September 7, 2021

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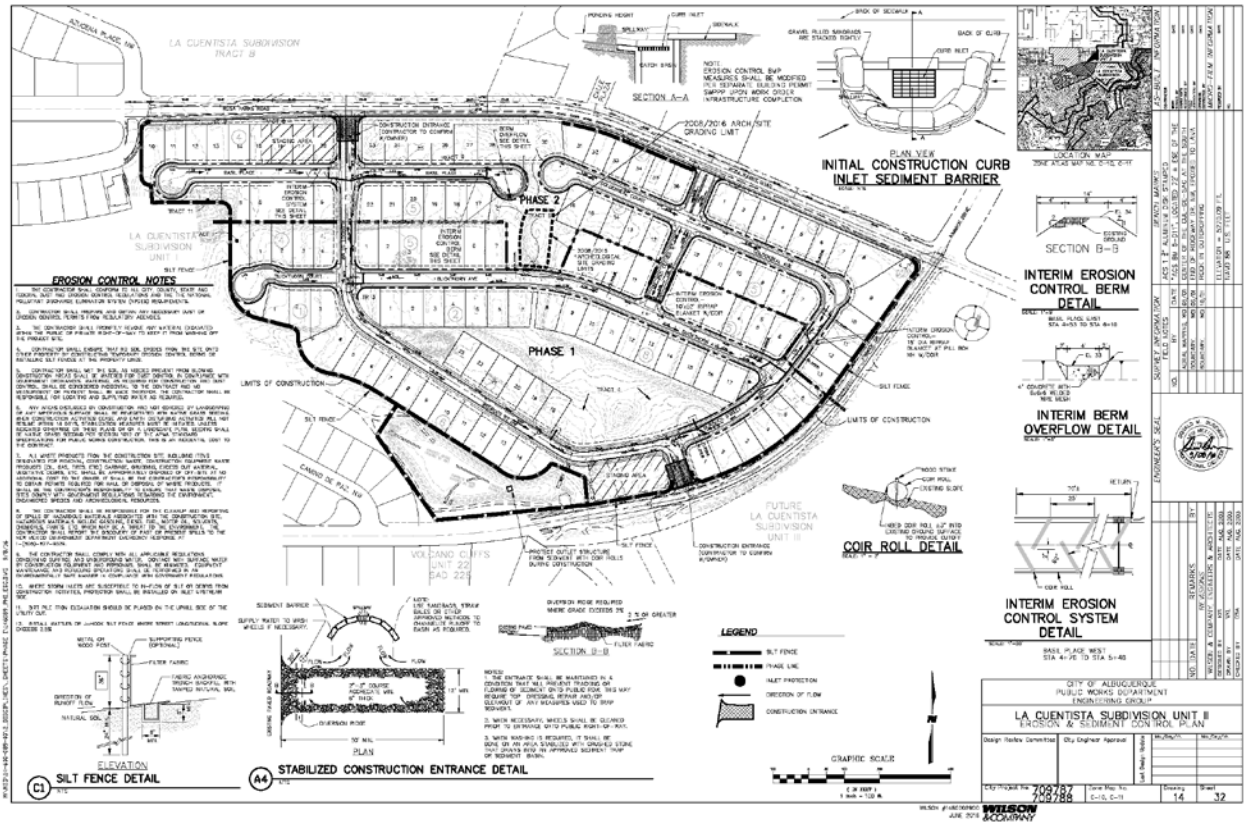
Site: La Cuentista Unit 2 (D10E002B)

Re: Inspection 8/19/2021 & 8/26/2021

The purpose of this inspection report is to update the status of Double M Properties' site with NPDES permit coverage under NMR1000HM. The site consists of all the lots and HOA tracts in La Cuentista Unit 2 and a portion of a large HOA tract owned by Unit 1 where the pond was deepened and the side slopes flattened. Additional Land disturbing activity is located east of Tract 11 Unit 2 on an additional portion of the Unit 1 HOA's property.



All of the residential lots in Unit 2 were transferred to home builders who obtained NPDES permit coverage. New homes have been constructed on all of the lots and sold to the new residents. So the residential lots are no longer covered by the NPDES permits. However, ownership of the Unit 2 HOA tracts was transferred from Double M Properties, Inc to the La Cuentista Unit 2 Homeowner's Association, Inc. with the recording of a unilateral Quit Claim Deed on 3/5/2020. It is unclear the extent to which the HOA has either accepted the transfer or objected to it. The HOA hasn't filed for NPDES permit coverage that I am aware of.

It is not the purpose of this inspection to resolve issues of property ownership or permit coverage requirement for the HOA Tracts. The sole purpose of this inspection is to measure the stabilization on the HOA tracts to see if the Final Stabilization Criteria in Part 2.2.14.b of the Construction General Permit is satisfied. The criteria is as follows.

2.2.14.b Final Stabilization Criteria (for any areas not covered by permanent structures):

i. Establish uniform, perennial vegetation (i.e., evenly distributed, without large bare areas) that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas; and/or
ii. Implement permanent non-vegetative stabilization measures to provide effective cover.
iii. Exceptions:
    a) Arid, semi-arid, and drought-stricken areas (as defined in Appendix A). Final stabilization is met if the area has been seeded or planted to establish vegetation that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas within three (3) years and, to the extent necessary to prevent erosion on the seeded or planted area, non-vegetative erosion controls have been applied that provide cover for at least three years without active maintenance.

Measurement methods.
Natural undisturbed ground cover is measured on natural undisturbed land next to the site since the entire site is disturbed and no longer natural. A transect is used to sample native vegetation since the individual plants are so large.

The Foliar cover is approximated for each plant by an approximate circle such that the area of leaves outside the circle would fill the gaps between the leaves inside the circle. This method is used both for transects and plots. Statistical analysis is performed by sampling a number of equidistant points in a line (transect) or in a grid (plot). The point must hit inside the circle approximating foliar cover.

