

RIPARIAN HABITAT DISTURBANCE CALCULATIONS

TOTAL XERORIPARIAN C HABITAT ON SITE: 538,825 SQ. FT. (12.37 AC.)

PHASE 1 XERORIPARIAN C HABITAT DISTURBANCE: 15,935 SQ. FT. (0.37 AC.)

FUTURE PHASE XERORIPARIAN C HABITAT DISTURBANCE*: 11,005 SQ. FT. (0.25 AC.)

TOTAL XERORIPARIAN C HABITAT DISTURBANCE: 26,940 SQ. FT. (0.62 AC.)
(5% OF TOTAL XERORIPARIAN C HABITAT ON SITE)

* NOTE: FINAL FUTURE PHASE DISTURBANCE FIGURE TO BE CALCULATED AT THE TIME OF FUTURE PHASE DEVELOPMENT PLAN SUBMITTAL.

PHASE 1 RIPARIAN HABITAT MITIGATION CALCULATIONS

CALCULATIONS AREA BASED ON ZONING CODE ADDENDUM I.II TABLE 24-7.

PHASE 1 XERORIPARIAN C HABITAT DISTURBANCE: 0.37 AC.

MITIGATION TREES REQ'D.: 45 TREES/AC.
45 x 0.37 = 17 TREES [(4) 24" BOX, (13) 15 GAL.]

MITIGATION SHRUBS REQ'D.: 100 SHRUBS/AC.
100 x 0.37 = 37 SHRUBS [(9) 5 GAL., (28) 1 GAL.]

HYDROSEED REQ'D.: AREA EQUAL TO DISTURBED AREA,
(ORO VALLEY SEED MIX B) 15,935 SQ. FT. (0.37 AC.)

MITIGATION TREES PROVIDED**: 32

MITIGATION SHRUBS PROVIDED**: 70

HYDROSEED PROVIDED**: 51,263 SQ. FT. (1.2 AC.)
(SEE SHEET RM04 FOR MIX)

** INCLUDES ADDITIONAL PLANT MATERIAL AND HYDROSEED AREA FOR RESTORATION/MITIGATION OF DISTURBED RIPARIAN APRON AREAS

FUTURE PHASE RIPARIAN HABITAT MITIG. CALCULATIONS

CALCULATIONS AREA BASED ON ZONING CODE ADDENDUM I.II TABLE 24-7.

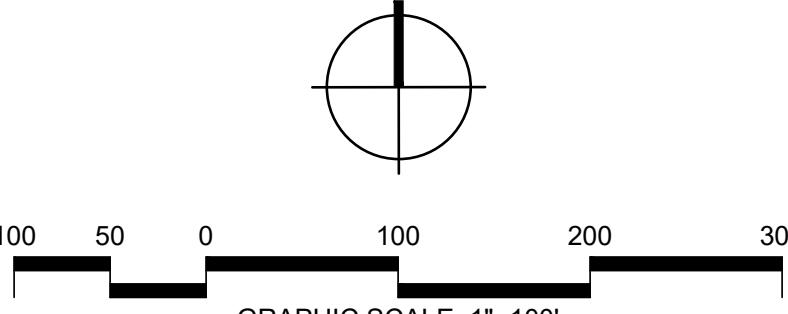
FUTURE PHASE XERORIPARIAN C HABITAT DISTURBANCE: 0.25 AC.

MITIGATION TREES REQ'D.: 45 TREES/AC.
45 x 0.25 = 11 TREES [(3) 24" BOX, (8) 15 GAL.]

MITIGATION SHRUBS REQ'D.: 100 SHRUBS/AC.
100 x 0.25 = 25 SHRUBS [(6) 5 GAL., (19) 1 GAL.]

HYDROSEED REQ'D.: AREA EQUAL TO DISTURBED AREA,
11,005 SQ. FT. (0.25 AC.)

NOTE: FINAL FUTURE PHASE MITIGATION CALCULATIONS TO BE DETERMINED AT THE TIME OF FUTURE PHASE DEVELOPMENT PLAN SUBMITTAL.



RIPARIAN MITIGATION PLAN FOR:
HALLAMARK
LOTS 1-59 AND COMMON AREA "A" PRIVATE STREETS & PUBLIC UTILITIES COMMON AREA "B" 1' & 18' OPEN SPACE, DRAINAGE UTILITIES, LANDSCAPE, COMMON AREA "C" & "C-1" NATURAL OPEN SPACE, SPAC & DRAINED AND COMMON AREA D-1 THRU 13 PORTION OF THE S 1/2 OF THE SW 1/4 OF SECTION 10, TOWNSHIP 12 SOUTH, RANGE 13 EAST GILA & SALT RIVER MERIDIAN, TOWN OF ORO VALLEY, PIMA COUNTY, ARIZONA

2500963

RELATED CASES:
2500142
OV99951 [(O) 02-17]



DRAWING NO.

