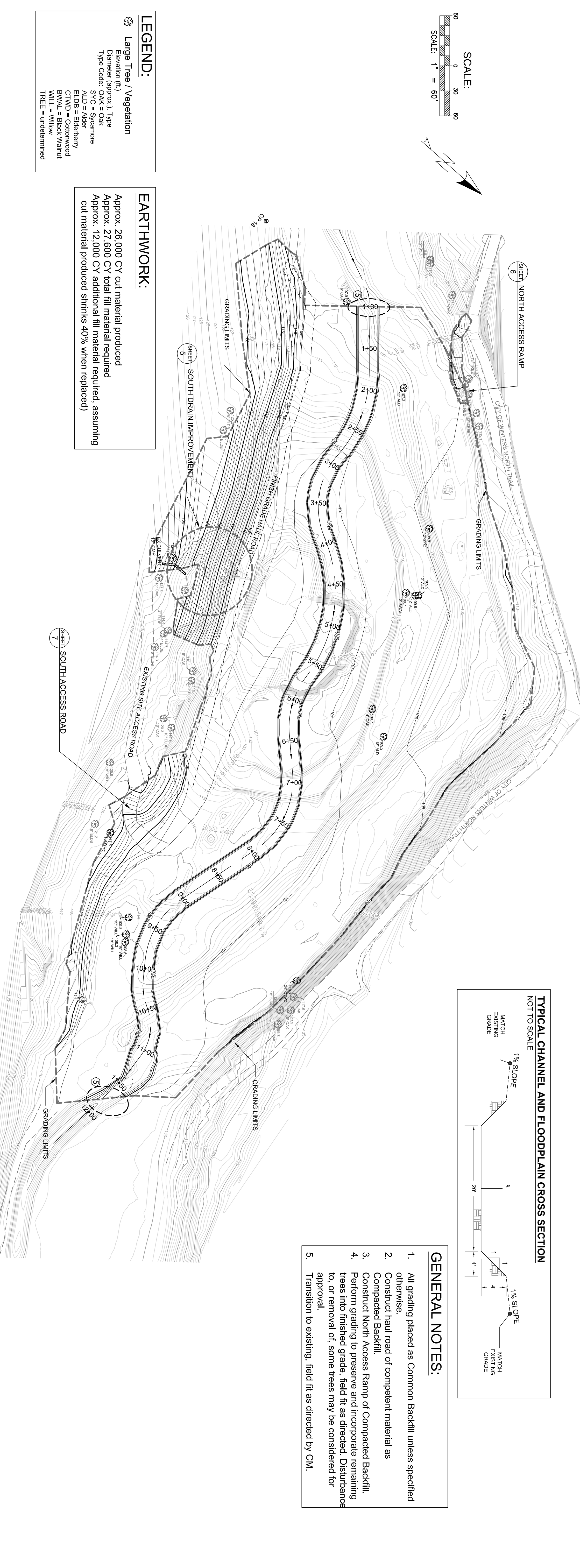
WINTERS PUTAH CREEK PARK - PHASE 3 - DESIGN CHANNEL & FLOODPLAIN GRADING: PLAN & PROFILE - PROFILE



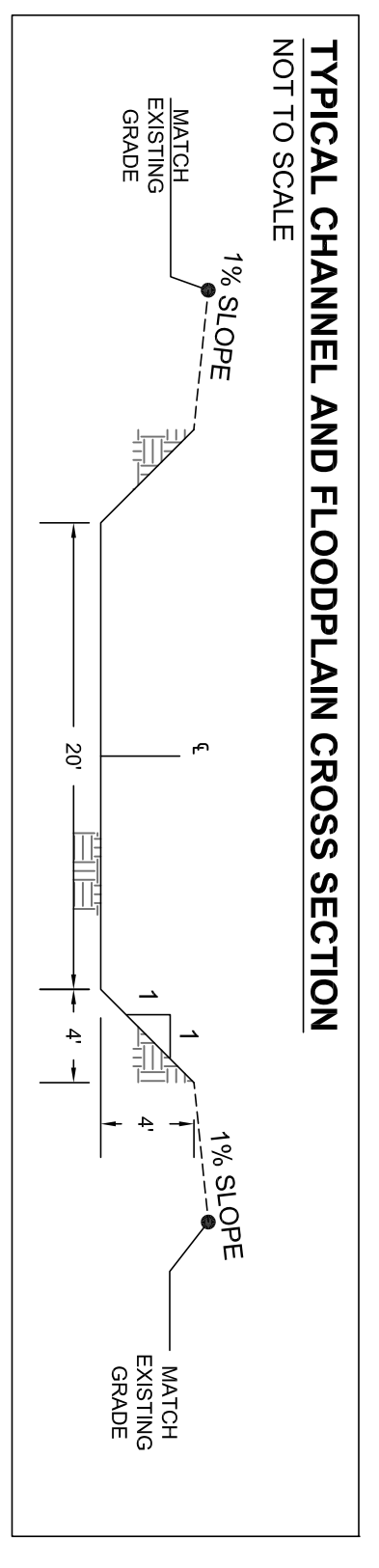
HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 10'

- NOTES:**
1. Design channel surface.
 2. Existing surface.
 - Earthwork cut.
 - Earthwork fill.

WINTERS PUTAH CREEK PARK - PHASE 3 - DESIGN CHANNEL & FLOODPLAIN GRADING: PLAN & PROFILE - PLAN



SCALE: 1" = 60'



- GENERAL NOTES:**
1. All grading placed as Common Backfill unless specified otherwise.
 2. Construct haul road of competent material as Compacted Backfill.
 3. Construct North Access Ramp of Compacted Backfill.
 4. Perform grading to preserve and incorporate remaining trees into finished grade, field fit as directed. Disturbance to, or removal of, some trees may be considered for approval.
 5. Transition to existing, field fit as directed by CM.

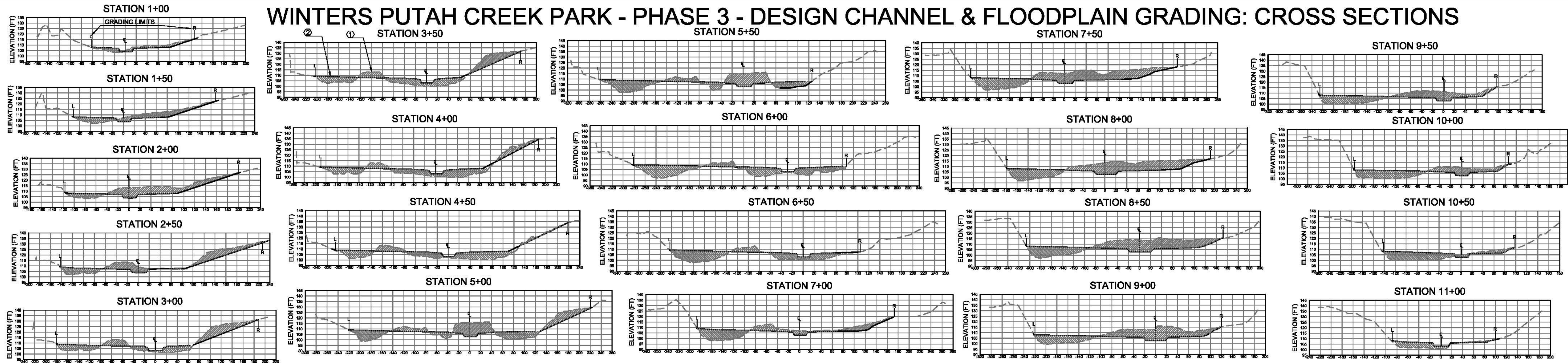
- LEGEND:**
- Large Tree / Vegetation
 - Elevation (ft)
 - Diameter (approx.) Type
 - Type Code: OAK = Oak
 - SLD = Sycamore
 - ALD = Alder
 - ELDB = Elderberry
 - CTWD = Cottonwood
 - BWAL = Black Walnut
 - WILL = Willow
 - TREE = undetermined

EARTHWORK:

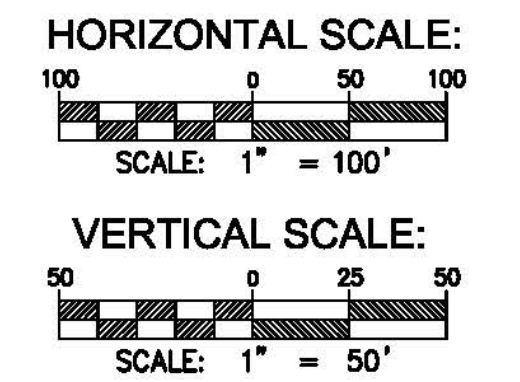
Approx. 26,000 CY cut material produced
 Approx. 27,600 CY total fill material required
 Approx. 12,000 CY additional fill material required, assuming cut material produced shrinks 40% when replaced)