Rocks and litter aren't included in the EPA's definition of ground cover for the purposes of final stabilization criteria 2.2.14.b.i, however I think they should be included in the ground cover estimates for both natural undisturbed condition and post development. So the "strict interpretation" includes only perennial vegetation, and a "loose interpretation" includes rocks and litter too.

Tumble weeds are neither native nor perennial, they are annuals, and they are illegal vegetation. City Ordinance § 9-8-4 prohibits weeds taller or wider than 4" and requires private property

owners to remove them from their property and the adjacent public right-of-way. They are not counted as cover when evaluating cover density for 2.2.14.b.i.

"Permanent non-vegetative stabilization measures" that satisfy Criteria 2.2.14.b.ii must include certain minimum standards to qualify as permanent. The landscaping industry standard typically includes decorative washed gravel or coble rock ¾" or larger 2" to 4" thick on filter fabric. The paving industry standard is 4" to 6" of aggregate base course placed on subgrade compacted to 95% modified proctor density.

"Non-vegetative erosion controls … that provide cover for at least three years without active maintenance" that satisfy the Arid Exception in 2.2.14.b.iii above include aggregate (rock) mulch and Rolled Erosion Control Products (RECPs). Hydraulic Erosion Control Products (HECPs) don't last 3 years, having only 3 months to 2 years functional longevity according to studies available from the National Transportation Product Evaluation Program (NTPEP) DATAMINE at https://data.ntpep.org/ECP/Products for ten different Bonded Fiber Matrix products applied at 3500 lb/acre. The only HECPs or RECPs remnants were found on Tract 4 where dead grass held small patches of hydromulch in place. However, there are a lot of rocks and fine gravel on the surface. Only rocks ¾" or larger or clusters of smaller rocks with ¾" or more cover were counted as rock ground cover for the purposes of evaluating the "loose interpretation" of 2.2.14.b.i and the second half of the Arid Exception 2.2.14.b.iii. The ¾" minimum rock size is from the new City of Albuquerque Standard Specification 1012.2.3.4 "Aggregate Mulch".

To satisfy the Arid Exception, 2.2.14.b.iii, the Aggregate Mulch density should be not more than 75% per COA Spec 1012.2.3.4. To satisfy the loose interpretation of 2.2.14.b.i only 70% of the natural undisturbed ground cover (70% of 32%), 23% is needed.

Natural undisturbed ground cover density

The natural ground cover density was determined by sampling 34 points along a 100' long transect located 300' west of Unit 2.

Dirt	22 points=64.7%
Rock	2 points= 5.9%
Litter	2 points= 5.9%
Sage brush	4 points=11.8%
Grass	3 points= 8.8%
Total	34 points=100%

Counting live perennial vegetation only the natural density of ground cover is 20.6%.

Adding rocks and litter the natural density of ground cover is 32.4%. The minimum replacement density is (70% of the natural density) 14% and 23% to satisfy the strict and loose interpretations of 2.2.14b.i respectively.

Tract 1

Tracts 1 and 2 of Unit 2 are adjacent to the Unit 1 HOA tract. The picture of Tract 1 below shows Tract 11 in the left background and remnants of a silt fence south of Tract 1 also on the left that should be removed. Tract 1 doesn't have any significant perennial vegetation or any rock cover. It is bare dirt. The 3:1 slope at the back of the tract has no significant cover and is eroding.

Tract 2

Similarly tract 2 has a few more rocks than Tract 1 but it is mostly bare dirt and tumble weeds satisfying neither the vegetation nor the rock criteria of CGP 2.2.14.b.

The silt fence south of Tract 2(in the background of the photo to the right), is supposed to be removed after the disturbed area is stabilized.

Tract 3

Twenty points were sampled from a single representative plot in Tract 3.

Dirt	6 points= 30%
Rock	0 points= 0%
Litter	10 points= 50%
Sage brush	1 points= 5%
Grass	3 points= 15%
Total	20 points=100%

Tract 3 satisfies both the strict and the loose interpretations of 2.2.14.b.i with 20% perennial vegetation, and 70% ground cover including the litter respectively.

Tract 4 (mid)

Twenty points were sampled from two plots in Tact 4. One in the middle of the tract had these results.

Dirt	9 points= 45%
Rock	2 points= 10%
Litter	8 points= 40%
Sage brush	0 points= 0%
Grass	1 points= 5%
Total	20 points=100%

The middle plot in Tract 4 fails to satisfy the strict interpretation of 2.2.14.b.i with only 5% perennial vegetation, but satisfies the loose interpretation with 55% ground cover including the rocks and litter. About half of the litter appears to be a thin fibrous cover of remnant hydromulch and/or dead grass. The 2 points that were counted as rock did not meet the 3/4" minimum rock size but they were counted as rock because a cluster of small pebbles formed a shape that exceeded ¾" in size. If the thin cover of the 4 litter points and the 2 clusters of small pebbles is counted as dirt the cover on this tract still exceeds the 23% needed to satisfy the loose interpretation of the final stabilization criteria 2.2.14.b.i.

Tract 4 (east)

The plot on the east half of Tract 4 had these results.

Dirt	16 points= 80%
Rock	3 points= 15%
Litter	0 points= 0%
Sage brush	0 points= 0%
Grass	1 points= 5%
Total	20 points=100%

The east plot in Tract 4 fails to satisfy both the strict and the loose interpretations of 2.2.14.b.i with only 5% perennial vegetation, and 20% ground cover including rocks and litter respectively. The thin layer of tiny pebbles doesn't compare to the ¾" minimum thickness of aggregate mulch in Spec 1012.2.3.4 or other naturally

occurring rock cover in this vicinity of the desert. There weren't any thick clusters of pebbles like the middle plot above.