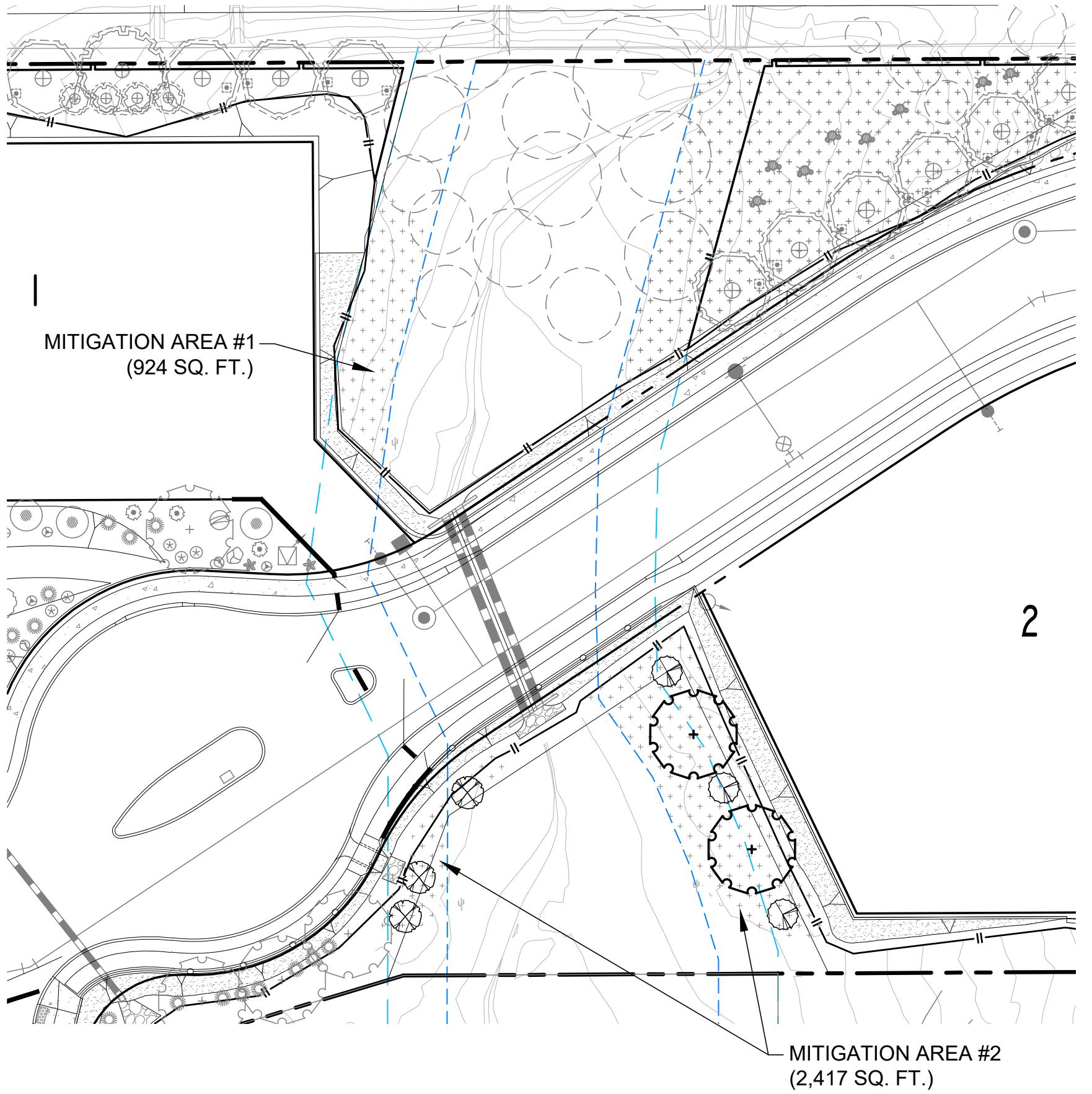
SHEET NO. 2 OF 5

REGISTERS PROFESSIONAL LANDSCAPE ARCHITECTS
36734
MARK E.
FELINGER
1/9/26
Signed
S. M. *[Signature]*
Seal

520-795-1000
richengineering.com
3945 E FORT LOWELL RD #111
TUCSON, AZ 85712
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

RICK
PROJECT NO: T5577
DRAWN/DESIGNED BY: MEF
CHECKED BY: *[Signature]*
DATE: 1/2026

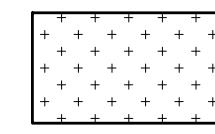
RM02



PLANT MATERIAL LEGEND

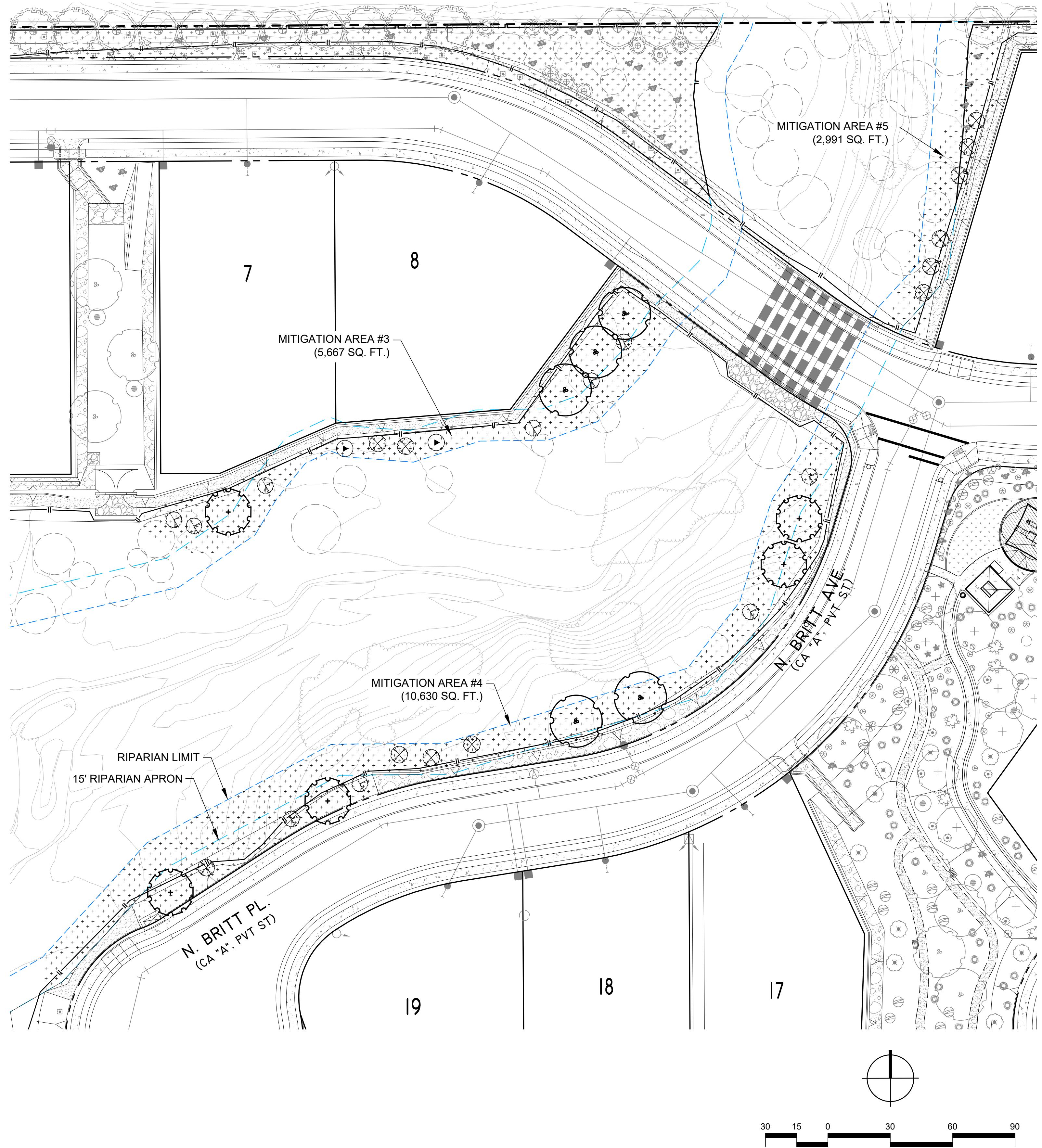
SYMBOL	BOTANICAL NAME COMMON NAME	QTY.	SIZE	H x W (CALIPER)	WATER USE TYPE	ADWR ANNUAL USE (GAL.)	ANNUAL USE (GAL.)	MONTHLY USE (GAL.)
TREES								
	PARKINSONIA FLORIDA BLUE PALO VERDE	10	24" BOX	5' x 3' (1")	2	5,702	57,020	4,752
	PARKINSONIA MICROPHYLLA FOOTHILLS PALO VERDE	10	15 GAL.	2' x 2' (.5")	1	1,754	17,540	1,462
	PROSOPIS VELUTINA VELVET MESQUITE	12	15 GAL.	4' x 2' (.5")	2	5,702	68,424	5,702
						TOTAL AT MATURITY (GAL.)	142,984	11,915
SHRUBS AND ACCENTS								
	ACACIA CONSTRICTA WHITETHORN ACACIA	30	5 GAL.		1	1,754	52,620	4,385
	ACACIA GREGGII CATCLAW ACACIA	30	5 GAL.		1	1,754	52,620	4,385
	CELTIS PALLIDA DESERT HACKBERRY	10	5 GAL.		2	634	6,340	528
						TOTAL AT MATURITY (GAL.)	111,580	9,298
TOTAL WATER USE AT MATURITY								
TREES								
142,984								
SHRUBS								
111,580								
TOTAL								
254,564								
ANNUAL USE (GAL.)								
11,915								
MONTHLY USE (GAL.)								
2,1213								