DESIGNED BY	JB	COMMENTS:	
DRAWN BY	JB		
CHECKED BY	TP		
REV.	DATE	BY	APP'D
		SOLANO COUNTY WATER AGENCY 810 VACA VALLEY PARKWAY, SUITE 203, VACAVILLE, CA 95688 PHONE (707) 451-6090, FAX (707) 451-6099	
		DESIGN CHANNEL & FLOODPLAIN GRADING: PLAN & PROFILE WINTERS PUTAH CREEK PARK DESIGN CONDITION: PHASE 3 CALIFORNIA	
SCALE VARIES		SHEET 3 OF 8	
DATE: 02-17-2015 FILE NO.: L-119			

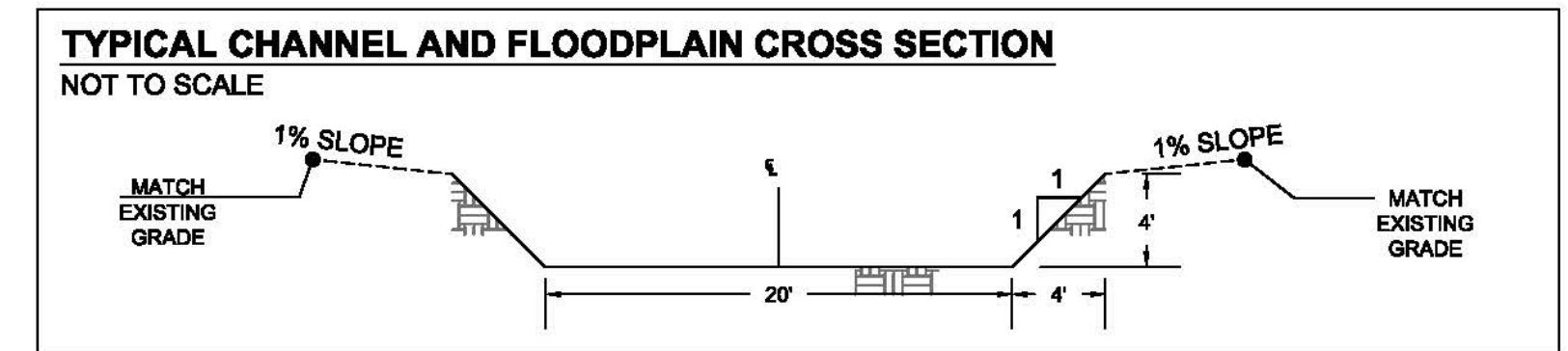
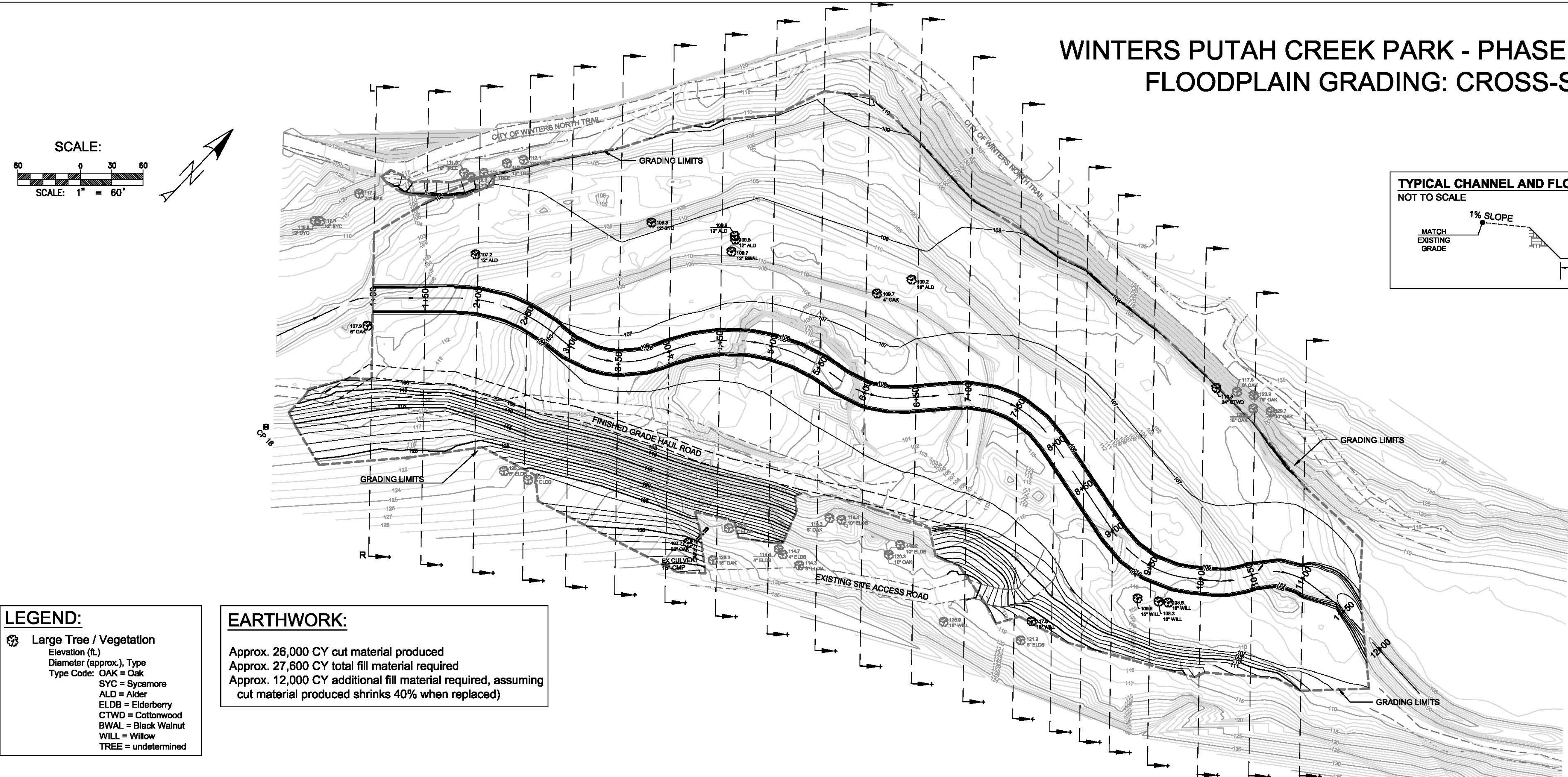
WINTERS PUTAH CREEK PARK - PHASE 3 - DESIGN CHANNEL & FLOODPLAIN GRADING: CROSS SECTIONS



- NOTES:**
- Existing surface. (TYP.)
 - Design surface. (TYP.)
 - Earthwork cut
 - Earthwork fill



WINTERS PUTAH CREEK PARK - PHASE 3 - DESIGN CHANNEL & FLOODPLAIN GRADING: CROSS-SECTIONS - PLAN



- GENERAL NOTES:**
- All grading placed as Common Backfill unless specified otherwise.
 - Construct haul road of competent material as Compacted Backfill.
 - Construct North Access Ramp of Compacted Backfill.
 - Downstream-facing sign convention.

- LEGEND:**
- Large Tree / Vegetation
 - Elevation (ft), Type
 - Diameter (approx.), Type
 - Type Code: OAK = Oak
 - SYC = Sycamore
 - ALD = Alder
 - ELDB = Elderberry
 - CTWD = Cottonwood
 - BWAL = Black Walnut
 - WILL = Willow
 - TREE = undetermined

EARTHWORK:

Approx. 26,000 CY cut material produced
 Approx. 27,600 CY total fill material required
 Approx. 12,000 CY additional fill material required, assuming cut material produced shrinks 40% when replaced)

COMMENTS:

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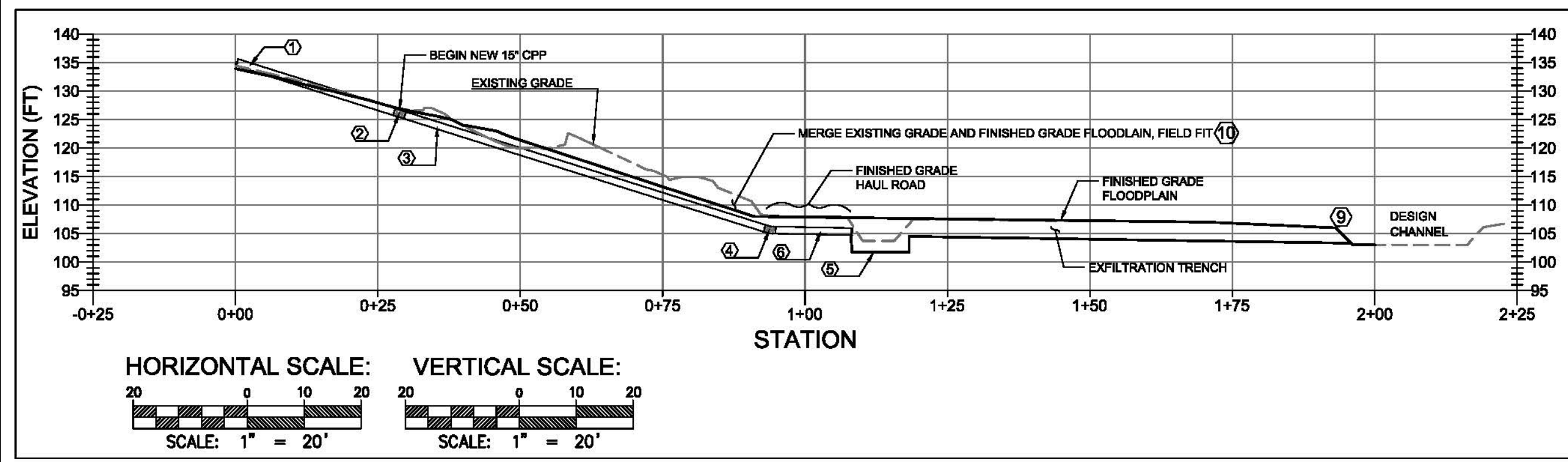
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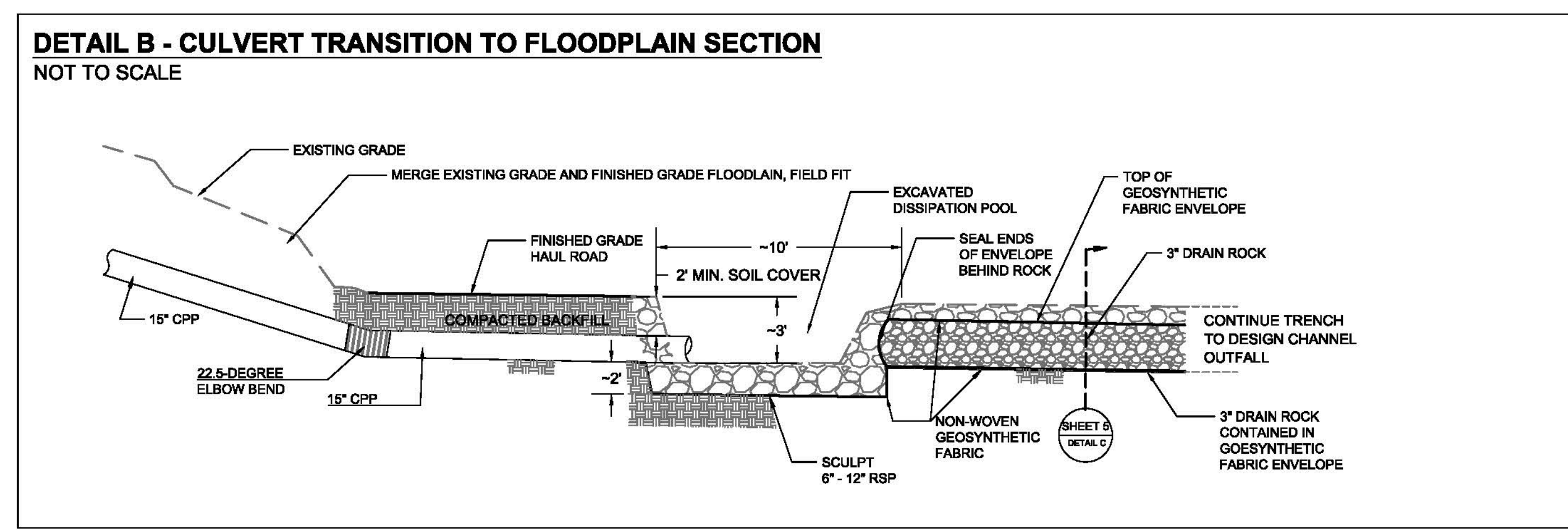
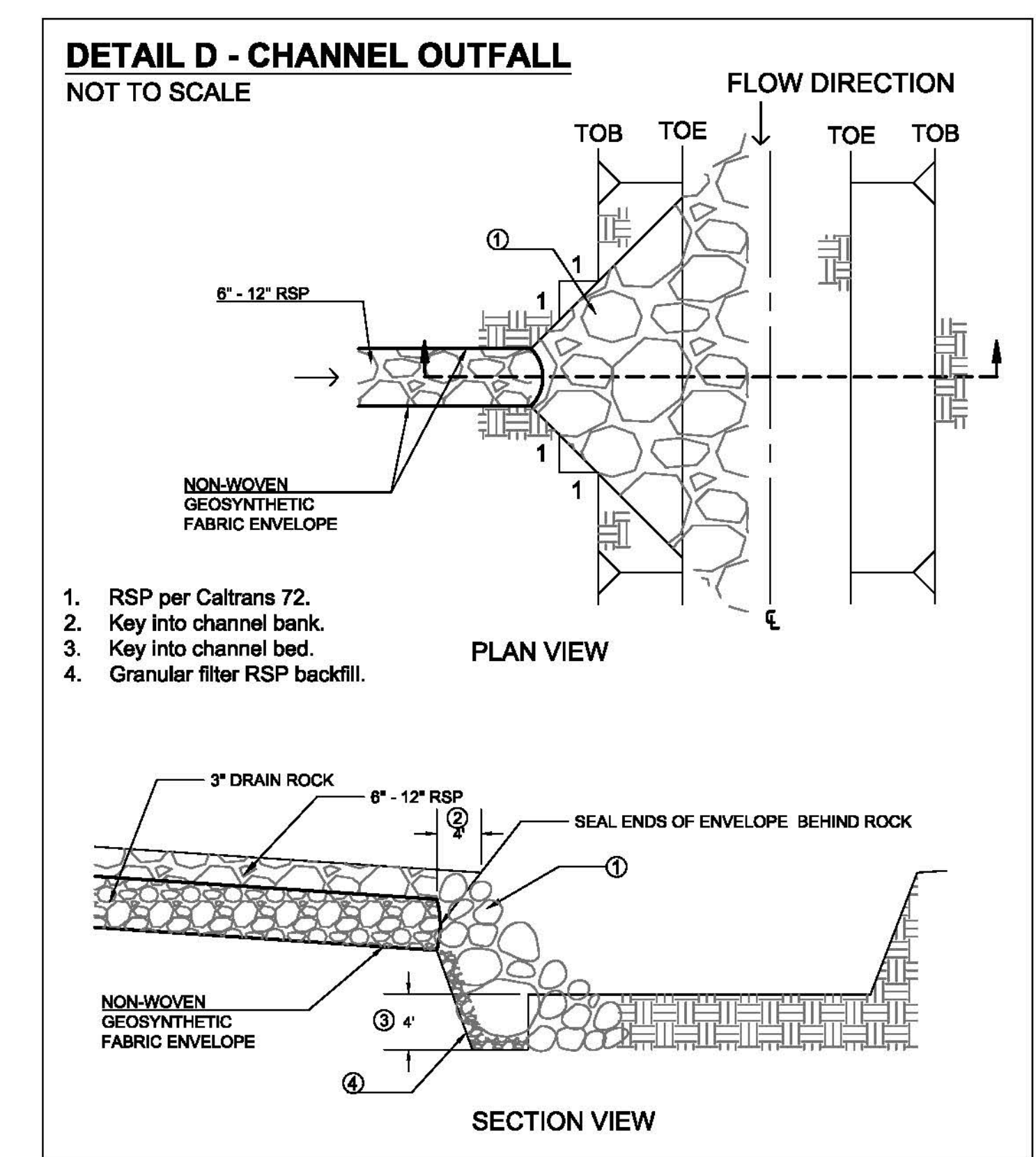
