

**Appendix B:
Biological Resources**

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B.1 - Biological Resources Assessment

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TECHNICAL MEMORANDUM

TO: Doyle Heaton, DRG Builders, Inc.

CC: Cort Munselle, P.E., Principal, Munselle Civil Engineering

FROM: Peter Bontadelli, Project Director, Analytical Environmental Services

DATE: 8/21/2015

RE: Healdsburg Subdivision: Biological Resources Assessment

1.0 PROJECT BACKGROUND AND SUMMARY

The Healdsburg Subdivision Project (Proposed Project) involves the construction of duplexes and single unit occupancy lots, and associated parking facilities. Additionally, the Proposed Project would include the demolition of 5 existing houses and associated structures (i.e., carports and sheds) and would utilize the City's existing water and sewage system. The Proposed Project, located at the 111, 155, and 157 Chiquita Road, Healdsburg, California 95448, is needed to support anticipated growth in the area.

2.0 REGULATORY SETTING

Table 1 includes the federal, state, and local regulatory requirements that were considered in this report. A detailed description of each act, code, and ordinance is provided in **Attachment A**.

TABLE 1
APPLICABLE REGULATIONS

<i>Federal</i>	<i>State</i>	<i>City of Healdsburg</i>
Federal Endangered Species Act Migratory Bird Treaty Act Wetlands and Waters of the U.S.	California Endangered Species Act California Environmental Quality Act California Fish and Game Code Native Plant Protection Act of 1977	Tree Ordinance Riparian Setback Ordinance

3.0 METHODS AND RESULTS

Information on biological resources in the vicinity of the project site was obtained from the following sources:

- USFWS IPaC list of federal listed special-status species with the potential to occur or be affected by activities on the Project site (USFWS, 2015; **Attachment B**).
- California Natural Diversity Database (CNDDDB) query of special-status species known to occur within the “Geyserville, CA” or “Jimtown, CA” quads (CDFW, 2015; **Attachment B**).
- California Native Plant Society (CNPS) query for special-status species known to occur within the “Geyserville, CA” quad (CNPS, 2015; **Attachment B**).

For the purposes of this assessment, “special-status” has been defined to include those species that are:

- Listed as endangered or threatened under the FESA (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the CESA (or proposed for listing);
- Designated as endangered or rare, pursuant to the California Fish and Game Code (§ 1901);
- Designated as fully protected, pursuant to the California Fish and Game Code (§ 3511, § 4700, or § 5050);
- Designated as species of concern to the CDFW; and
- Designated as rare according to the California Native Plant Protection Act.

Methodology

AES biologist Justin Demianew conducted a biological resources survey throughout the Proposed area on August 6, 2015. The survey consisted of a pedestrian level reconnaissance survey which comprised walking through the project area and documenting any occurrences of jurisdictional waters of the U.S. and the occurrence of State and federally listed species, rare species and species of special concern, and/or their habitats. A list of regionally occurring State and federally listed species, as well as species considered rare and/or of special concern, was compiled based on records obtained from the California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS), and U.S. Fish and Wildlife Service (USFWS) (**Attachment B**). The potential for each of the species to occur within the project limits was subsequently evaluated based on habitat preference, required soils, range including elevation, and proximity of known occurrences of special status species to the site. The name, regulatory status, habitat requirements, and period of identification for these potential regionally occurring special-status species are identified in **Table 2**. These include one fish, one reptile, one mammal, and one bird species. Due to the lack of wetland habitats and the high proportion of ruderal/developed habitat on-site (including non-native grasses), the Proposed Project site is not likely to support any special status plant species.

**TABLE 2
POTENTIAL REGIONALLY OCCURRING SPECIAL-STATUS SPECIES**

<i>Scientific Name</i> Common name	Listing Status USFWS/ CDFW/CNPS	General Habitat Description	Potential for Occurrence	Period of Identification
Plants				
Burke's Goldfields <i>Lasthenia burkei</i>	FE/CE/1B	Found in meadows and seeps (mesic) and vernal pools at elevations from 15-600 meters.	No. There are no meadows or vernal pool wetlands on the Project site. The Project site consists predominantly of ruderal/developed habitat.	April-June
Pennell's bird's-beak <i>LCordylanthus tenius ssp. capillaris</i>	FE/CR/1B	Closed-cone coniferous forest and Chaparral/serpentine at elevations of 45-305 meters.	No. There are no coniferous or chaparral habitat on the Project site. The Project site consists predominantly of ruderal/developed habitat.	June-September
Fish				
steelhead Central California Coast DPS <i>Oncorhynchus mykiss irideus</i>	FE/CH/--	Found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample cover from riparian vegetation or overhanging banks. Spawning: streams with pool and riffle complexes. For successful breeding, require cold water and gravelly streambed.	Yes. Designated Critical habitat for this species includes Foss Creek, which occurs on the eastern edge of the Project site.	Consult Agency
Reptiles and Amphibians				
California red-legged frog <i>Rana draytonii</i>	FT/CSC/--	Found in lowlands and foothills in or near permanent sources of deep water with dense shrubby or emergent riparian vegetation.	No. The project site does not contain any permanent water sources. Additionally, the ephemeral Foss Creek and the unnamed tributary contain very little emergent riparian vegetation.	November – March (breeding) June - August (non-breeding)
Western pond turtle <i>Emys marmorata</i>	--/CSC/--	Requires aquatic habitats with suitable basking sites. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks.	Yes. WPT have been observed in Foss Creek at Grant Street Bridge, just downstream of the Project site.	Year Round
Mammals				

Pallid bat <i>Antrozous pallidus</i>	--/CSC/--	Habitats occupied include grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests, generally below 2,000 meters. The species is most common in open, dry habitats with rocky areas for roosting. Roosts also include cliffs, abandoned buildings, bird boxes, and under bridges.	Yes. Marginal cavities and exfoliating bark on the large oak and eucalyptus trees on Foss Creek immediately adjacent to the Project site provide potential roosting habitat.	Year Round
Birds				
White-tailed kite <i>Elanus marmorata</i>	--/CFP/--	Habitats include savanna, open woodland, marshes, partially cleared lands and cultivated fields, mostly in lowland situations. Nesting occurs in trees.	Yes. The ruderal/developed grassland areas provide potential foraging habitat while the oak and eucalyptus trees provide potential nesting habitat.	Year Round
Invertebrates				
California freshwater shrimp <i>Syncaris pacifica</i>	FE/CE/--	Small, low-gradient, perennial coastal streams. Prefers relatively shallow streams with depths of 12-36 inches, exposed live roots of trees such as alder and willow, undercut banks greater than 6 inches, overhanging woody debris or stream vegetation and vines. Elevations range from 0-116 meters.	No. The entire stretch of Foss Creek and the unnamed tributary that passes through the Project site is entirely dry during the summer months, and would not provide habitat for this species.	Consult Agency

Source: USFWS 2015; CDFW 2015; CNPS 2015.