HYDROSEED



IN CONFORMANCE WITH ADDENDUM 'D' OF THE ORO VALLEY ZONING CODE, I.E. THE ORO VALLEY APPROVED
REVEGETATION SEED MIX. SEE SHEET RM04.

46,963 SQ. FT. (1.1 AC.)



RIPARIAN MITIGATION PLAN FOR:
HALLAMARK
LOTS 1-5B AND COMMON AREA A: PRIVATE STREETS & PUBLIC UTILITIES, COMMON AREA B: 1' x 1' & 1' x 2' OPEN SPACE, COMMON AREA C: LANDSCAPE, COMMON AREA D: 1' x 1' & 1' x 2' FUNCTIONAL OPEN SPACE & DRAINED AND COMMON AREA D-1 THRU D-11 NATURAL OPEN SPACE
PORTION OF THE S 1/2 OF THE SW 1/4 OF SECTION 10, TOWNSHIP 12 SOUTH, RANGE 13
EAST GILA & SALT RIVER MERRIDIAN, TOWN OF ORO VALLEY, PIMA COUNTY, ARIZONA

2500963

RELATED CASES:

2500142

OV99951 [(O) 02-17]



DRAWING NO.

RM03

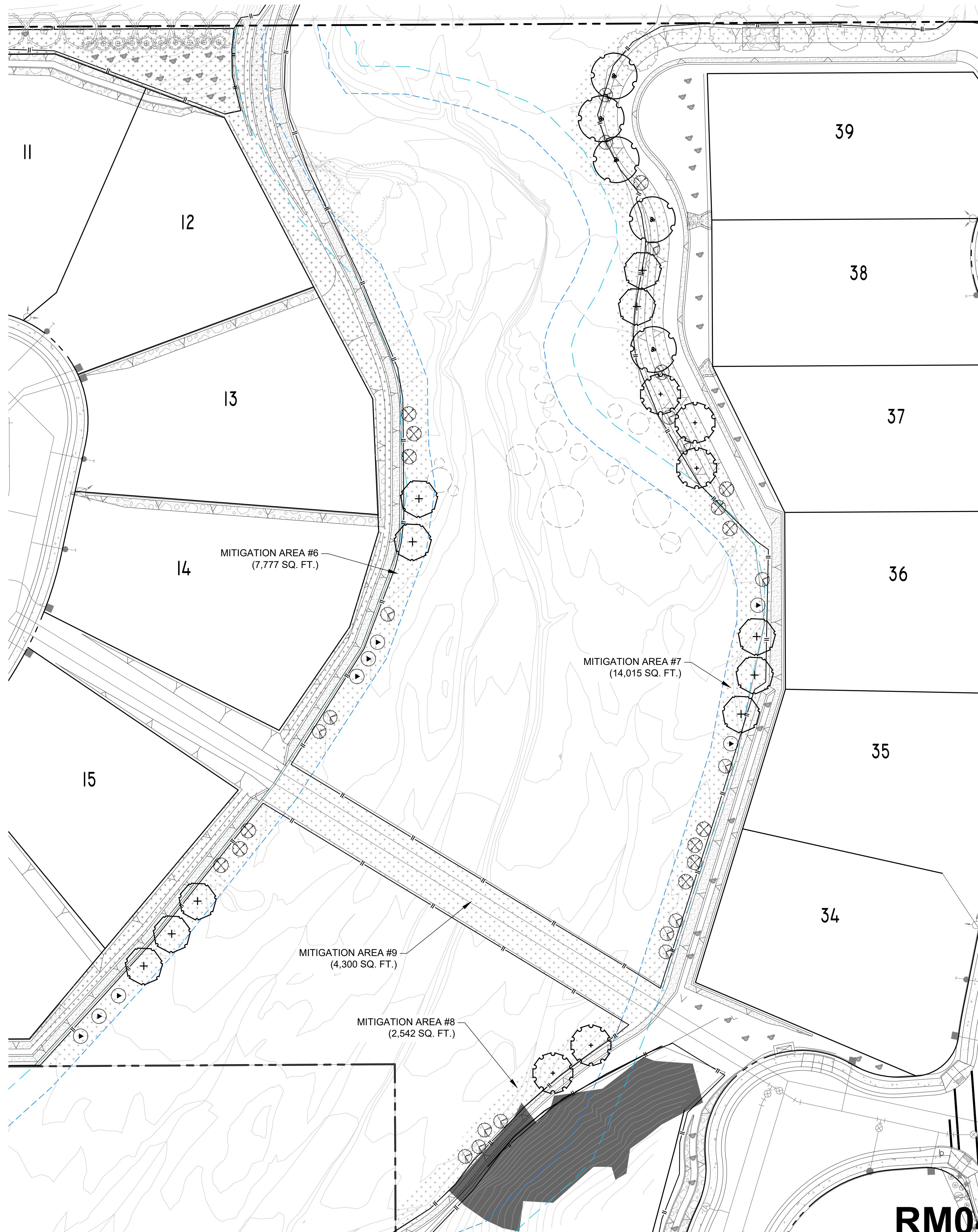
SHEET NO. 3 OF 5

NON-IRRIGATED HYDROSEED MIX	
	46,963 SQ. FT. (1.1 AC.)
SPECIES	PLS RATE LBS./ACRE
SHRUBS	
CALLIANDRA ERIOPHYLLA, FAIRY DUSTER	1.0
CELTIS PALLIDA, DESERT HACKBERRY	1.0
ENCELIA FARINOSA, BRITTLEBUSH	2.0
ERICAMERIA LARICIFOLIA, TURPENTINE BUSH	1.0
SMALL PERENNIALS	
BAILEYA MULTIRADIATA, DESERT MARIGOLD	1.5
CASSIA COVESII, DESERT SENNA	1.5
DATURA WRIGHTII, SACRED DATURA	0.5
SPAERALCEA AMBIGUA, DESERT GLOBE-MALLOW	1.5
PERENNIAL GRASSES	
ARISTIDA PURPUREA, PURPLE THREE-AWN	1.0