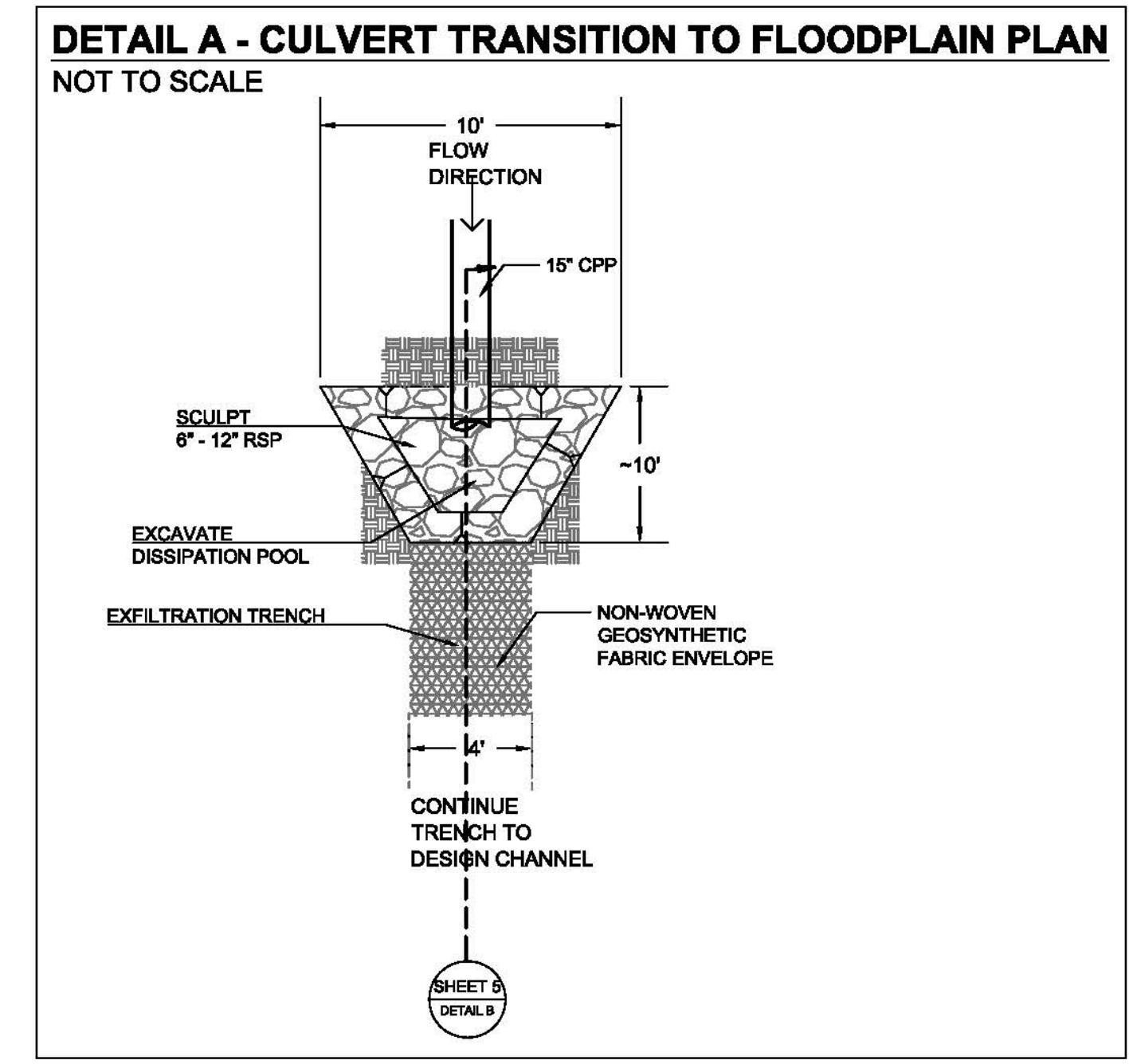
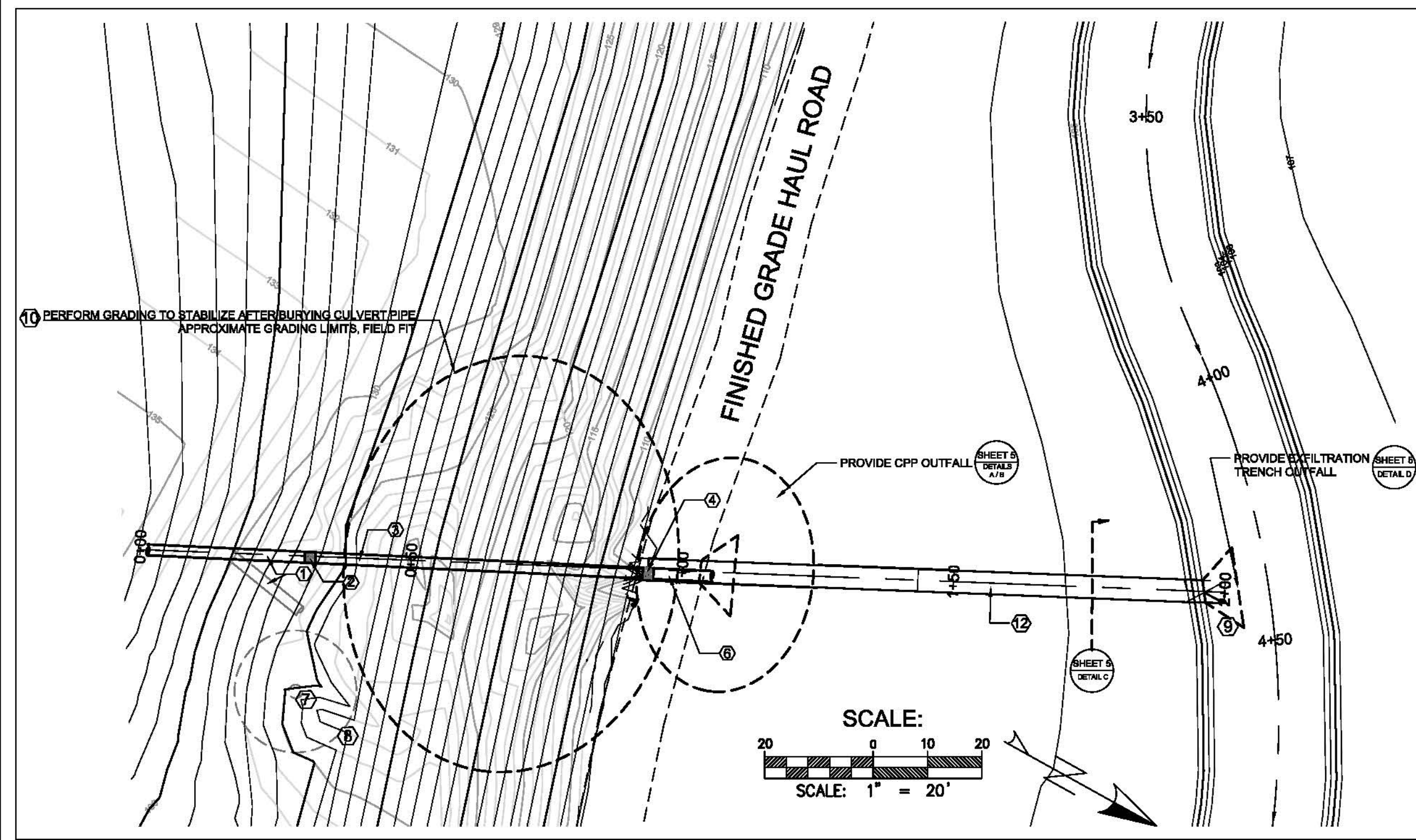
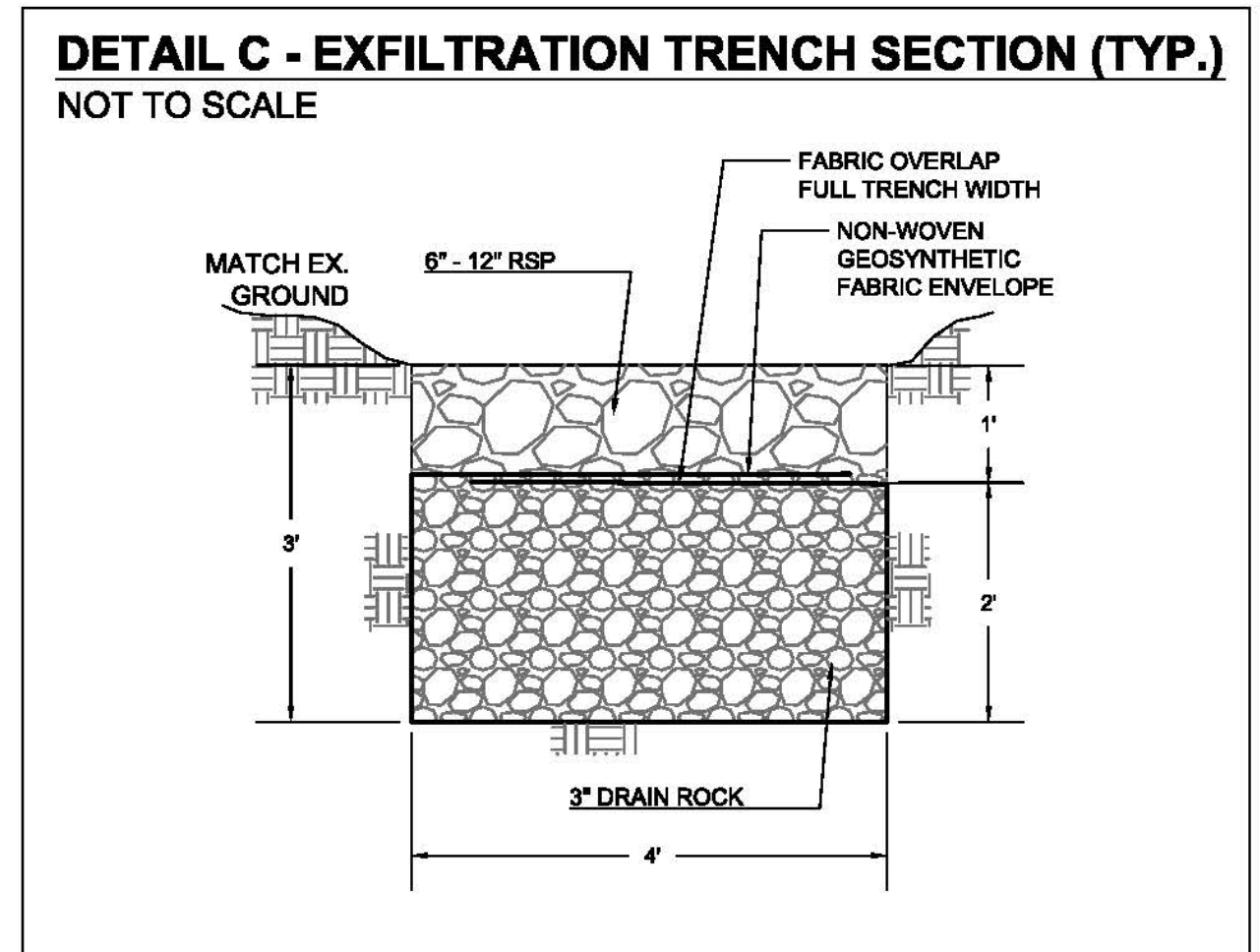
DESIGN CHANNEL & FLOODPLAIN GRADING:
CROSS-SECTIONS
 WINTERS PUTAH CREEK PARK
 DESIGN CONDITION: PHASE 3
 SOLANO COUNTY CALIFORNIA