Tract 4 has at least one concentrated flow path that is highly erosive and should be stabilized, and there are several large bare spots as shown in the picture to the right.

The west side of Tract 5 is in the background of both these photos.

Tract 4 in the foreground has was seeded last year and is irrigated resulting in sparse emergent grass.

Tract 5 (east)

The far east side of Tract 5 has 100 % density cover with sod and gravel on filter fabric near the entrance off of Kimmick. West of that is an area that has been seeded and mulched and watered some. There is a green patch in the middle of that area that gets more water that has 45% perennial vegetation and 65% ground cover including the litter. The plot in the area with less water had these results.

Dirt	7 points= 35%
Rock	0 points= 0%
Litter	7 points= 35%
Sage brush	0 points= 0%
Grass	6 points= 30%
Total	20 points=100%

The east plot in the area with less water in Tract 5 satisfies both the strict and the loose interpretations of 2.2.14.b.i with 30% perennial vegetation, and 65% ground cover including rocks and litter respectively.

Tract 5 (west)

Has several large boulders on dirt with no measurable ground cover of any kind (<5%).

There is a small patch of concrete washout in the lower left corner of the picture and silt fence on the right side that is holding up well and should remain to prevent sediment from getting into the street until the area is stabilized.

Tract 9 (West)

Boulder City has about 5% rock cover which doesn't satisfy any part of 2.2.14.b.

Tract 9 (North)

The north side of the arch site has a few tumble weeds and less than 5% rock cover so it doesn't satisfy the Final Stabilization Criteria in 2.2.14.b.

Tract 9 north also has concrete washout and a silt fence that is needed to keep the sediment from the north part of Tract 9 out of one of the resident's front yard landscaping.

Tract 9 (southeast)

The plot in the southeast area had these results.

Dirt	13 points=	65%
Rock	7 points=	35%
Litter	0 points=	0%
Sage brush	0 points=	0%
Grass	0 points=	0%
Total	20 points=	100%

The strict interpretations of 2.2.14.b.i is not satisfied because the only vegetation is annual tumble weeds with 0% perennial vegetation. However the 35% rock cover satisfies the loose interpretation.

Tract 11 and the portion of Unit 1 HOA next to tract 11

On Tract 11, 20 points were sampled in a single representative plot with 0% perennial vegetation, 0% rock, and 0% litter. The tract has some sand and pebbles and some tumble weeds that are not included using this measurement method.

HOA Unit 1 Pond

The bottom of the pond received a lot of water an appears to have suffficient vegitation to satisfy the strict interperitation of the final stabilization criteria.

The pond side slopes are mostly bare dirt and will remain erosive until they are stabilized with rock armoring. The natural undisturbed condithion of the land is flat and not very erosive, but the steep slopes require a lot more cover to stabilize.

There is some sediment in the street on Kimmick Dr.

La Cuentista Summary of Stabilization Inspection

Tract#	Dirt	Rock	Litter	Grass & Brush	2.2.14.b.i strict	2.2.14.b.i loose
Natural undeveloped	65%	6%	6%	0%	21%	32%
1	100%	0%	0%	0%	0%	0%
2	100%	0%	0%	0%	0%	0%
3	30%	0%	50%	20%	20%	70%
4 (mid)	45%	10%	40%	5%	5%	55%
4 (east)	80%	15%	0%	5%	5%	20%
5 (east)	35%	0%	35%	30%	30%	65%
5 (east +H_2O)	35%	0%	20%	45%	45%	65%
5 (west)	100%	0%	0%	0%	0%	0%
9(west)	95%	5%	0%	0%	0%	5%
9 (north)	100%	0%	0%	0%	0%	0%
9 (SE)	65%	35%	0%	0%	0%	35%
11	0%	0%	0%	0%	0%	0%
Pond bottom						
Pond Sides & Dam						

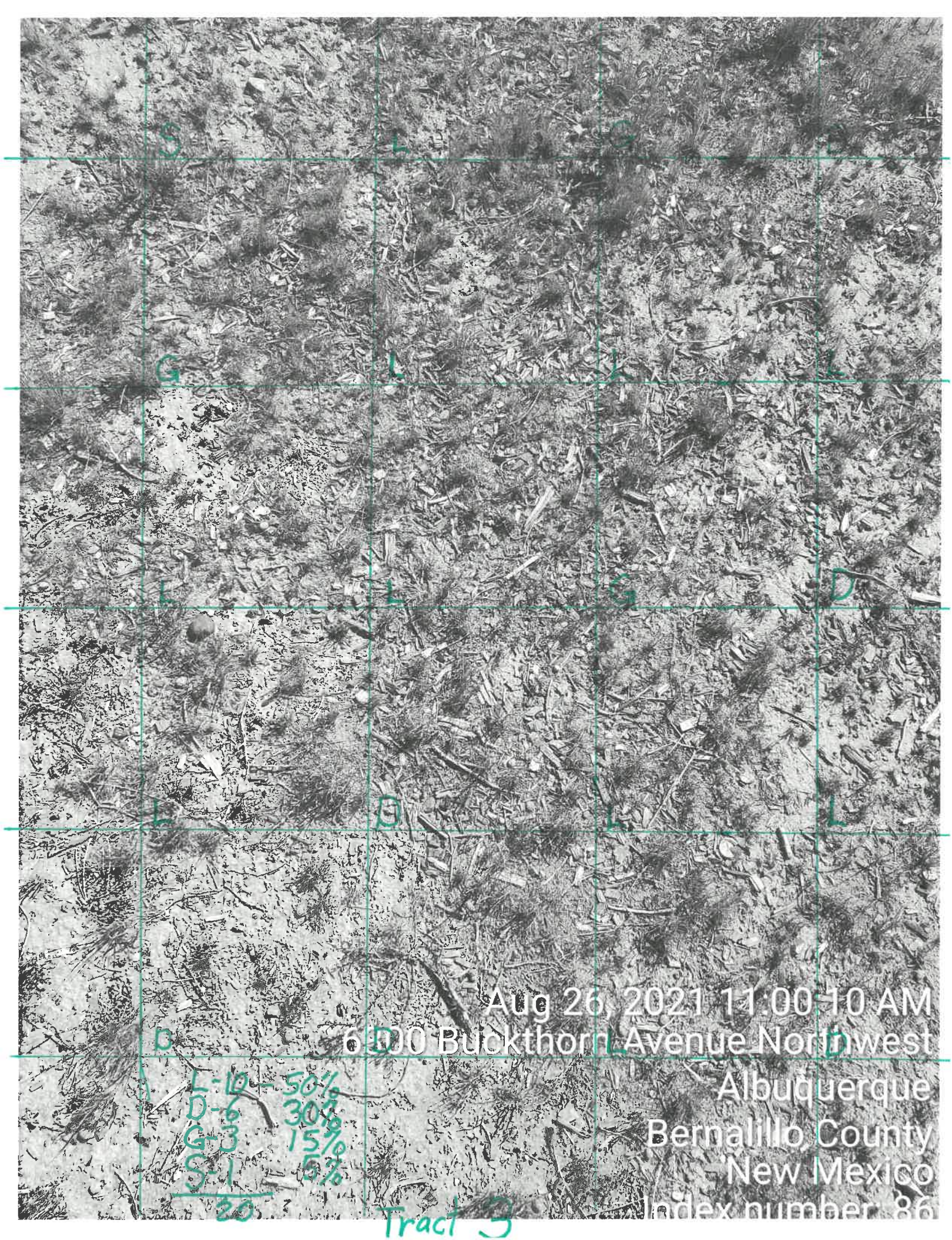
The minimum replacement density is (70% of the natural density) 14% and 23% to satisfy the strict and loose interpretations of 2.2.14b.i respectively.