BOUTELOUA CURTIPENDULA, SIDEOTS GRAMA	1.5
ERIONEURON PULCHELLUM, FLUFFGRASS	1.5
SPOROBOLUS CRYPTANDRUS, SAND DROPSEED	1.0
ANNUAL HERBS AND GRASSES	
BOUTELOUA ARISTIDOIDES, NEEDLE GRAMA	1.5
BOUTELOUA BARBATA, SIX WEEKS GRAMA	1.5
PENSTEMON PARRYI, PARRY PENSTEMON	0.5
PLANTAGO INSULARIS, INDIAN WHEAT	1.5
20.0 TOTAL	

NOTES:
SLURRY MIX FOR NATIVE SEED APPLICATION SHALL
CONSIST OF THE FOLLOWING:

SEED =LBS/ACRE PER SEED MIX
WOOD FIBER MULCH =2000 LBS/ACRE
AMMONIUM PHOSPHATE FERTILIZER (16-20-0) =200 LBS/ACRE

SPECIES AND PLS RATE SUBSTITUTIONS IN CONFORMANCE WITH ADDENDUM 'D' OF THE
ORO VALLEY ZONING CODE, I.E. THE ORO VALLEY APPROVED REVEGETATION SEED MIX,
ARE ACCEPTABLE.



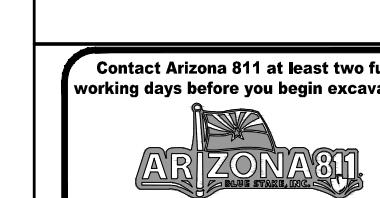
RIPARIAN MITIGATION PLAN FOR:
HALLMARK
LOTS 1-5B AND COMMON AREA "A", PRIVATE STREETS & PUBLIC UTILITIES, COMMON
AREAS "B", "C", & "D", OPEN SPACE, DRAINAGE UTILITIES, LANDSCAPE, COMMON AREA
"C-1 & "C-2" (FUNCTIONAL OPEN SPACE & DRAINED AND COMMON AREA D-1 THRU
D-11 NATURAL OPEN SPACE), PORTION OF THE S. 1/2 OF THE SW 1/4 OF SECTION 10, RANGE 13
EAST GILA & SALT RIVER MERIDIAN, TOWN OF ORO VALLEY, PIMA COUNTY, ARIZONA

2500963

RELATED CASES:

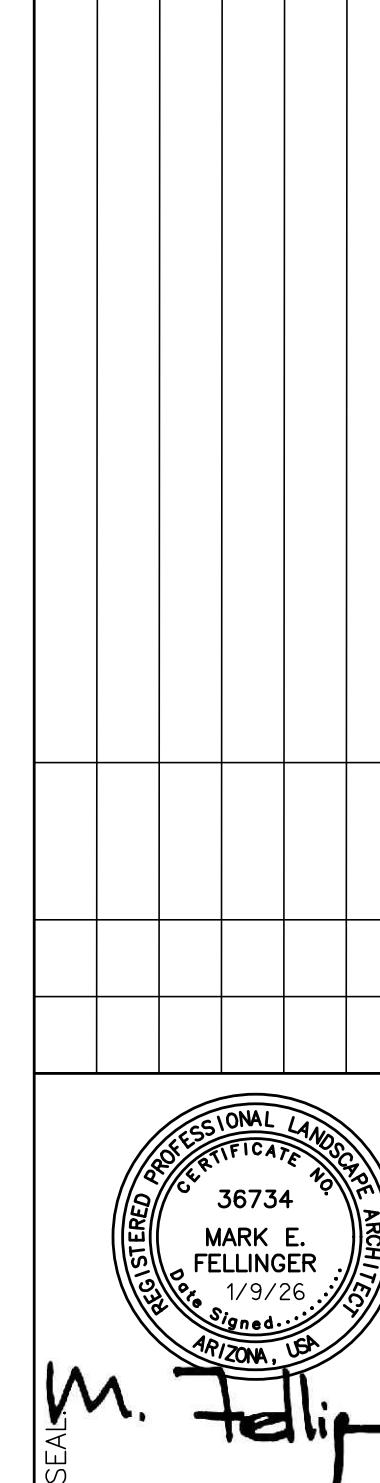
2500142

OV99951 [(O) 02-17]



DRAWING NO.