SCALE	VARIABLES	SHEET
DATE: 02-17-2015		4
FILE NO. L-119		OF 8

WINTERS PUTAH CREEK PARK - PHASE 3 - SOUTH DRAIN IMPROVEMENT



- NOTES:**
1. Straighten existing 15" CMP.
 2. Provide new 15" CPP and connect to existing 15" CPP per manufacturer's recommendation.
 3. Install new 15" CPP according to alignment as shown.
 4. Provide 22.5-degree elbow bend connecting new 15" CPPs per manufacturer's recommendation.
 5. Provide energy dissipation pool, see Sheet 5, Details A and B.
 6. Install new 15" CPP under finished grade haul road terminating in energy dissipation pool, see Sheet 5, Details A and B.
 7. Elderberry tree to be avoided during construction.
 8. 10 foot radius around elderberry tree, to remain undisturbed.
 9. Provide outfall to design channel at end of infiltration trench at approximately Station 4+50, see Sheet 5, Detail D.
 10. Fill existing gully with soil to finish grade to blend with existing bank, field fit. See Section 2.7(k).
 11. All materials for South Drain Improvement provided by contractor. All connections per manufacturer's recommendation.
 12. Provide infiltration trench, align as shown from culvert outlet to channel outfall.
 13. All work in accordance with CASQA EC-11, 12; Caltrans 61, 62, 64, 66, 68-70.



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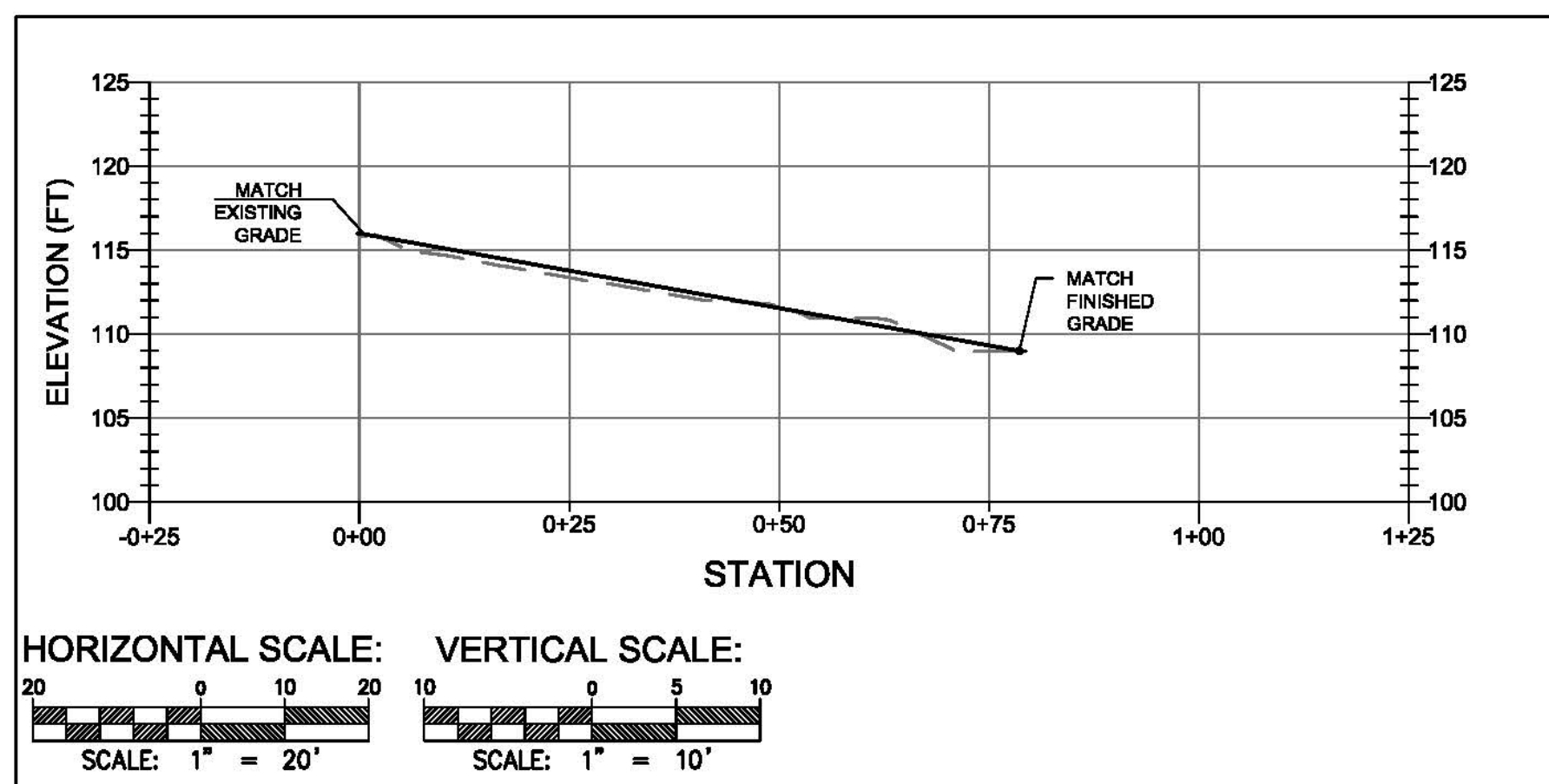
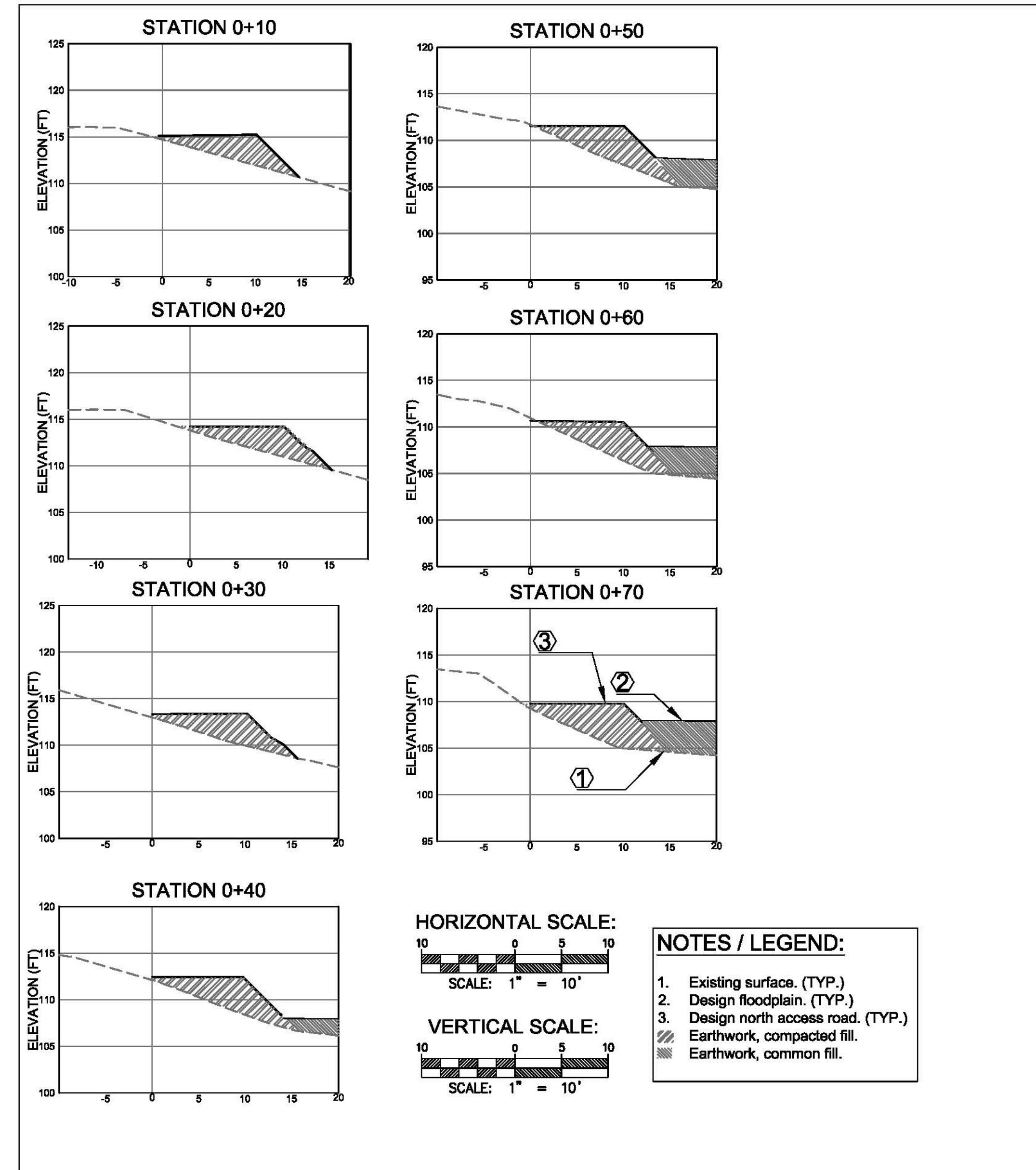
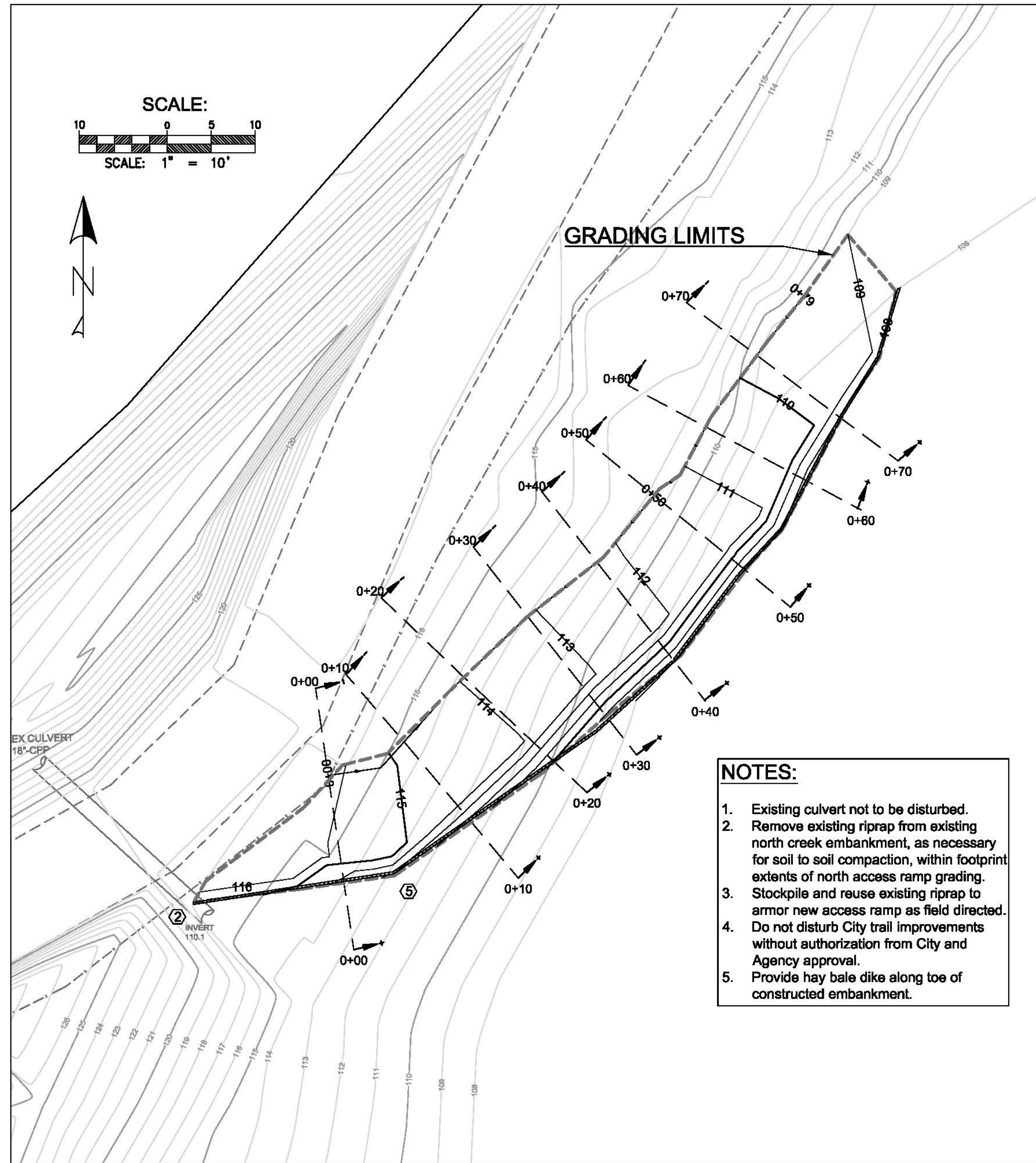
COMMENTS:

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SOUTH DRAIN IMPROVEMENT
 WINTERS PUTAH CREEK PARK
 DESIGN CONDITION: PHASE 3
 SOLANO COUNTY CALIFORNIA

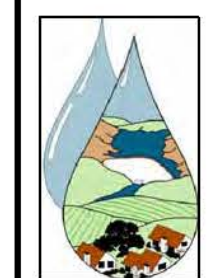
SCALE	VARIABLES	SHEET
DATE: 02-17-2015	FILE NO. L-119	5 OF 8

WINTERS PUTAH CREEK PARK - PHASE 3 - NORTH ACCESS RAMP



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COMMENTS:



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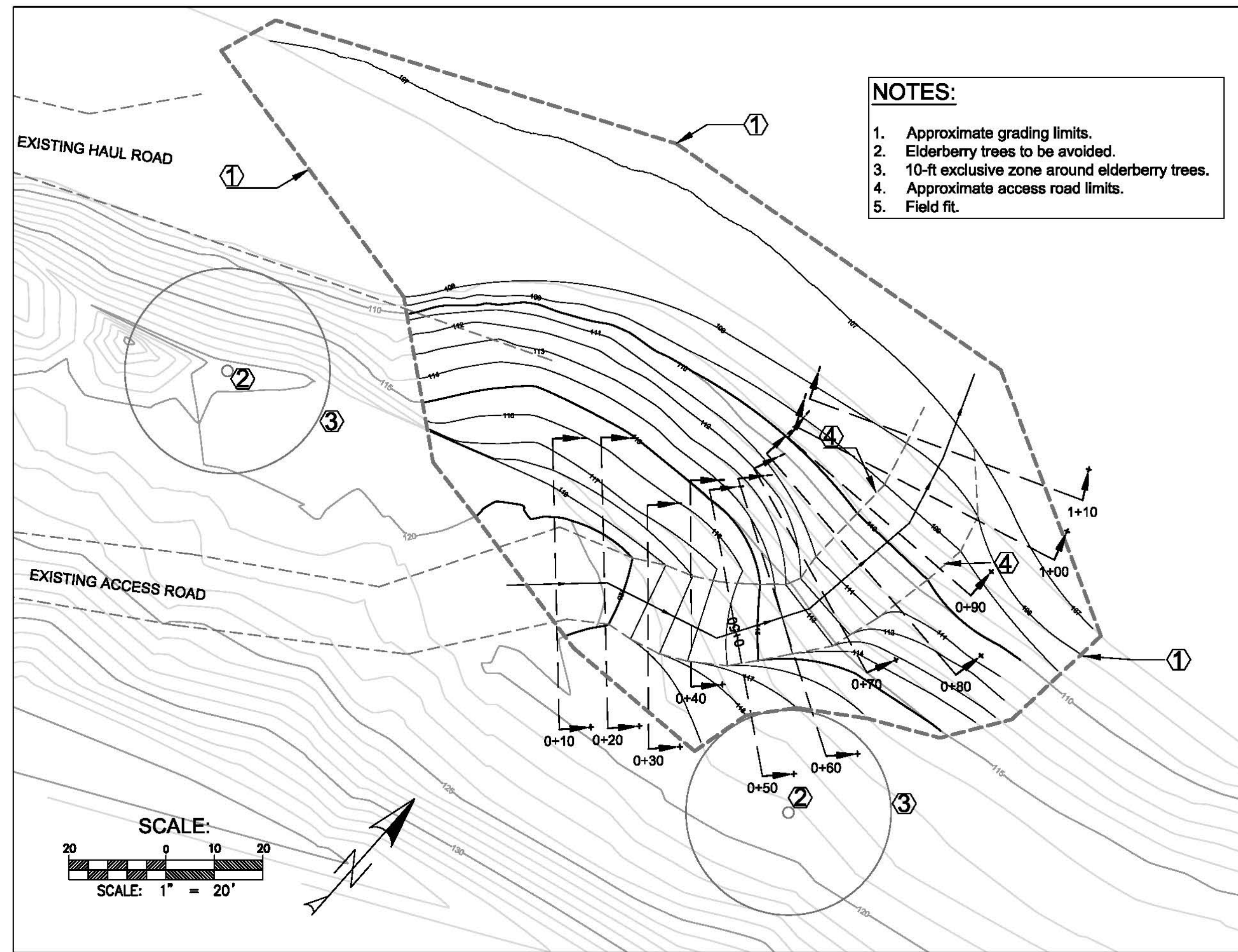