STATUS CODES:

FEDERAL: (U.S. Fish and Wildlife Service or National Marine Fisheries Service)

- FE = Listed as Endangered by the Federal Government
- FT = Listed as Threatened by the Federal Government
- FC = Candidate for Federal Listing
- CH = Critical Habitat

STATE: (California Department of Fish and Wildlife)

- CE = Listed as Endangered by the State of California
- CT = Listed as Threatened by the State of California
- CSC = California Species of Special Concern
- CFP = California Fully Protected Species

CRPR: (California Rare Plant Rank)

- Rank1A = Plants presumed extirpated in California and either rare or extinct elsewhere
- Rank1B = Plants rare, threatened, or endangered in California and elsewhere

Results

Habitat Types

The project location is comprised three general habitat types: ruderal/developed, mixed oak woodland, and riparian (**Figure 1**). The ruderal/developed habitat within the Project site contains, pavement, gravel,

houses, sheds, carports, storage bins, roadway shoulders, native and non-native shrubs, ornamental trees, and disturbed non-native grassland. Native shrubs and ornamental trees consisted of wild grape (*Vitis californica*), coyote brush (*Baccharis pilularis*), olive (*Olea europaea* sp.), apple (*Malus domestica*), fig (*Ficus carica*), English walnut (*Juglans regia*), American sweet gum (*Liquidambar styraciflua*), acacia (*Acacia* spp.), and Himalayan blackberry (*Rubus armeniacus*). The mixed oak woodland was dominated by coast live oak (*Quercus agrifolia*) and interior live oak (*Quercus wislizenii*) with interspersed valley oak (*Quercus lobata*) and California black oak (*Quercus kelloggii*). These native oak species dominated the riparian overstory. The riparian understory consisted primarily of non-native grasses and poison oak (*Toxicodendron diversilobum*), with interspersed cattail (*Typha* spp.), fennel (*Foeniculum vulgare*), and sedge (*Cyperus* spp.). Site photographs of each habitat type are included in **Attachment C**.

Wildlife

No special-status plant or wildlife species were observed during the biological resources survey conducted on August 6, 2015, although the Project site does contain potential habitat for five special status species listed in **Table 2**, above. Non-special status wildlife species that were observed within the Project area included turkey vulture (*Cathartes aura*), western scrub-jay (*Aphelocoma californica*), and California towhee (*Pipilo crissalis*). No active nests were observed during the survey.

Implementation of the below recommendations for these special status species and their habitats would reduce the potential impacts (i.e., loss of potential habitat) of the Proposed Project to a less-than-significant level. Overall, there would be **No Effect** to any federally- or State-listed plants/animals or their habitats within the project limits with the implementation of the below recommendations. Due to the scope, design plans, and location of the project, consultation pursuant to Section 7 or 10 of the Endangered Species Act will not be required. If project construction activities occur during the nesting season (generally March 1 through September 1), nesting birds may be disturbed. Recommendations to avoid potential effects to nesting birds are provided below. Similarly, all activities that will result in the removal of heritage trees will require mitigation in accordance with City of Healdsburg Tree Ordinance. Heritage tree mitigation recommendations are also provided below. Lastly, impacts to Foss Creek, which is designated critical habitat for steelhead and potential habitat for the western pond turtle, and the unnamed tributary will be avoided with implementation of the riparian setback recommendations below. These riparian setback recommendations will simultaneously protect potential pallid bat roosting habitat.

4.0 RECOMMENDATIONS

Migratory Birds

To comply with the Migratory Bird Treaty Act and the California Fish and Game Code, the project specifications should incorporate pre-construction bird surveys for migratory birds and raptors prior to the commencement of any construction activities (including grading and vegetation removal) between March 1st and September 1st. The following avoidance measures are recommended:

- For vegetation removal and/or earth-disturbing activities occurring during the breeding season (March 1 through September 1), a qualified biologist should conduct pre-construction surveys of all potential nesting habitat for all migratory birds within 500 feet of construction activities.

- If active special status bird, migratory bird, or raptor nests are found during pre-construction surveys an appropriate buffer based on the species observed shall be established by a biologist. These buffers shall be no less than: 1) 500-foot no-disturbance buffer will be created around active raptor nests during the breeding season or until it is determined that all young have fledged, and 2) a 250-50-foot buffer zone will be created around the nests of other migratory or special status birds and all other birds that are protected by California Fish and Game Code 3503. Buffer zones for these species shall be set based on recommendations by the survey biologist. These buffer zones are consistent with CDFW avoidance guidelines and CDFW buffers required on other similar projects; however, they may be modified in coordination with CDFW based on existing conditions at the project site.
- If pre-construction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Shrubs and trees that have been determined to be unoccupied by special status birds or that are located 500 feet from active nests of any species may be removed.
- If vegetation removal activities are delayed or suspended for more than two weeks after the pre-construction survey, the areas should be resurveyed.

Heritage Trees

This biological survey did not include an arborist assessment of all on-site trees. However, the vast majority trees that may qualify for protection under the City of Healdsburg's Tree Ordinance exist within the protected riparian corridor of Foss Creek and the unnamed tributary. For all potential heritage trees that may fall outside of this protected buffer, the following avoidance, minimization, and mitigation measures are recommended:

- Any impacts to heritage trees shall require a tree permit. Permit applications shall include the required information provided in Section 20.24.060 of Article II.
- Project design should, to the greatest extent possible, avoid impacts to heritage trees. All trees to be avoided in the Project area shall be protected by a construction barrier (e.g., fence, flagging, etc.) acceptable to the Planning and Building Director and City Arborist. These protection measures shall be in place prior to the issuance of any grading or building permit.
- The drip line of any protected tree shall be protected. All excavation, cutting, paving, or construction within the protected zone of a tree shall be minimized. The protected zone is defined as the area extending from the trunk to the drip line, and shall not be no less than 10 feet.
- No oil, gas, or other chemicals, in addition to construction equipment and material, shall not be staged in the protected area of any heritage tree, or in any area where such materials may enter the protected zone.
- Trenching within the protected zone shall be avoided wherever possible. Unavoidable trenching activities shall avoid major roots. All trenching within the protected zone of a heritage tree shall be done by hand.