SHEET NO. 4 OF 5



36734
MARK E.
FELLINGER
1/9/26
Signed

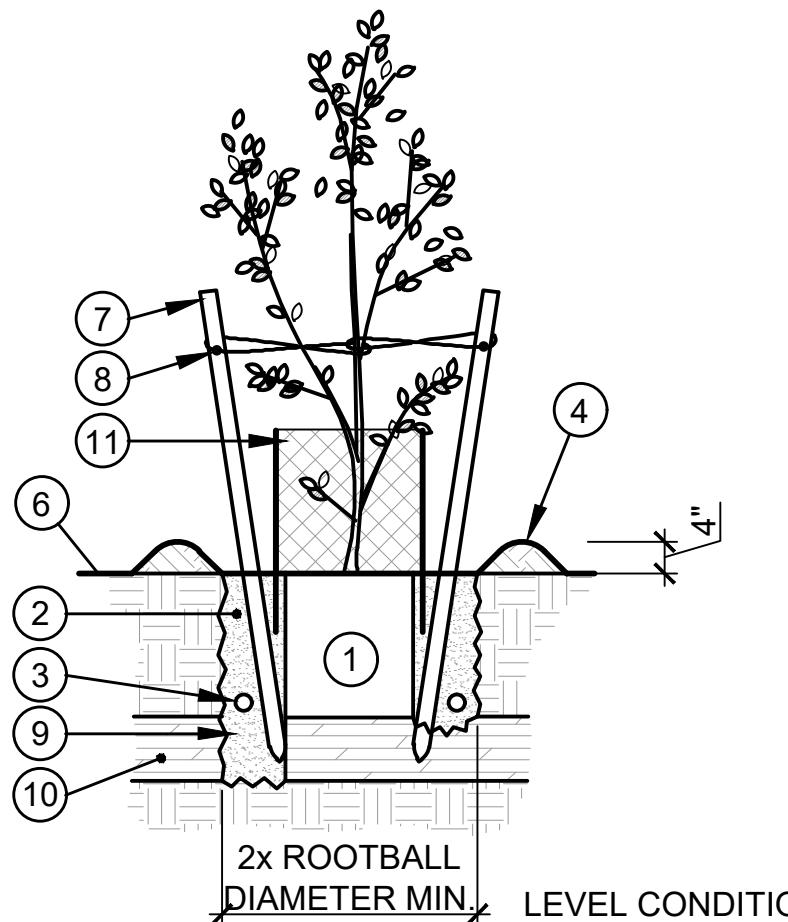
SEAL

M. *[Signature]* telip

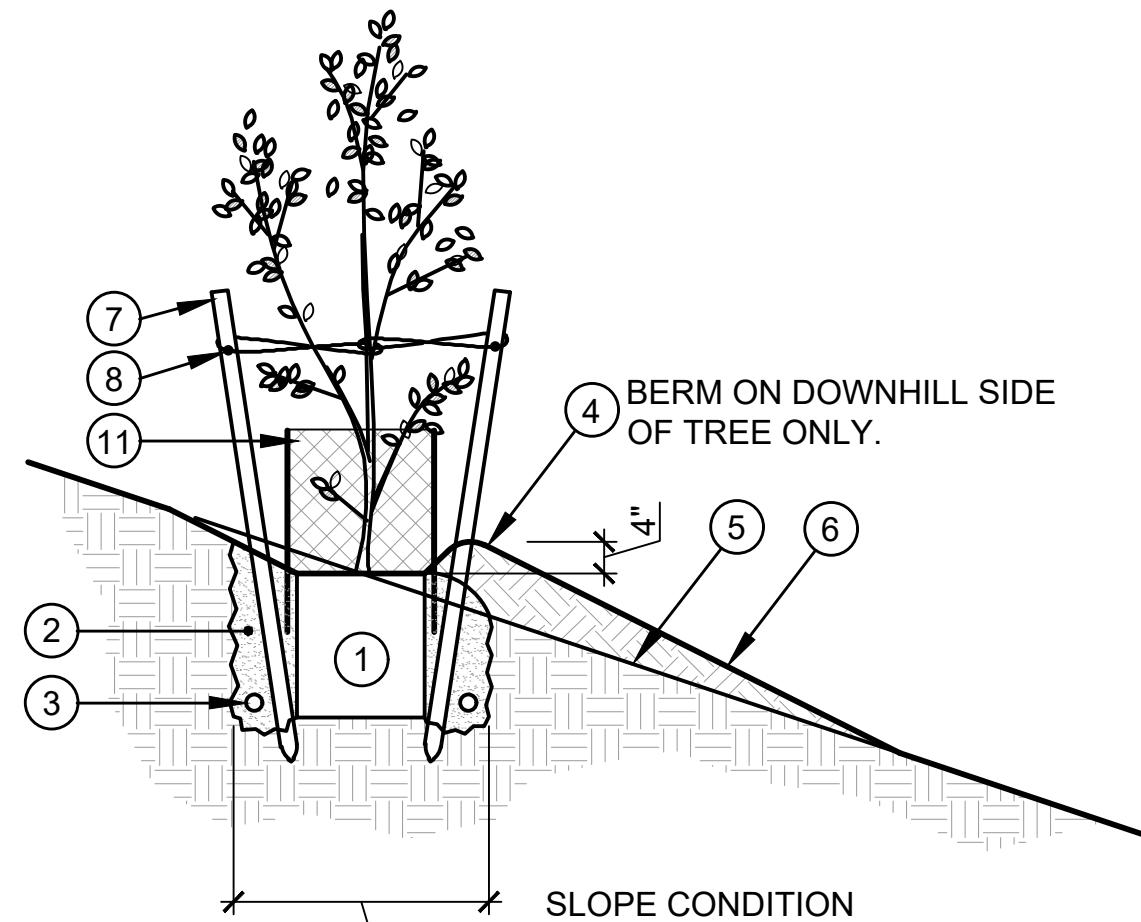
520-795-1000
rickengineering.com
RICK
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