SOLANO COUNTY CALIFORNIA

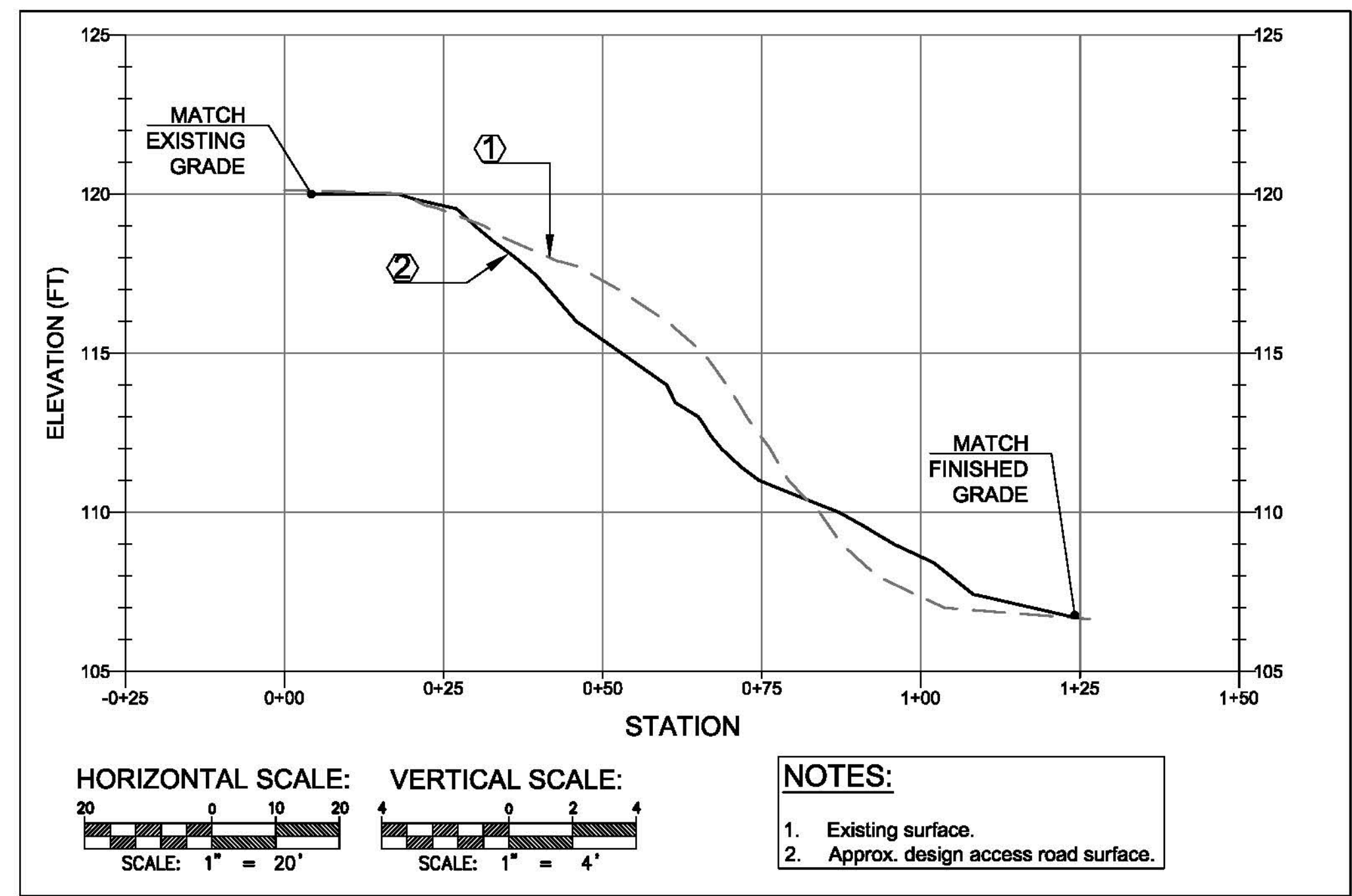
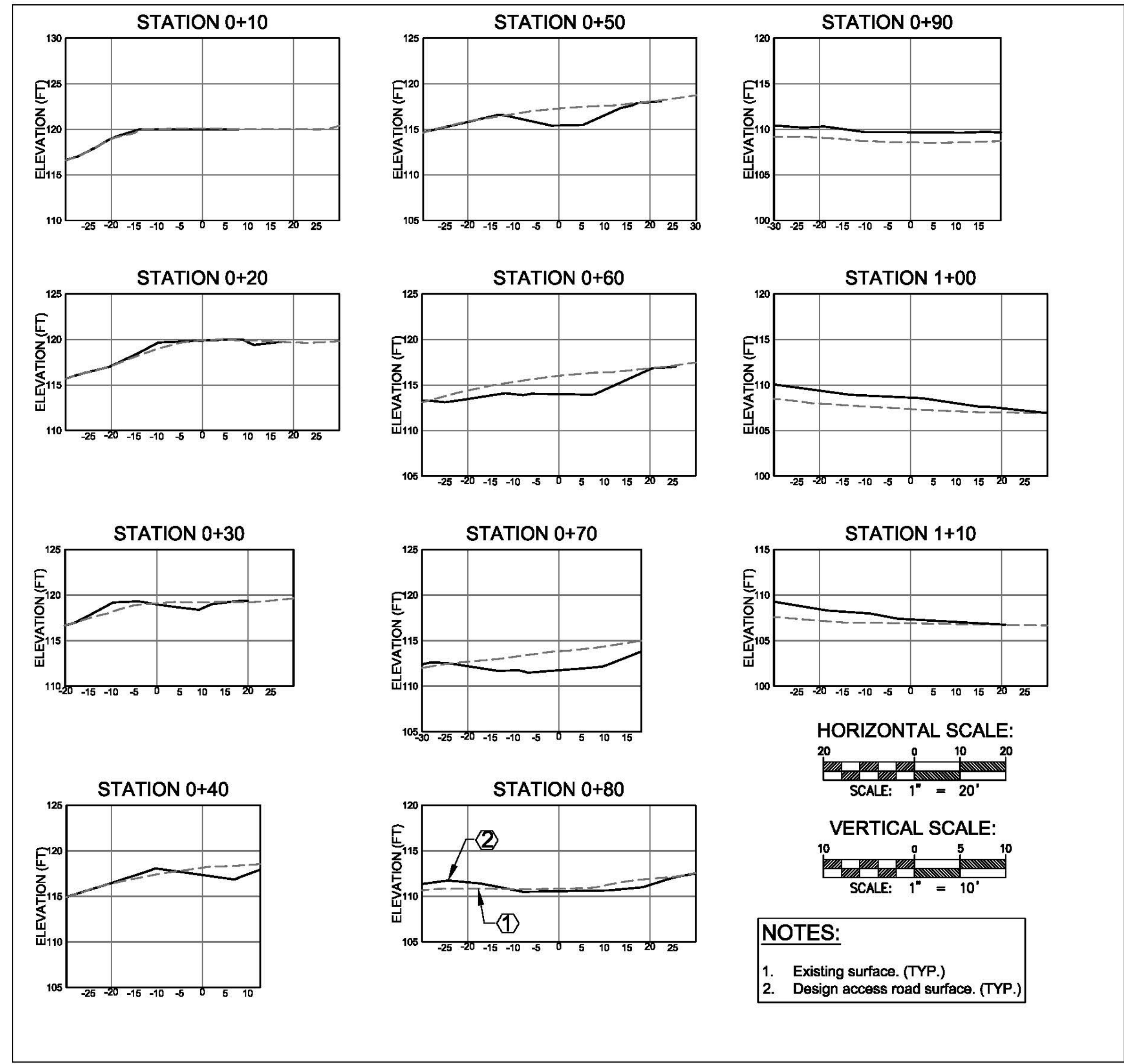
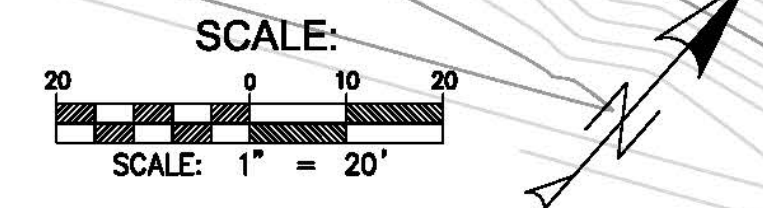
NORTH ACCESS RAMP
WINTERS PUTAH CREEK PARK
DESIGN CONDITION: PHASE 3

SCALE	VARIES	SHEET	6
DATE:	02-17-2015	OF	8
FILE NO.	L-119		

WINTERS PUTAH CREEK PARK - PHASE 3 - SOUTH ACCESS ROAD IMPROVEMENT



- NOTES:**
1. Approximate grading limits.
 2. Elderberry trees to be avoided.
 3. 10-ft exclusive zone around elderberry trees.
 4. Approximate access road limits.
 5. Field fit.