- All heritage trees to be removed shall be replaced at a ratio of 3:1. If it is infeasible to plant replacement trees on the same site or with immediately adjacent rights-of-way, an in-lieu equivalent fee shall be paid to the Tree Planting and Maintenance Fund. These monies will be used for the purpose of planting and maintaining trees throughout the City.
- Other mitigation measures provided in Section 20.24.080 of Article II shall be maintained and followed .

Riparian Setbacks

The Proposed Project is currently designed to meet the City of Healdsburg Riparian Setback requirements. This includes a 35-foot buffer around Foss Creek and a 25-foot buffer around the unnamed tributary. To further ensure the protection of Foss Creek and its unnamed tributary, in addition to the special status species which may utilize these water sources and the surrounding riparian habitat, the following avoidance, minimization, and mitigation measures are recommended:

- Encroachment into the riparian zone of Foss Creek and the unnamed tributary shall be minimized, even if this encroachment is greater than 35 feet and 25 feet, respectively, from the top of the finished bank.
- A City grading permit and a stormwater pollution and Prevention Plan (SWPPP) shall be in place prior to any excavation, grading, or trenching. The SWPPP shall contain protective measures to prevent any discharge of sediment or other contaminants into on-site waterways.

References

California Department of Fish and Wildlife (CDFW). 2015. RareFind 5, California Natural Diversity Database. Geyserville, California; Jintown, California Accessed on August 5, 2015.

California Native Plant Society (CNPS) Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, California. Available at: <http://www.rareplants.cnps.org>. Accessed on August 5, 2015.

City of Healdsburg. 2015. Municipal Code. Available online at: <http://www.codepublishing.com/CA/healdsburg/#!/Healdsburg20/Healdsburg2024.html#20.24>. Accessed on August 14, 2015

U.S. Fish and Wildlife Service (USFWS), 2015. Information for Planning and Conservation (IPaC) Federal Endangered and Threatened Species that Occur On or may be Affected by the Proposed Project. Available at: <http://ecos.fws.gov/ipac/>. Accessed on August 5, 2015.



Figure 1
Habitat Types

APPENDICES

APPENDIX A

REGULATORY REQUIREMENTS

Regulatory Setting

Federal

Federal Endangered Species Act of 1973

Under the federal Endangered Species Act (FESA), the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered [16 United States Code (USC) 1533(c)]. The purposes of the FESA are to provide a means to conserve the ecosystems that endangered and threatened species depend on and to provide a program and means for conservation and recovery of the species with the intent of removing the species from listed, protected status. Regulatory protection is given to any species listed as endangered or threatened.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) are the federal agencies that enforce the FESA. Pursuant to the requirements of the FESA, an agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any candidate species for listing under the FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species [16 USC 1536(3), (4)]. Section 7(a)(2) of the FESA requires all federal agencies, including the NMFS and the USFWS, to evaluate the proposed project with respect to any species proposed for listing or already listed as endangered or threatened and their critical habitat, if any is proposed or designated. The FESA would be applicable to the project if critical habitat or listed species are present. Section 10(a)(1)(b) allows non-federal entities, under consultation with the USFWS and the NMFS, to obtain incidental take permits for federally-listed wildlife. Section 10 (a)(1)(b) is not required for federally listed plants. Under Section 10 of the FESA, the applicant for an incidental take permit is required to submit a "conservation plan" to the USFWS or the NMFS that specifies, among other things, the impacts that are likely to result from the taking, and the measures the permit applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement those steps. Conservation plans under the FESA have come to be known as habitat conservation plans (HCPs).

Migratory Bird Treaty Act

Most bird species, (especially those that are breeding, migrating, or of limited distribution) are protected under federal and/or state regulations. Under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Subsection 703-712), migratory bird species, their nests, and their eggs are protected from injury or death, and any project-related disturbances during the nesting cycle. As such, project-related disturbances must be reduced or eliminated during the nesting cycle. This is generally considered April 1 through September 15.

Wetlands and Other Waters of the U.S.

The U.S. Army Corps of Engineers (USACE) has primary federal responsibility for administering regulations that concern waters of the U.S., including wetlands, under Section 404 of the Clean Water Act (CWA). The USACE requires that a permit be obtained if a project proposes placing structures within, over, or under navigable waters and/or discharging dredged or fill material into waters below the ordinary high-water mark (OHWM). Wetlands and other water features that lack a hydrologic connection to navigable waters of the U.S. and that lack a nexus to interstate and foreign commerce are not regulated by the CWA and do not fall under the jurisdiction of the USACE. These such features are called “isolated.” However, the Environmental Protection Agency (EPA) and USACE have recently proposed a new rule under the CWA wherein they redefine waters of the U.S. and the jurisdictional extent of the EPA and USACE. This final rule is planned to take affect August 28, 2015, but has been challenged by many states and entities. Among the highlights, the final rule:

- Makes all “tributaries” (as defined) jurisdictional by rule, without the need for a case-specific “significant nexus” analysis;
- Defines “adjacent” waters, which are jurisdictional by rule, as including all waters within the floodplain of, or within specified distances from the ordinary high water mark (“OHWM”) of, traditional navigable waters, their tributaries, and impoundments;
- Requires that certain types of waters, including vernal pools in California, be evaluated in combination with other waters of the same type within the watershed when making a significant nexus determination, which will have the practical effect of making all such waters jurisdictional by rule;
- For waters not jurisdictional by rule, requires the water to be within the floodplain of, or within a certain distance from, a traditional navigable water, impoundment or tributary in order to be potentially subject to jurisdiction under a case-specific significant nexus analysis. Waters outside these limits cannot be jurisdictional—although such waters are likely be rare, at least in the arid West; and
- Contains “grandfathering” language, in the preamble, that clearly provides the new definition will not apply to approved jurisdictional determinations, or permits, issued before the new rule’s effective date—unless the applicant requests otherwise.