PROJECT NO: T5577
DRAWN/DESIGNED BY: MEF
CHECKED BY: *[Signature]*

DATE: 1/2026



- 1) ROOTBALL. PLACE ON UNDISTURBED NATIVE SOIL AT BOTTOM OF PLANT PIT.
- 2) AMENDED BACKFILL MIX.
- 3) FERTILIZER TABLETS.
- 4) 4" HIGH EARTH BERM / MICROBASIN (NOT REQUIRED FOR LEVEL CONDITION IF TREE IS LOCATED IN A DEPRESSED WATER HARVESTING AREA; ALWAYS REQUIRED FOR SLOPE CONDITION.)
- 5) SLOPE GRADE PRIOR TO PLANTING.
- 6) FINISH GRADE.
- 7) (2) 2" DIA. LODGE POLE STAKES. PLACE OUTSIDE OF ROOTBALL.
- 8) BLACK PLASTIC CINCH-TIE WITH ONE TWIST NAILED TO STAKE, OR APPROVED EQUAL. (WIRE TIES WITH RUBBER HOSE IS NOT ACCEPTABLE).
- 9) DRILL 8" DIAMETER CHIMNEY DRAINAGE HOLE AT BOTTOM OF PLANT PIT IF HARDPAN OR CALICHE SOIL LAYER IS ENCOUNTERED.
- 10) HARDPAN OR CALICHE SOIL LAYER.
- 11) BROWSE CAGE. SEE NOTE 6.

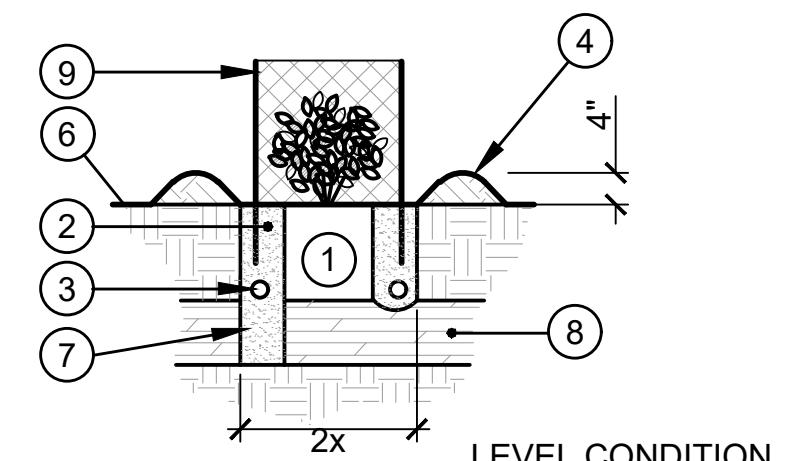


NOTES: 2x ROOT BALL
DIAMETER MIN.

1. TREE STAKES ARE NOT REQUIRED FOR 5 GAL. TREES.
 2. TREE STAKES MAY BE OMITTED IF TREE IS ABLE TO SUPPORT ITSELF UPRIGHT WITHOUT LEANING OR BENDING.
 3. WHEN STAKES ARE INSTALLED, TIES SHOULD BE PLACED AS LOW AS POSSIBLE WHILE STILL PROVIDING NECESSARY SUPPORT. CUT STAKE APPROX. 6" ABOVE TIE TO AVOID BRANCHES RUBBING ON STAKE.
 4. ALL NURSERY STAKES ARE TO BE REMOVED REGARDLESS OF PLANT SIZE.
 5. SCARIFY SIDES OF PLANT PIT TO ELIMINATE SMOOTH SHOVEL CUTS PRIOR TO PLACEMENT OF TREE IN PIT.
 6. CONTRACTOR SHALL INCLUDE BROWSE CAGES FOR ALL TREES AS AN ADDITIVE ALTERNATE IN THE BID. CONTRACTOR SHALL CLOSELY MONITOR TREES FOR WILDLIFE DAMAGE DURING THE MAINTENANCE PERIOD, AND SHALL IMMEDIATELY MAKE A RECOMMENDATION FOR A CORRECTIVE COURSE OF ACTION TO THE OWNER IF WILDLIFE DAMAGE OCCURS OR IS SUSPECTED. SUBMIT BROWSE CAGE SHOP DRAWING FOR APPROVAL PRIOR TO INSTALLATION.