If you have any questions, you can contact me at 924-3420, jhughes@cabq.gov .

Sincerely,

James D. Hughes

James D. Hughes, P.E.
Principal Engineer, Hydrology/Stormwater Quality
Planning Dept.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6100 Buckthorn Avenue Northwest
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Bernalillo County
New Mexico
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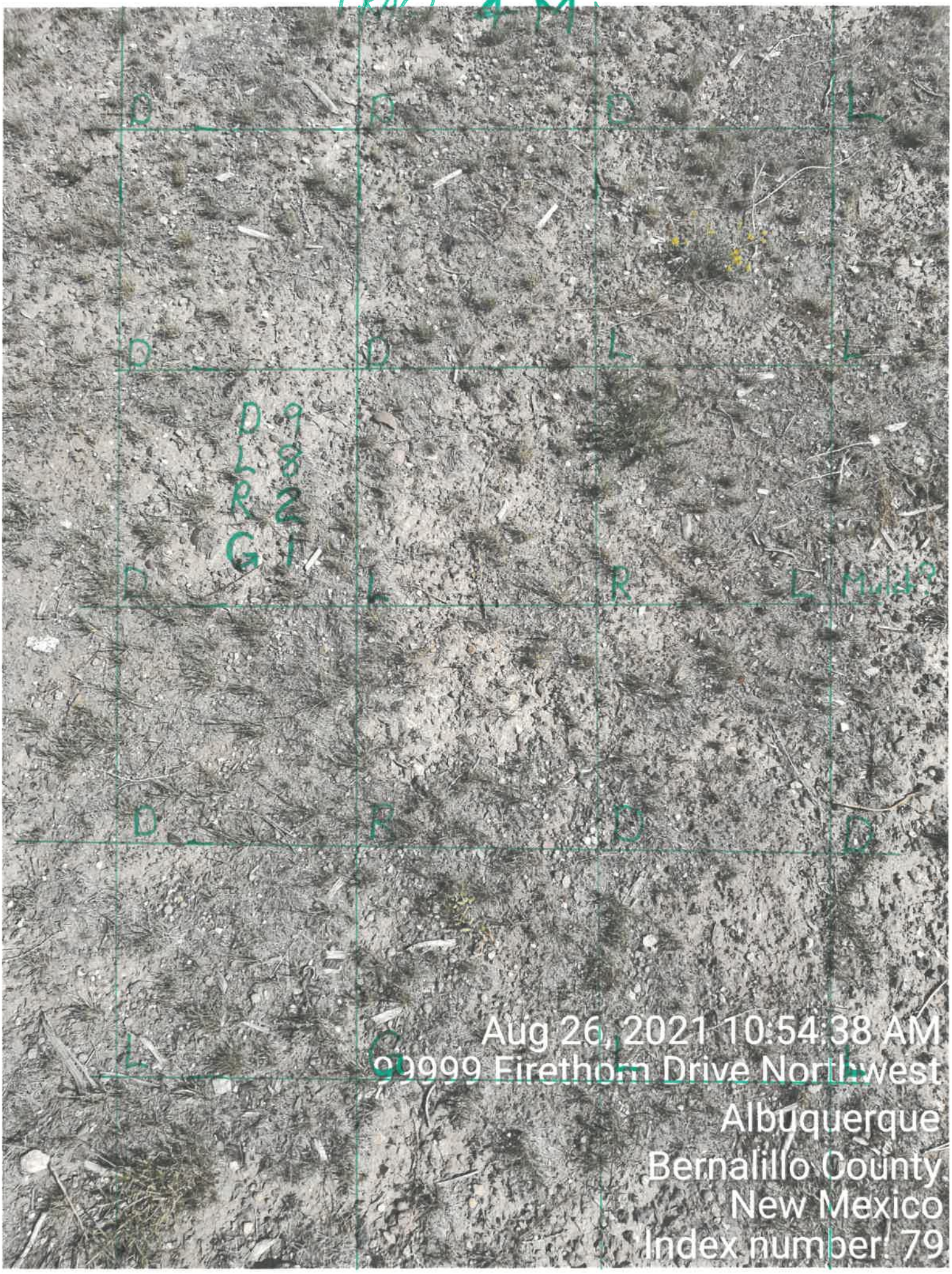
L-10 - 50%
D-6 30%
G-3 15%
S-1 5%
20
Tract 3