The final rule retains exclusions found in the current regulations and adds several exclusions that are intended to codify longstanding practice. A water falling within an exclusion is not jurisdictional even if it otherwise meets the definition of a waters of the U.S. The exclusions include:

- Certain ditches that are not tributaries (new), including:
 - ditches with ephemeral flows that were not excavated in and did not relocate a tributary,
 - ditches with intermittent flow that were not excavated in and did not relocate a tributary or drain a wetland; and
 - ditches that do not flow into a traditional navigable waters, interstate waters, or territorial seas;
- Certain other features not considered jurisdictional under current practice, including:
 - artificially irrigated areas that would revert to dry land absent irrigation;

- artificial, constructed lakes and ponds created in dry land, such as cooling ponds, settling ponds, and irrigation ponds and fields flooded for rice growing;
- water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel and that fill with water;
- erosional features, including gullies, rills, and ephemeral streams that do not meet the definition of a tributary; and
- puddles (new);
- Groundwater, including groundwater drained through subsurface drainage systems (new); and
- Stormwater control features created in dry land and constructed to convey, treat or store stormwater;

Most of the exclusions require that the feature have been created in and would revert to “dry land,” with the burden on the applicant to demonstrate that an exclusion is applicable.

State

California Endangered Species Act

The California Endangered Species Act (CESA) declares that deserving plant or animal species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. The CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Department of Fish and Wildlife (CDFW).

The CESA authorizes that “(p)ivate entities may take plant or wildlife species listed as endangered or threatened under the FESA and the CESA, pursuant to a federal incidental take permit (ITP) issued in accordance with Section 10 of the FESA, if the CDFW certifies that the incidental take statement or incidental take permit is consistent with the CESA [Fish & Game Code § 2080.1(a)]. If not, the CDFW may issue their own ITP under Fish & Game Code § 2081(b) and (c).

California Environmental Quality Act

Section 15380(b) of the CEQA Guidelines provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. Section 15380 defines “endangered” species of plants, fish, or wildlife as those whose survival and reproduction in the wild are in immediate jeopardy and “rare” species as those who are in such low numbers that they could become endangered if their environment worsens. Therefore, a project will normally have a significant effect on the environment if it will substantially affect a rare or endangered species or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

California Fish and Game Code

The California Fish and Game Code provides specific protection and listing for several types of biological resources. Section 2081(b) and (c) of the CESA allows CDFW to issue an incidental take permit for a state listed threatened and endangered species if specific criteria outlined in Title 14 CCR, Sections

783.4(a), (b) and CDFW Code Section 2081(b) are met. The CDFW Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code. Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird. Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA. If a project is planned in an area where a species or specified bird occurs, an applicant must design the project to avoid all take; the CDFW cannot provide take authorization under the CESA.

Native Plant Protection Act of 1977

Native Plant Protection Act of 1977 and implementing regulations in Section 1900 et seq. of the Fish and Game Code designates rare and endangered plants, and provides specific protection measures for identified populations. The CDFW administers the Native Plant Protection Act.

City of Healdsburg

Tree Ordinance

Article II Sections 20.24.035 - 20.24.080 established regulations to protect trees that have cultural significance, enhance the scenic beauty of the landscape, improve air quality, increase property value, promote public health, and assist in abating soil and slope erosion. Any tree that is greater than 30 inches in diameter measured at 2 feet above the ground is classified as a City heritage tree. Any impact to a heritage tree would require a permit from the Planning and Building Director. Impacts include removal and any encroachment that could potentially harm the tree and its root system. Encroachment, as defined under Section 20.24.045 of Article II, is 'any intrusion or human activity into the protected zone of a tree [i.e., drip line] including, but not limited to, grading, excavating, trenching, parking of vehicles, storage of material and equipment, or the construction of structures or other improvements.

Riparian Setback Ordinance

Article III Section 20.24.090 established riparian setbacks to protect river, creeks, and streams from encroachment from urbanization and to protect riparian habitat. The ordinance provides the following setback requirements:

A) No building, structure or permanent or temporary improvement, including but not limited to buildings of any type, garages, swimming pools and spas, parking lots (paved or unpaved), patios, platforms, decks, fences, liquid storage tanks, trash enclosures, mobile homes, retaining walls, debris, fill or trash shall be allowed within the following setbacks:

Creek: thirty-five (35) feet. All other streams and creeks: twenty-five (25) feet.

B) Setbacks shall be measured from the top of existing bank. Where channel improvements are proposed, subject to the approval of a variance pursuant to this section, setbacks shall be measured from the top of finished bank.

C) Existing riparian vegetation within setback areas shall be maintained and protected from disturbance.

APPENDIX B

SPECIAL STATUS SPECIES LISTS

Healdsburg Subdivision Project

IPaC Trust Resource Report

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Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

Amphibians

California Red-legged Frog *Rana draytonii*

Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=D02D>

Birds

Northern Spotted Owl *Strix occidentalis caurina*

Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B08B>

Crustaceans

California Freshwater Shrimp *Syncaris pacifica*

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=K01W>

Fishes

Steelhead *Oncorhynchus (=Salmo) mykiss*

Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=E08D>

Flowering Plants

Burke's Goldfields *Lasthenia burkei*

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q1XU>

Pennell's Bird's-beak *Cordylanthus tenuis* ssp. *capillaris*

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q2O8>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

Steelhead Critical Habitat Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=E08D#crithab>