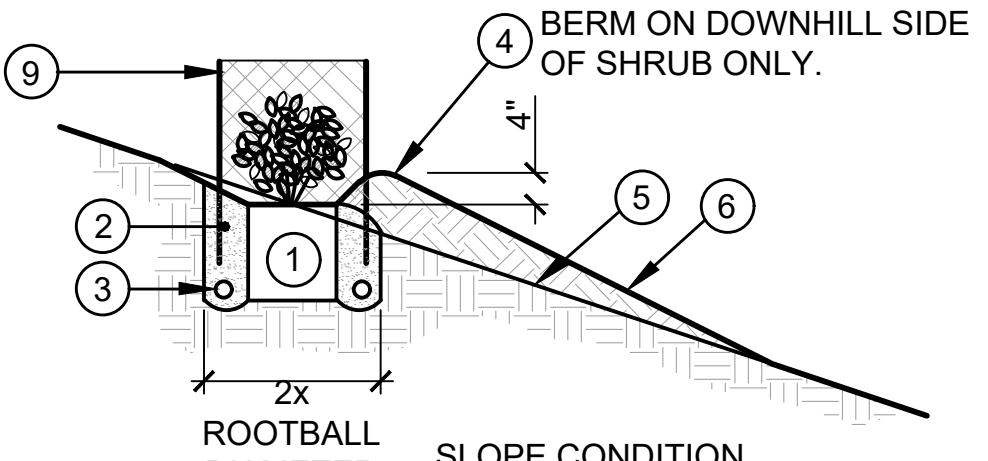
A TREE PLANTING

NOT TO SCALE



- 1) ROOTBALL. PLACE ON UNDISTURBED NATIVE SOIL AT BOTTOM OF PLANT PIT.
- 2) AMENDED BACKFILL MIX.
- 3) FERTILIZER TABLETS.
- 4) 4" HIGH EARTH BERM / MICROBASIN (NOT REQUIRED FOR LEVEL CONDITION IF TREE IS LOCATED IN A DEPRESSED WATER HARVESTING AREA; ALWAYS REQUIRED FOR SLOPE CONDITION.)

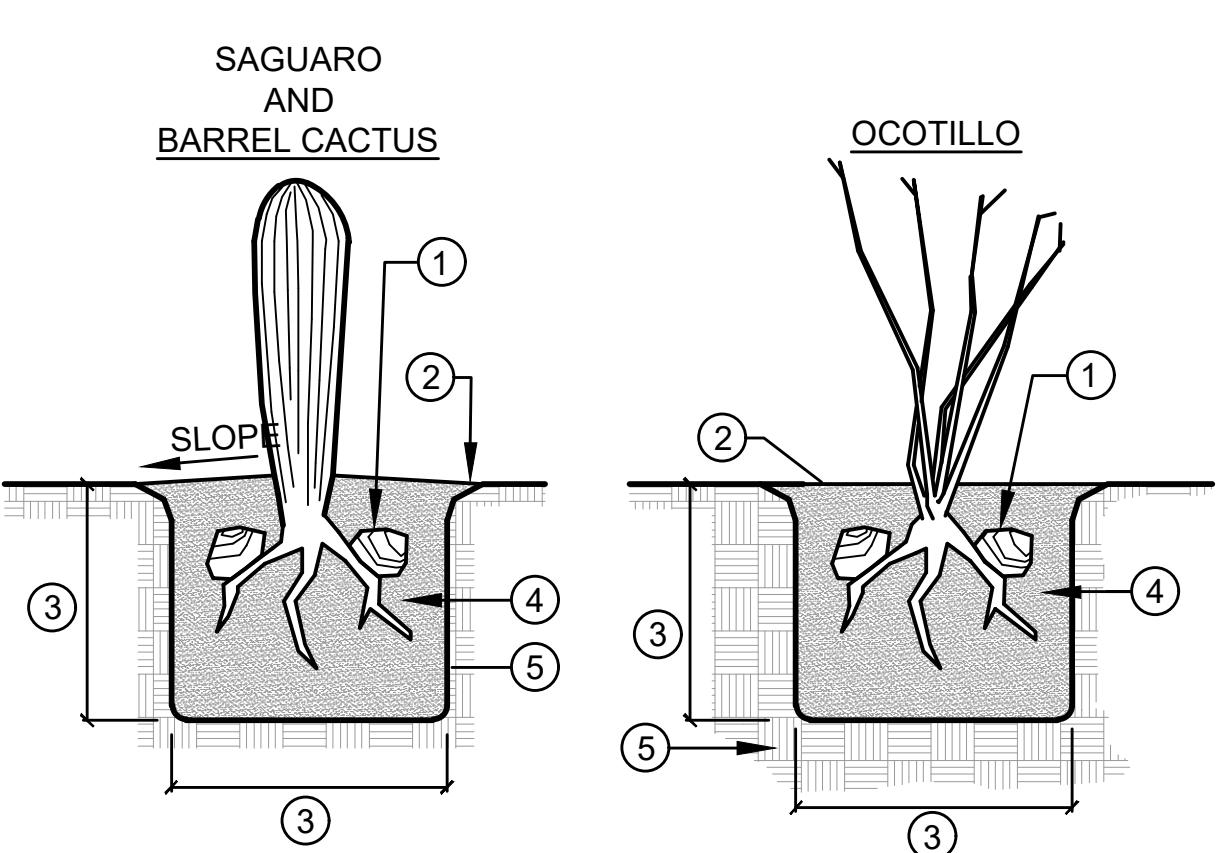
NOTE: CONTRACTOR SHALL INCLUDE BROWSE CAGES FOR ALL SHRUBS AS AN ADDITIVE ALTERNATE IN THE BID. CONTRACTOR SHALL CLOSELY MONITOR SHRUBS FOR WILDLIFE DAMAGE DURING THE MAINTENANCE PERIOD, AND SHALL IMMEDIATELY MAKE A RECOMMENDATION FOR A CORRECTIVE COURSE OF ACTION TO THE OWNER IF WILDLIFE DAMAGE OCCURS OR IS SUSPECTED. SUBMIT BROWSE CAGE SHOP DRAWING FOR APPROVAL PRIOR TO INSTALLATION.



- E 5) SLOPE GRADE PRIOR TO PLANTING.
- 6) FINISH GRADE.
- 7) DRILL CHIMNEY DRAINAGE HOLE AT BOTTOM OF PLANT PIT IF HARDPAN OR CALICHE SOIL LAYER IS ENCOUNTERED.
- 8) HARDPAN OR CALICHE SOIL LAYER.
- 9) BROWSE CAGE. SEE NOTE.