TRACT 4 M
D
R
D
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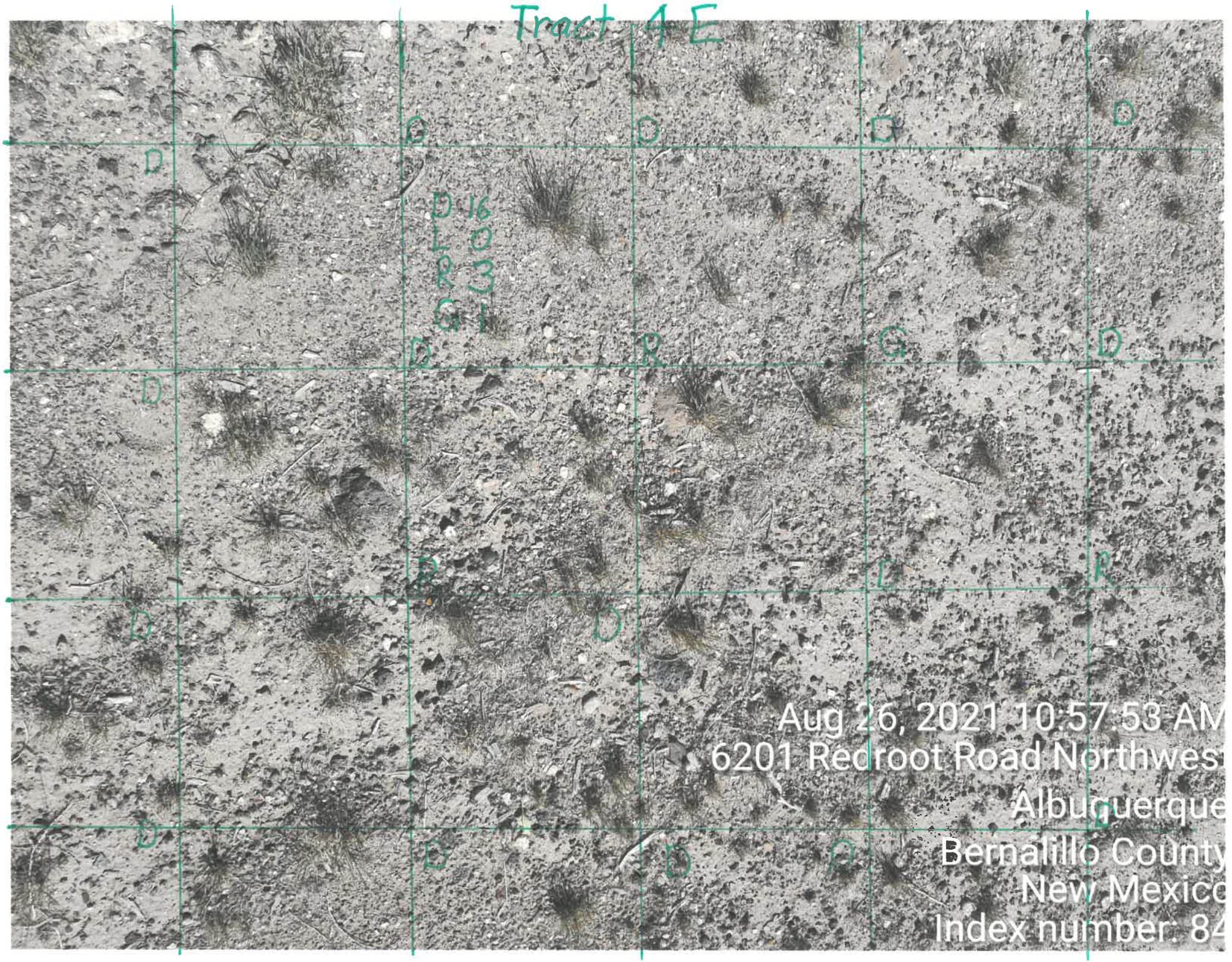