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Bell's Sparrow <i>Amphispiza belli</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=BOHE</p>	Bird of conservation concern
<p>Burrowing Owl <i>Athene cunicularia</i> Year-round</p>	Bird of conservation concern
<p>Costa's Hummingbird <i>Calypte costae</i> Season: Breeding</p>	Bird of conservation concern
<p>Fox Sparrow <i>Passerella iliaca</i> Season: Wintering</p>	Bird of conservation concern
<p>Lesser Yellowlegs <i>Tringa flavipes</i> Season: Wintering</p>	Bird of conservation concern
<p>Lewis's Woodpecker <i>Melanerpes lewis</i> Season: Wintering</p>	Bird of conservation concern
<p>Loggerhead Shrike <i>Lanius ludovicianus</i> Season: Wintering https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FY</p>	Bird of conservation concern
<p>Long-billed Curlew <i>Numenius americanus</i> Season: Wintering https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06S</p>	Bird of conservation concern
<p>Nuttall's Woodpecker <i>Picoides nuttallii</i> Year-round</p>	Bird of conservation concern
<p>Oak Titmouse <i>Baeolophus inornatus</i> Year-round</p>	Bird of conservation concern
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</p>	Bird of conservation concern
<p>Peregrine Falcon <i>Falco peregrinus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</p>	Bird of conservation concern

Short-billed Dowitcher *Limnodromus griseus*

Season: Wintering

Bird of conservation concern**Short-eared Owl** *Asio flammeus*

Season: Wintering

Bird of conservation concern<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HD>**Swainson's Hawk** *Buteo swainsoni*

Season: Breeding

Bird of conservation concern<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B070>**Tricolored Blackbird** *Agelaius tricolor*

Year-round

Bird of conservation concern<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06P>

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands identified in this project area

CNPS *California Native Plant* Rare and Endangered Plant Inventory

Plant List

51 matches found. *Click on scientific name for details*

Search Criteria

Rare Plant Rank is one of [1A, 1B, 2A, 2B], Found in 9 Quads around 38122F8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Allium peninsulare var. franciscanum	Franciscan onion	Alliaceae	perennial bulbiferous herb	1B.2	S1	G5T1
Amorpha californica var. napensis	Napa false indigo	Fabaceae	perennial deciduous shrub	1B.2	S2	G4T2
Arctostaphylos bakeri ssp. bakeri	Baker's manzanita	Ericaceae	perennial evergreen shrub	1B.1	S1	G2T1
Arctostaphylos bakeri ssp. sublaevis	The Cedars manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2	G2T2
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	S3	G5T3
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita	Ericaceae	perennial evergreen shrub	1B.1	S1	G3T1
Blennosperma bakeri	Sonoma sunshine	Asteraceae	annual herb	1B.1	S1	G1
Brodiaea leptandra	narrow-anthered brodiaea	Themidaceae	perennial bulbiferous herb	1B.2	S3?	G3?
Calochortus raichei	The Cedars fairy-lantern	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
Calystegia collina ssp. tridactylosa	three-fingered morning-glory	Convolvulaceae	perennial rhizomatous herb	1B.2	S1	G4T1
Campanula californica	swamp harebell	Campanulaceae	perennial rhizomatous herb	1B.2	S3	G3
Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	Brassicaceae	perennial rhizomatous herb	1B.2	S2	G3G5T2Q
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	2B.1	S2	G5
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	1B.1	S1	G1
Ceanothus purpureus	holly-leaved ceanothus	Rhamnaceae	perennial evergreen shrub	1B.2	S2	G2
Centromadia parryi ssp. parryi	pappose tarplant	Asteraceae	annual herb	1B.2	S1	G3T1
Chlorogalum pomeridianum var. minus	dwarf soaproot	Agavaceae	perennial bulbiferous herb	1B.2	S2S3	G5T2T3
Cordylanthus tenuis ssp. capillaris	Pennell's bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.2	S1	G4G5T1

<u>Cryptantha dissita</u>	serpentine cryptantha	Boraginaceae	annual herb	1B.2	S2	G2
<u>Downingia pusilla</u>	dwarf downingia	Campanulaceae	annual herb	2B.2	S2	GU
<u>Eriastrum brandegeae</u>	Brandegee's eriastrum	Polemoniaceae	annual herb	1B.1	S1	G1Q
<u>Erigeron greenei</u>	Greene's narrow-leaved daisy	Asteraceae	perennial herb	1B.2	S2	G2
<u>Erigeron serpentinus</u>	serpentine daisy	Asteraceae	perennial herb	1B.3	S2	G2
<u>Eriogonum cedrorum</u>	The Cedars buckwheat	Polygonaceae	perennial herb	1B.3	S1	G1
<u>Eriogonum nervulosum</u>	Snow Mountain buckwheat	Polygonaceae	perennial rhizomatous herb	1B.2	S2	G2
<u>Fritillaria liliacea</u>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
<u>Hemizonia congesta ssp. congesta</u>	congested-headed hayfield tarplant	Asteraceae	annual herb	1B.2	S1S2	G5T1T2
<u>Hesperolinon adenophyllum</u>	glandular western flax	Linaceae	annual herb	1B.2	S3	G3
<u>Horkelia tenuiloba</u>	thin-lobed horkelia	Rosaceae	perennial herb	1B.2	S2	G2
<u>Lasthenia burkei</u>	Burke's goldfields	Asteraceae	annual herb	1B.1	S1	G1
<u>Layia septentrionalis</u>	Colusa layia	Asteraceae	annual herb	1B.2	S2	G2
<u>Leptosiphon jepsonii</u>	Jepson's leptosiphon	Polemoniaceae	annual herb	1B.2	S2	G2
<u>Lessingia arachnoidea</u>	Crystal Springs lessingia	Asteraceae	annual herb	1B.2	S1	G1
<u>Limnanthes vinculans</u>	Sebastopol meadowfoam	Limnanthaceae	annual herb	1B.1	S1	G1
<u>Lupinus sericatus</u>	Cobb Mountain lupine	Fabaceae	perennial herb	1B.2	S2	G2
<u>Microseris paludosa</u>	marsh microseris	Asteraceae	perennial herb	1B.2	S2	G2
<u>Navarretia leucocephala ssp. bakeri</u>	Baker's navarretia	Polemoniaceae	annual herb	1B.1	S2	G4T2
<u>Navarretia leucocephala ssp. pauciflora</u>	few-flowered navarretia	Polemoniaceae	annual herb	1B.1	S1	G4T1
<u>Navarretia leucocephala ssp. pliantha</u>	many-flowered navarretia	Polemoniaceae	annual herb	1B.2	S1	G4T1
<u>Panicum acuminatum var. thermale</u>	Geysers panicum	Poaceae	annual / perennial herb	1B.2	S2	G5T2Q
<u>Piperia candida</u>	white-flowered rein orchid	Orchidaceae	perennial herb	1B.2	S2	G3?
<u>Sidalcea malviflora ssp. purpurea</u>	purple-stemmed checkerbloom	Malvaceae	perennial rhizomatous herb	1B.2	S1	G5T1
<u>Sidalcea oregana ssp. hydrophila</u>	marsh checkerbloom	Malvaceae	perennial herb	1B.2	S3	G5T3
<u>Streptanthus brachiatus ssp. brachiatus</u>	Socrates Mine jewel-flower	Brassicaceae	perennial herb	1B.2	S1	G2T1
<u>Streptanthus brachiatus ssp. hoffmanii</u>	Freed's jewel-flower	Brassicaceae	perennial herb	1B.2	S2	G2T2
<u>Streptanthus glandulosus ssp. hoffmanii</u>	Hoffman's bristly jewel-flower	Brassicaceae	annual herb	1B.3	SH	G4TH
<u>Streptanthus morrisonii ssp. elatus</u>	Three Peaks jewel-flower	Brassicaceae	perennial herb	1B.2	S2	G2T2
<u>Streptanthus morrisonii ssp. hirtiflorus</u>	Dorr's Cabin jewel-flower	Brassicaceae	perennial herb	1B.2	S1	G2T1