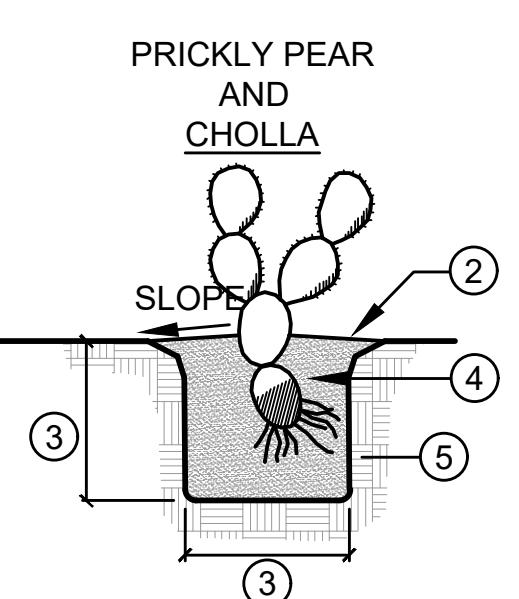
B SHRUB PLANTING

NOT TO SCALE



NOTES:

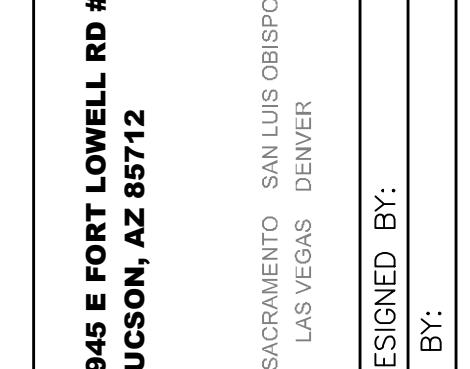
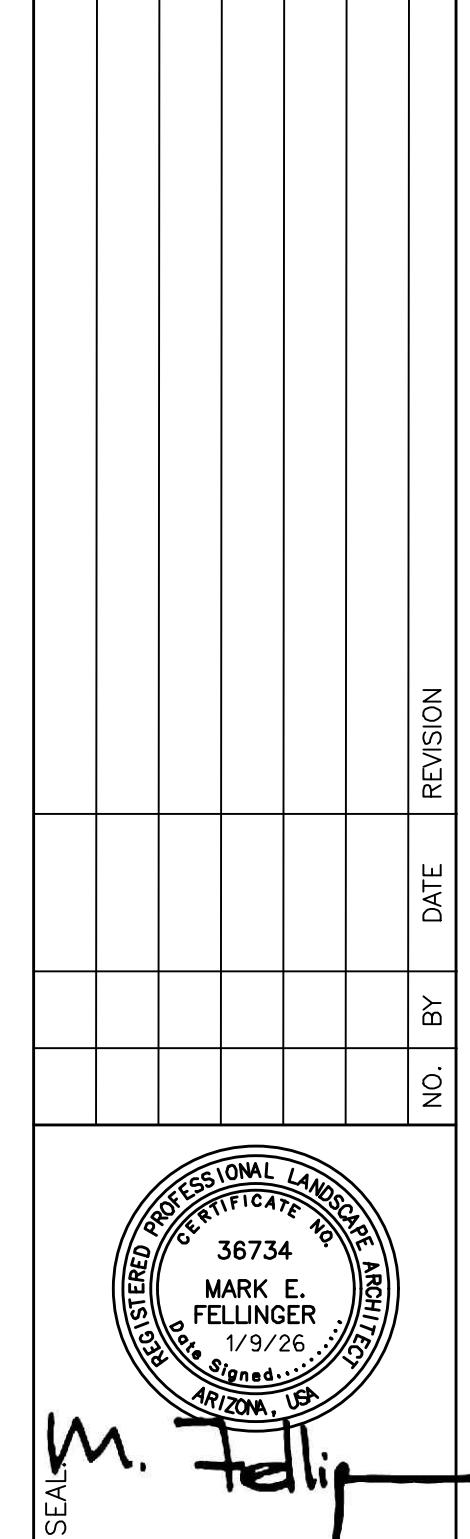
1. SET MAIN STEM OF CACTI PLUMB AS VIEWED FROM ALL SIDES.
2. DO NOT CREATE A BASIN AT BASE OF CACTUS. SLOPE BACKFILL AWAY FROM STEM.
3. TREAT ALL BARE ROOTS WITH POWDERED SULFUR.
4. PRICKLY PEAR ONLY - BURY ONE FULL PAD, MINIMUM.
5. SAGUARO ONLY - BURY PORTION OF GREEN CACTUS 1/10TH HEIGHT OF CACTUS, UP TO A MAXIMUM OF 24"
6. OCOTILLO - BURY ROOT SYSTEM SUCH THAT TOP OF ROOT SYSTEM IS 6" (MAX.) BELOW FINISHED GRADE



- ① SUPPORT CACTI BY PLACING 2-4 ROCKS (1 CU. FT. MIN) ON ROOTS
- ② FINISH GRADE
- ③ 18" MINIMUM
- ④ BACKFILL (1/2 SCREENED NATIVE SOIL AND 1/2 CLEAN SAND)
- ⑤ UNDISTURBED NATIVE SOIL



NOT TO SCALE



 <p>RICK</p> <p>rickengineering.com</p>		<p>3</p> <p>T</p>	<p>SAN DIEGO ORANGE RIVERSIDE SANTA CLARITA PHOENIX TUCSON</p>	<p>DRAWN/D CHECKED</p>
PROJECT NO:	T5577		DATE:	1/2026

RIPARIAN MITIGATION PLAN FOR:	<h1>HALMARK</h1>	<p>LOTS 1 - 69, AND COMMON AREA "A" (PRIVATE STREETS & PUBLIC UTILITIES) COMMON AREAS "B-1" & "B-2" (OPEN SPACE, DRAINAGE, UTILITIES & LANDSCAPE), COMMON AREA "C-1" & "C-2" (FUNCTIONAL OPEN SPACE & DRAINAGE), AND COMMON AREA "D-1" THRU "D-11" (NATURAL OPEN SPACE)</p> <p>PORTION OF THE S 1/2 OF THE SW 1/4 OF SECTION 10, TOWNSHIP 12 SOUTH, RANGE 13 EAST GILA & SALT RIVER MERIDIAN, TOWN OF ORO VALLEY, PIMA COUNTY, ARIZONA</p>	<h2>landscape details</h2>
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2500963
RELATED CASES:
2500142
OV99951 [(O) 02-17]

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA 811
TOLL FREE 1.800.424.8111

Call 811 or click Arizona811.com

DRAWING NO. 5 SHEET NO. 5 OF 5