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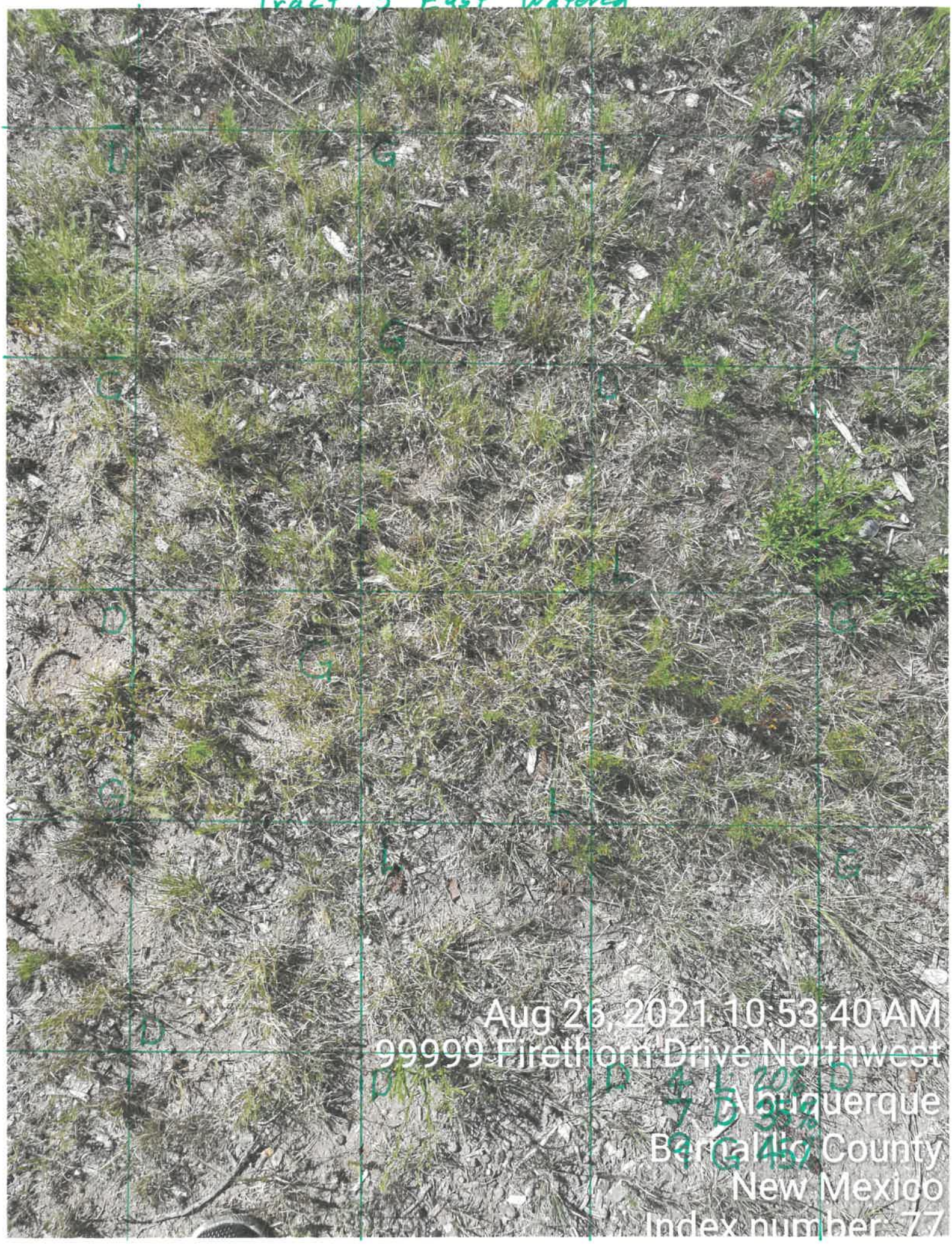
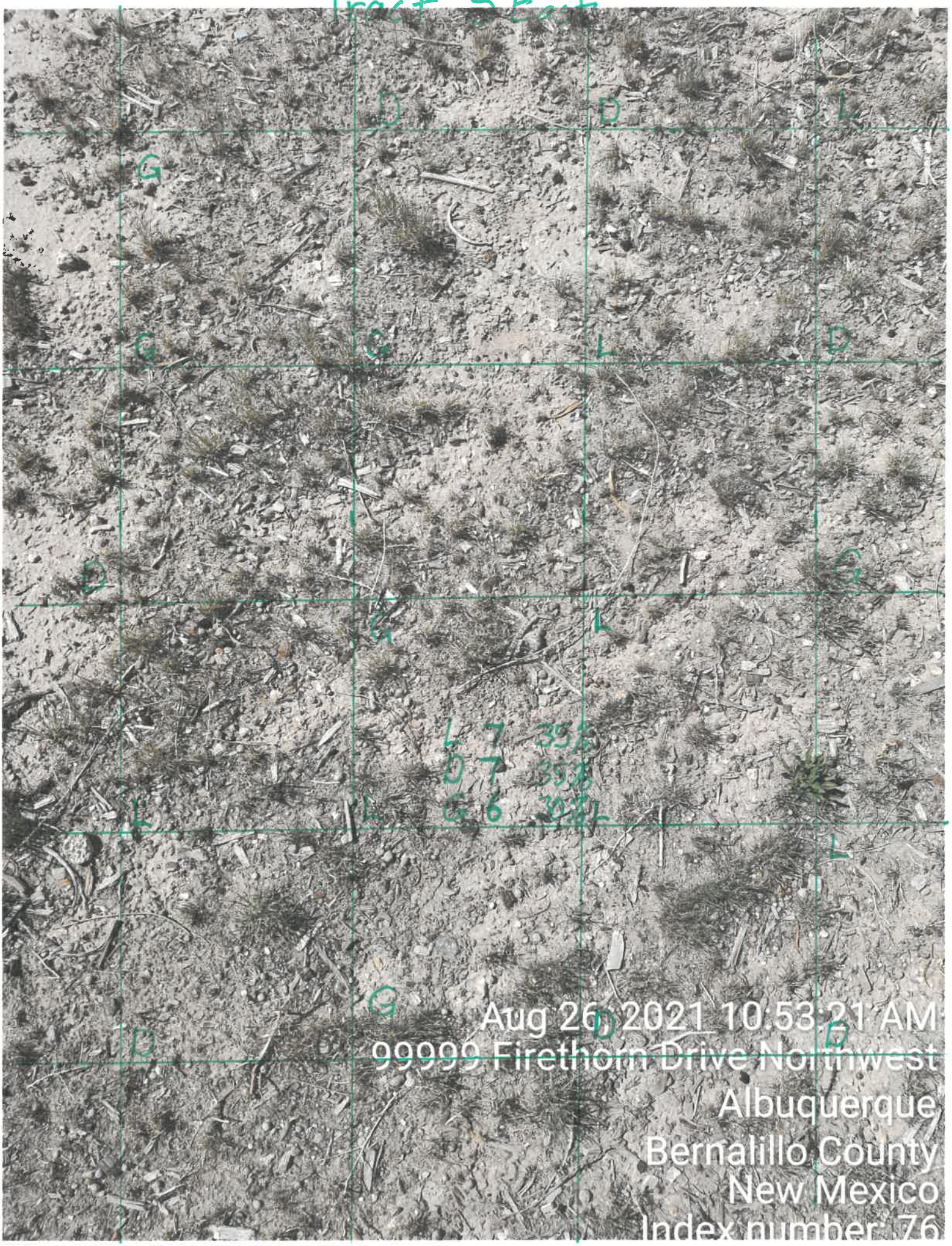
Tract 5 East Watered