Streptanthus morrisonii ssp. kruckebergii	Kruckeberg's jewel-flower	Brassicaceae	perennial herb	1B.2	S1	G2T1
Streptanthus morrisonii ssp. morrisonii	Morrison's jewel-flower	Brassicaceae	perennial herb	1B.2	S2	G2T2
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	1B.1	S2	G2

Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 05 August 2015].

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Taxonomic Group is (Fish or Amphibians or Reptiles or Birds or Mammals or Mollusks or Arachnids or Crustaceans or Insects or Ferns or Gymnosperms or Monocots or Dicots or Lichens or Bryophytes) and Other Status Contains (CDFW_FP-Fully Protected or CDFW_SSC-Species of Special Concern or CDFW_WL-Watch List or MMC_SSC-Species of Special Concern) and Quad is (Geyserville (3812268) or Jintown (3812267))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Arborimus pomo</i> Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Elanus leucurus</i> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Hysteroecarpus traski pomo</i> Russian River tule perch	AFCQK02011	None	None	G5T4	S4	SSC
<i>Mylopharodon conocephalus</i> hardhead	AFCJB25010	None	None	G3	S3	SSC
<i>Pandion haliaetus</i> osprey	ABNKC01010	None	None	G5	S4	WL
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC

Record Count: 9



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: (Federal Listing Status is (Endangered or Threatened or Proposed Endangered or Proposed Threatened or Candidate) or State Listing Status is (Endangered or Threatened or Candidate Endangered or Candidate Threatened)) and Quad is (Geyserville (3812268) or Jimtown (3812267))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Lasthenia burkei</i> Burke's goldfields	PDAST5L010	Endangered	Endangered	G1	S1	1B.1

Record Count: 1

APPENDIX C

SITE PHOTOGRAPHS

Site Photographs



Photo 1: Ruderal/developed habitat in the northern portion of the site, with the riparian corridor of Foss Creek in the background.



Photo 2: Ruderal/developed habitat in the eastern portion of the site with mixed oak woodland in the background.



Photo 3: Ruderal/developed habitat in the western portion of the site with mixed oak woodland in the background.



Photo 4: Riparian habitat along Foss Creek in the east central portion of the site.



Photo 5: Riparian habitat along the unnamed tributary in the west central portion of the site.



Photo 6: Riparian habitat along the unnamed tributary in the east central portion of the site.

B.2 - Arborist Report 2015

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HORTICULTURAL

Associates

Consultants in Horticulture and Arboriculture

TREE PRESERVATION AND MITIGATION REPORT

The Oaks at Foss Creek
Healdsburg, California

Prepared for:

Mr. Doyle Heaton
DRG Builders
3496 Buskirk Avenue, Suite 104
Pleasant Hill, California 94523

Prepared by:

John C. Meserve
Consulting Arborist and Horticulturist
Member, American Society of Consulting Arborists
ISA Certified Arborist, WE #0478A
ISA Tree Risk Assessment Qualified

December 15, 2015

December 15, 2015

Mr. Doyle Heaton
DRG Builders
3496 Buskirk Avenue, Suite 104
Pleasant Hill, California 94523

Re: Completed and Updated *Tree Preservation and Mitigation Report*, The Oaks at Foss Creek,
Healdsburg, California

Doyle,

Attached you will find our updated *Tree Preservation and Mitigation Report* for the above noted proposed residential project site. A total of 90 trees were evaluated based on requirements of the Healdsburg Tree Ordinance.

This updated report reflects revisions to the original plan that have been made to preserve a greater number of trees. The original plan, which was evaluated in our October 17, 2015 report, would have caused the removal of all site trees except for one. The revised plan now allows the effective preservation of 17 trees.

Each tree in this report was evaluated and documented for species, size, health, and structural condition. We have also provided our estimate of the potential development impact on each tree, as well as specific recommendations for preservation or removal. The *Tree Location Plan* shows the location and numbering sequence of all evaluated trees. Also included are a *Tree Fencing Detail*, *Tree Preservation Guidelines* and *Pruning Standards*.

This report is intended to be a basic inventory of trees present at this site, which includes a general review of tree health and structural condition. No in-depth evaluation has occurred, and assessment has included only external visual examination without probing, drilling, coring, root collar examination, root excavation, or dissecting any tree part. Failures, deficiencies, and problems may occur in these trees in the future, and this inventory in no way guarantees or provides a warranty for their condition.

EXISTING SITE CONDITION SUMMARY

The proposed project will cover several parcels of land that include existing residences, outbuildings, and storage facilities. Two creeks bisect the sites, and these have 25' and 35' setbacks where no development will occur. These riparian corridors contain many large riparian trees, and because these areas are protected no trees were inventoried there.

EXISTING TREE SUMMARY

Existing native trees at the site include Valley Oak (*Quercus lobata*), Coast Live Oak (*Quercus agrifolia*), Black Oak (*Quercus kelloggii*), Black Walnut (*Juglans nigra*), and Oregon Ash (*Fraxinus latifolia*).