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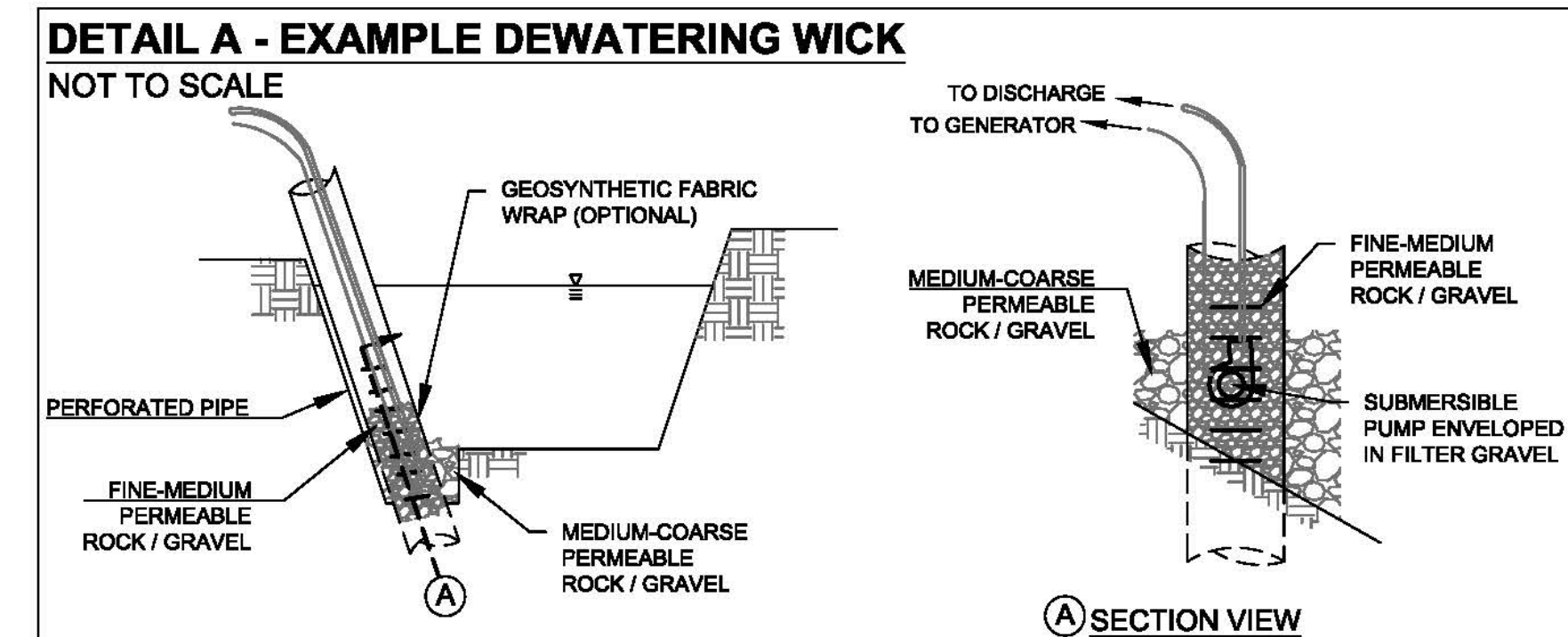
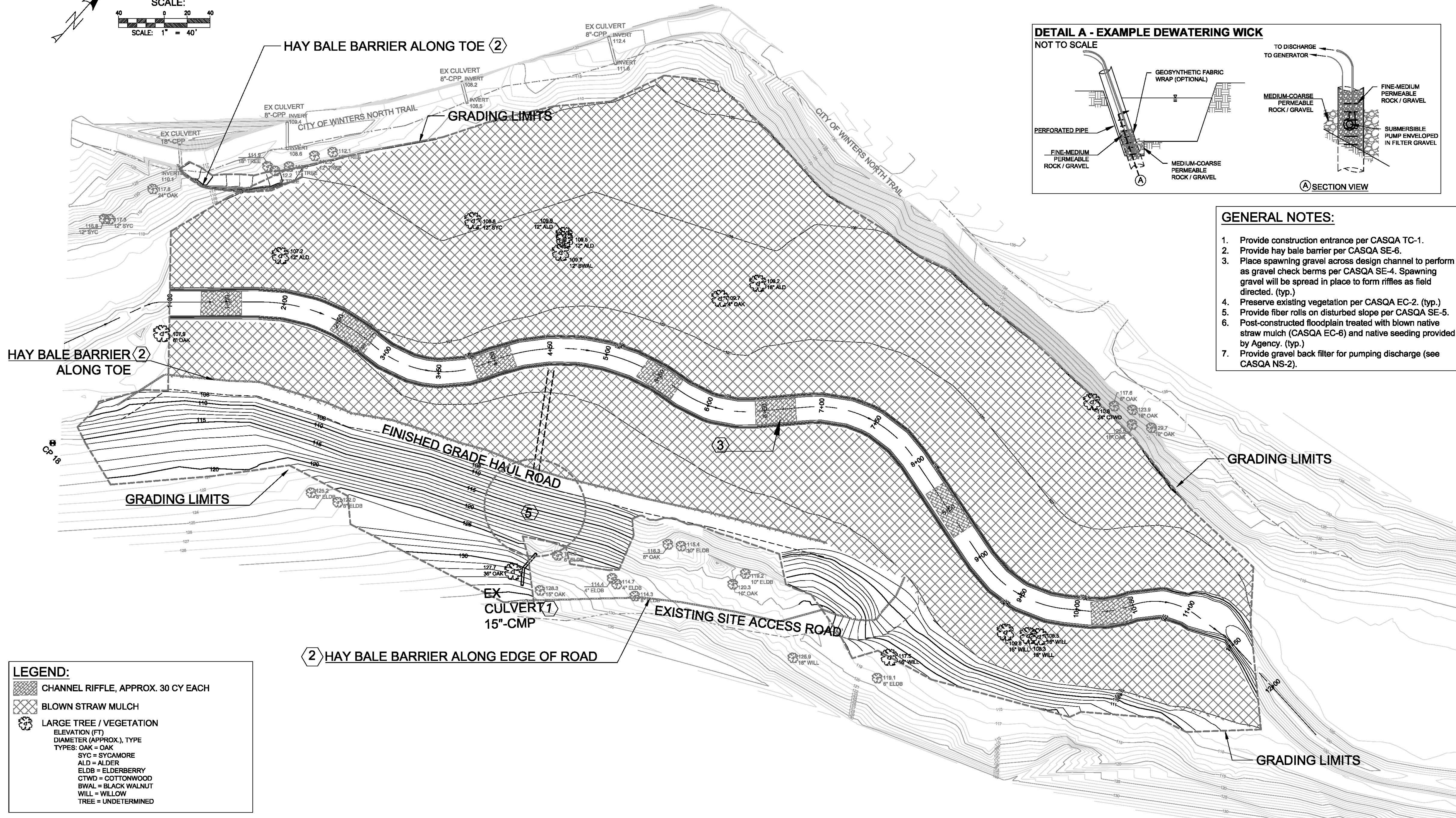
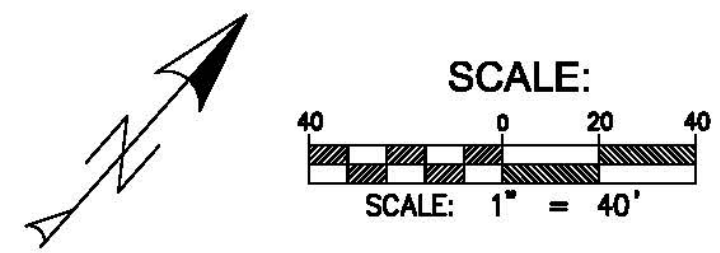
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SOUTH ACCESS ROAD IMPROVEMENT
WINTERS PUTAH CREEK PARK
DESIGN CONDITION: PHASE 3

SOLANO COUNTY CALIFORNIA

SCALE	VARIABLES	SHEET
DATE: 02-17-2015		7
FILE NO. L-119		8

WINTERS PUTAH CREEK PARK - PHASE 3 - EROSION CONTROL PLAN



- GENERAL NOTES:**
1. Provide construction entrance per CASQA TC-1.
 2. Provide hay bale barrier per CASQA SE-6.
 3. Place spawning gravel across design channel to perform as gravel check berms per CASQA SE-4. Spawning gravel will be spread in place to form riffles as field directed. (typ.)
 4. Preserve existing vegetation per CASQA EC-2. (typ.)
 5. Provide fiber rolls on disturbed slope per CASQA SE-5.
 6. Post-constructed floodplain treated with blown native straw mulch (CASQA EC-6) and native seeding provided by Agency. (typ.)
 7. Provide gravel back filter for pumping discharge (see CASQA NS-2).

LEGEND:

- CHANNEL RIFFLE, APPROX. 30 CY EACH
- BLOWN STRAW MULCH
- LARGE TREE / VEGETATION
ELEVATION (FT)
DIAMETER (APPROX.), TYPE
TYPES: OAK = OAK
SYC = SYCAMORE
ALD = ALDER
ELDB = ELDERBERRY
CTWD = COTTONWOOD
BWAL = BLACK WALNUT
WILL = WILLOW
TREE = UNDETERMINED

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COMMENTS:

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PHONE (707) 451-6090, FAX (707) 451-6099

EROSION CONTROL PLAN
WINTERS PUTAH CREEK PARK
DESIGN CONDITION: PHASE 3

SOLANO COUNTY CALIFORNIA

SCALE	1" = 40'	SHEET	8
DATE:	02-17-2015	OF	8
FILE NO.	L-119		