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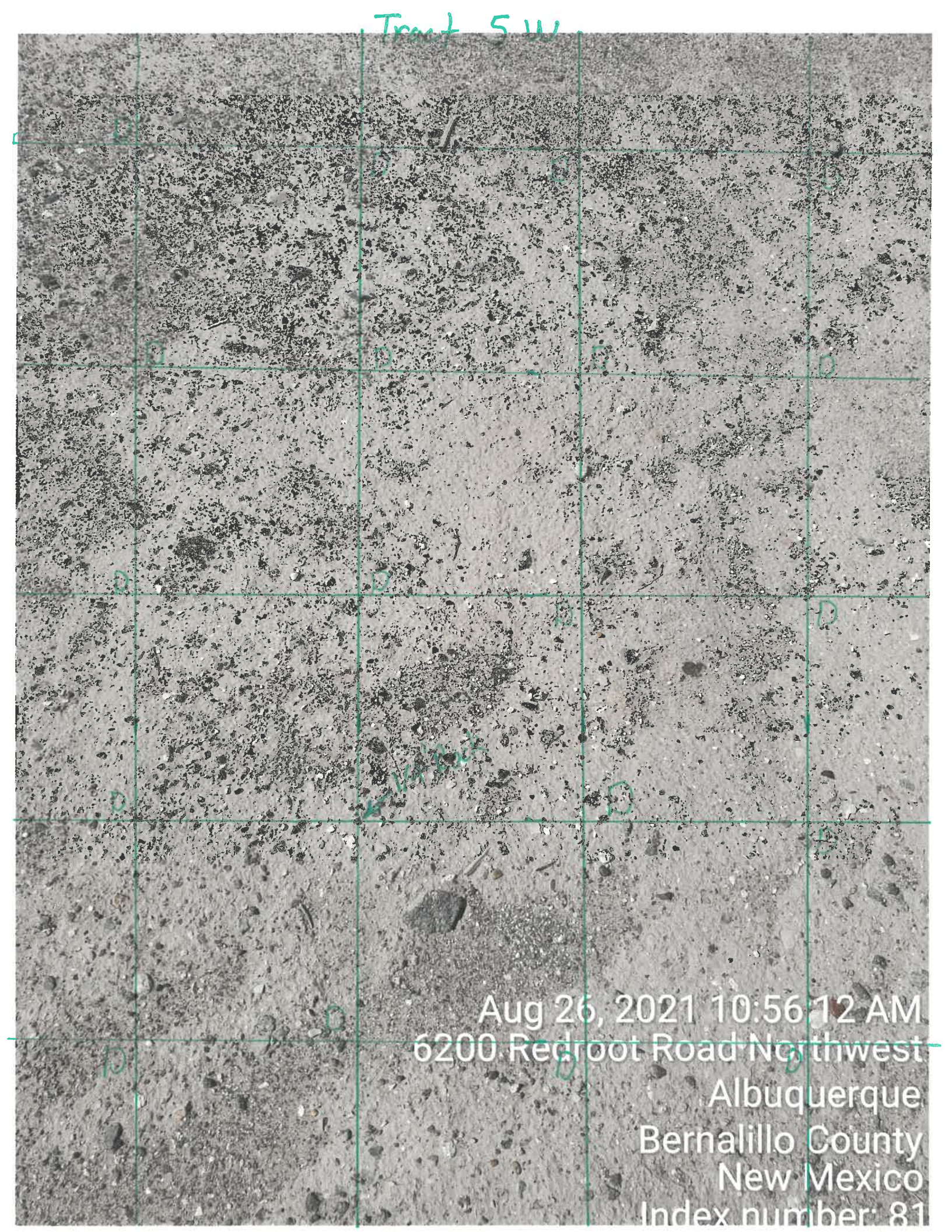
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TRACT 9 West
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