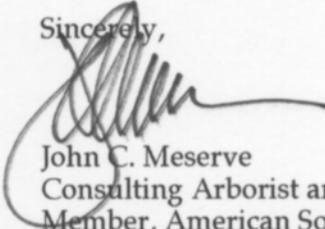
Non-native species including some which have been planted and many which have occurred as volunteers include English Walnut (*Juglans regia*), Chinese Elm (*Ulmus parvifolia*), Canary Island Date Palm (*Phoenix canariensis*), Fig (*Ficus carica*), Apple (*Malus domestica*), Plane Tree (*Platanus acerifolia*), Euonymus (*Euonymus japonica*), and Sweetgum (*Liquidambar styraciflua*).

CONSTRUCTION IMPACT SUMMARY

The revised plan reviewed for this updated report will preserve 17 trees and remove 73 trees. This is a significant improvement in the number of trees that will be protected.

Please feel free to contact me if you have questions regarding this report, or if further discussion about any tree issue is required.

Sincerely,



John C. Meserve
Consulting Arborist and Horticulturist
Member, American Society of Consulting Arborists
ISA Certified Arborist, WE #0478A
ISA Tree Risk Assessment Qualified



TREE INVENTORY CHART

TREE INVENTORY
The Oaks at Foss Creek
Healdsburg, CA

December 15, 2015

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
1	<i>Quercus lobata</i>	Valley Oak	21	45	22	4	3	3	2
2	<i>Quercus lobata</i>	Valley Oak	17	40	18	4	3	3	2
3	<i>Quercus agrifolia</i>	Coast Live Oak	19+19+16	45	30	4	3	2	1, 6, 7, 8
4	<i>Quercus agrifolia</i>	Coast Live Oak	12+21	45	22	4	3	3	2
5	<i>Quercus lobata</i>	Valley Oak	12+18	45	25	4	3	3	2
6	<i>Quercus lobata</i>	Valley Oak	17+14	45	30	4	3	3	2
7	<i>Quercus lobata</i>	Valley Oak	11	30	18	2	3	3	2
8	<i>Quercus agrifolia</i>	Coast Live Oak	23	40	25	4	3	1	1, 6, 7, 8
9	<i>Quercus lobata</i>	Valley Oak	8	40	15	4	3	3	2
10	<i>Quercus lobata</i>	Valley Oak	12	40	15	4	3	3	2
11	<i>Quercus agrifolia</i>	Coast Live Oak	12	35	15	4	3	3	2
12	<i>Quercus agrifolia</i>	Coast Live Oak	26	45	22	4	3	3	2
13	<i>Quercus agrifolia</i>	Coast Live Oak	11	35	16	4	3	3	2
14	<i>Quercus lobata</i>	Valley Oak	7	30	14	4	3	3	2
15	<i>Quercus agrifolia</i>	Coast Live Oak	5	20	10	4	4	3	2
16	<i>Quercus agrifolia</i>	Coast Live Oak	7+4	20	10	4	4	3	2
17	<i>Quercus agrifolia</i>	Coast Live Oak	10	22	12	4	4	3	2
18	<i>Quercus agrifolia</i>	Coast Live Oak	10+8	20	12	4	4	3	0
19	<i>Quercus agrifolia</i>	Coast Live Oak	9+5	20	12	4	4	3	2
20	<i>Quercus agrifolia</i>	Coast Live Oak	10+10	16	14	4	3	3	2
21	<i>Quercus lobata</i>	Valley Oak	12	40	18	4	3	3	2
22	<i>Quercus lobata</i>	Valley Oak	14	40	18	4	3	3	2
23	<i>Quercus lobata</i>	Valley Oak	10+13	40	18	4	3	3	2
24	<i>Quercus agrifolia</i>	Coast Live Oak	20+20	40	21	2.5	3	3	2
25	<i>Olea europaea</i>	Olive	8+14	35	18	3	3	3	2

HORTICULTURAL ASSOCIATES
P.O. Box 1261, Glen Ellen, CA 95442
707.935.3911

TREE INVENTORY
The Oaks at Foss Creek
Healdsburg, CA

December 15, 2015

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
26	<i>Olea europaea</i>	Olive	16+17	35	25	4	3	3	2
27	<i>Quercus agrifolia</i>	Coast Live Oak	17	45	25	3	3	1	1, 6, 7, 8
28	<i>Olea europaea</i>	Olive	23	20	15	3	3	3	2
29	<i>Quercus lobata</i>	Valley Oak	15+10	40	21	4	3	3	2
30	<i>Quercus lobata</i>	Valley Oak	20	40	21	4	3	3	2
31	<i>Juglans regia</i>	English Walnut	16	20	15	2	3	3	2
32	<i>Quercus agrifolia</i>	Coast Live Oak	5x13+8+10+12+13	45	30	4	2	3	2
33	<i>Olea europaea</i>	Olive	36	12	8	2	1	3	2
34	<i>Quercus agrifolia</i>	Coast Live Oak	13+17	40	21	4	3	3	2
35	<i>Quercus agrifolia</i>	Coast Live Oak	11+10	35	15	4	3	3	2
36	<i>Ulmus parvifolia</i>	Evergreen Elm	19	18	10	1	1	3	2, 3
37	<i>Quercus lobata</i>	Valley Oak	10+10	35	12	4	3	1	1, 6, 7, 8
38	<i>Quercus lobata</i>	Valley Oak	6	35	10	4	3	3	2
39	<i>Quercus agrifolia</i>	Coast Live Oak	11+12	35	25	4	3	3	2
40	<i>Quercus lobata</i>	Valley Oak	13	40	16	4	3	1	1, 6, 7, 8
41	<i>Phoenix canariensis</i>	Canary Island Date Palm	32	30	15	4	3	3	2
42	<i>Fraxinus latifolia</i>	Oregon Ash	10	35	15	4	3	3	2
43	<i>Juglans nigra</i>	Black Walnut	20	40	20	3	2	3	2
44	<i>Quercus agrifolia</i>	Coast Live Oak	18	40	25	3	3	3	2
45	<i>Quercus agrifolia</i>	Coast Live Oak	7+6	18	12	4	4	3	2
46	<i>Olea europaea</i>	Olive	12+12	20	16	4	3	1	1, 6, 7, 8
47	<i>Ficus carica</i>	Fig	6	8	6	4	4	3	2
48	<i>Quercus lobata</i>	Valley Oak	8+12	35	18	4	3	3	2
49	<i>Quercus agrifolia</i>	Coast Live Oak	4+4+4	15	12	4	4	3	2
50	<i>Quercus agrifolia</i>	Coast Live Oak	17	25	21	4	3	3	2