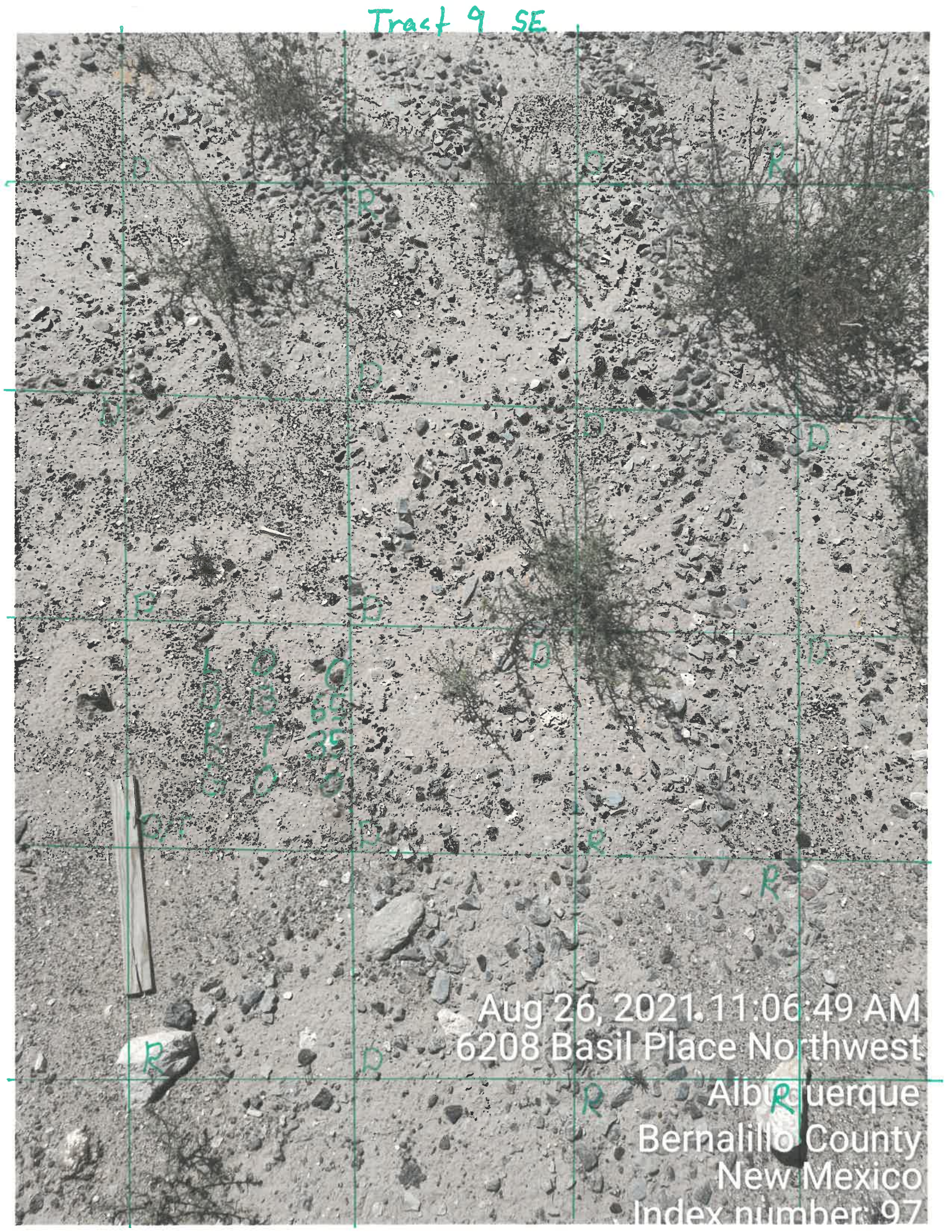
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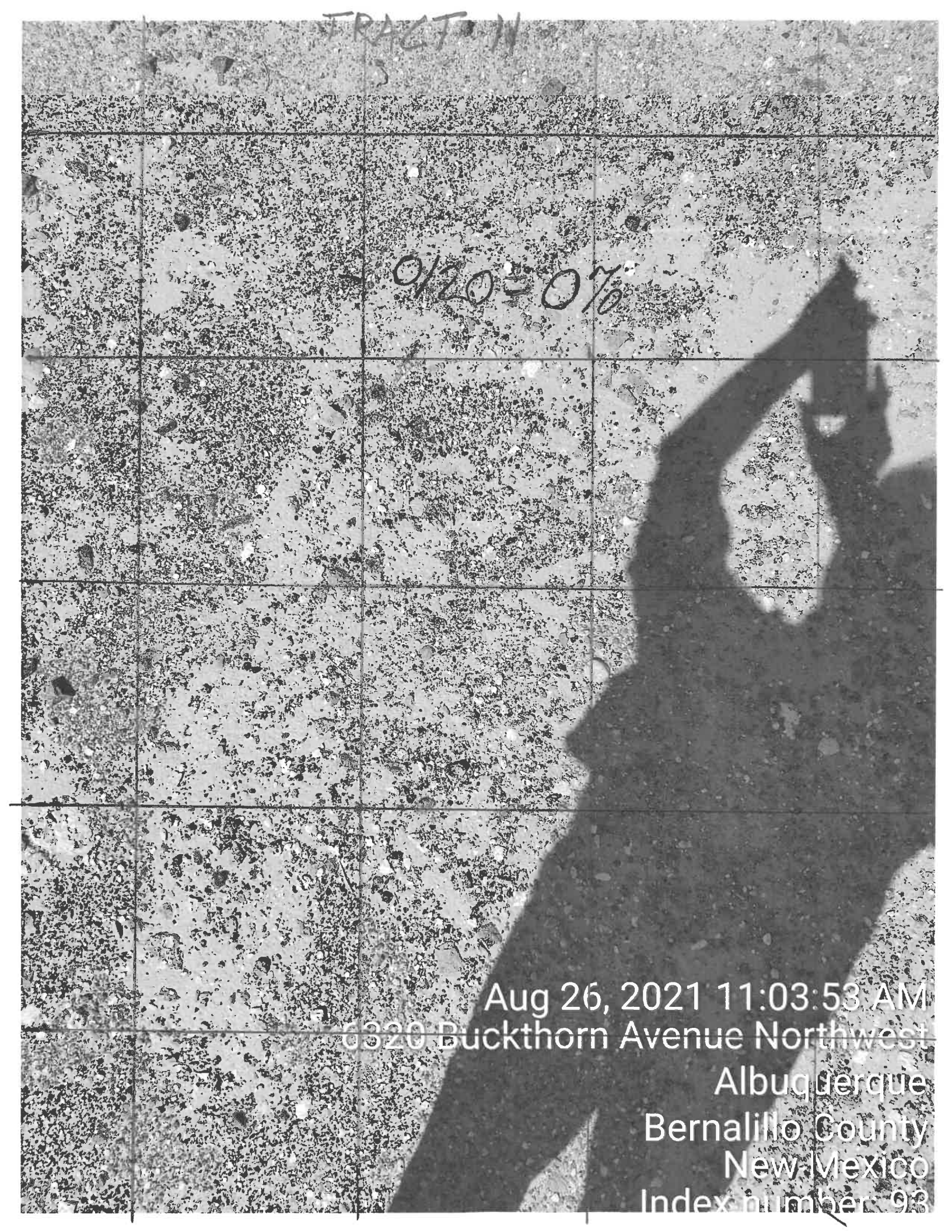
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