HORTICULTURAL ASSOCIATES
P.O. Box 1261, Glen Ellen, CA 95442
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TREE INVENTORY
The Oaks at Foss Creek
Healdsburg, CA

December 15, 2015

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
51	<i>Quercus agrifolia</i>	Coast Live Oak	10	25	12	3	2	3	2
52	<i>Quercus agrifolia</i>	Coast Live Oak	6	14	10	4	3	3	2
53	<i>Quercus agrifolia</i>	Coast Live Oak	5+6+8	22	12	4	3	3	2
54	<i>Quercus agrifolia</i>	Coast Live Oak	6	15	10	4	3	3	2
55	<i>Quercus agrifolia</i>	Coast Live Oak	6+5	14	10	4	3	3	2
56	<i>Quercus agrifolia</i>	Coast Live Oak	5+5	12	10	4	3	3	2
57	<i>Quercus agrifolia</i>	Coast Live Oak	8+5	21	12	4	3	3	2
58	<i>Quercus lobata</i>	Valley Oak	6	24	14	4	3	3	2
59	<i>Quercus lobata</i>	Valley Oak	12+17	40	28	3	3	3	2
60	<i>Malus domestica</i>	Apple	6+4+3	12	12	3	1	3	2
61	<i>Quercus agrifolia</i>	Coast Live Oak	4x8	15	14	4	3	3	2
62	<i>Quercus agrifolia</i>	Coast Live Oak	8+6	21	12	4	3	3	2
63	<i>Quercus agrifolia</i>	Coast Live Oak	6+4	18	10	4	3	3	2
64	<i>Quercus agrifolia</i>	Coast Live Oak	10	21	10	4	3	3	2
65	<i>Quercus agrifolia</i>	Coast Live Oak	6	18	8	4	3	3	2
66	<i>Platanus acerifolia</i>	Plane Tree	21	45	16	4	3	3	2
67	<i>Quercus agrifolia</i>	Coast Live Oak	19	25	22	3	3	2	1, 6, 7, 8
68	<i>Quercus agrifolia</i>	Coast Live Oak	15+25	40	28	3	3	2	1, 6, 7, 8
69	<i>Quercus agrifolia</i>	Coast Live Oak	29	45	28	4	3	2	1, 6, 7, 8
70	<i>Euonymus japonica</i>	Euonymus	10	12	10	4	3	3	2
71	<i>Malus domestica</i>	Apple	7	12	10	4	3	3	2
72	<i>Liquidambar styraciflua</i>	Sweetgum	±24	50	15	3	2	3	2, 3
73	<i>Liquidambar styraciflua</i>	Sweetgum	±14+5	50	15	3	3	3	2
74	<i>Quercus agrifolia</i>	Coast Live Oak	23	40	20	4	3	3	2
75	<i>Quercus lobata</i>	Valley Oak	30	45	30	4	3	3	2

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TREE INVENTORY
The Oaks at Foss Creek
Healdsburg, CA

December 15, 2015

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
76	<i>Quercus agrifolia</i>	Coast Live Oak	22	45	25	4	3	1	1, 6, 7, 8
77	<i>Quercus agrifolia</i>	Coast Live Oak	20+7	45	30	2	1	3	2, 3
78	<i>Quercus agrifolia</i>	Coast Live Oak	18	45	30	4	1	3	2
79	<i>Quercus kelloggii</i>	Black Oak	11+11+16	40	25	4	3	3	2
80	<i>Quercus agrifolia</i>	Coast Live Oak	12+12	35	18	4	2	3	2
81	<i>Quercus agrifolia</i>	Coast Live Oak	8+20	40	18	3	3	1	1, 6, 7, 8
82	<i>Quercus agrifolia</i>	Coast Live Oak	22	40	25	4	3	1	1, 6, 7, 8
83	<i>Quercus agrifolia</i>	Coast Live Oak	16	40	25	3	3	3	2
84	<i>Quercus agrifolia</i>	Coast Live Oak	15+10+12	40	20	3	3	3	2
85	<i>Quercus lobata</i>	Valley Oak	23+19	45	30	4	3	1	1, 6, 7, 8
86	<i>Quercus agrifolia</i>	Coast Live Oak	15	15	8	3	3	1	1, 6, 7, 8
87	<i>Quercus kelloggii</i>	Black Oak	6+9	40	16	4	1	1	1, 6, 7, 8
88	<i>Quercus agrifolia</i>	Coast Live Oak	14	40	16	3	3	1	1, 6, 7, 8
89	<i>Quercus agrifolia</i>	Coast Live Oak	18	18	18	2	3	1	1, 6, 7, 8
90	<i>Quercus agrifolia</i>	Coast Live Oak	6	21	12	3	3	3	2

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KEY TO TREE
INVENTORY CHART

KEY TO TREE INVENTORY CHART

The Oaks at Foss Creek

Healdsburg, California

Tree Number

Each tree has been identified in the field with an aluminum tag and reference number. Tags are attached to the trunk at approximately eye level. The *Tree Location Plan* illustrates the location of each numbered tree.

Species

Each tree has been identified by genus, species and common name. Many species have more than one common name.

Trunk

Each trunk has been measured or estimated, in inches, to document its diameter, at 4.5 feet above adjacent grade. Trunk diameter is a good indicator of age, and is commonly used to determine mitigation replacement requirements.

Height

Height is estimated in feet, using visual assessment.

Radius

Radius is estimated in feet, using visual assessment. Since many canopies are asymmetrical, it is not uncommon for a radius estimate to be an average of the canopy size.

Health

The following descriptions are used to rate the health of a tree. Trees with a rating of 4 or 5 are very good candidates for preservation and will tolerate more construction impacts than trees in poorer condition. Trees with a rating of 3 may or may not be good candidates for preservation, depending on the species and expected construction impacts. Trees with a rating of 1 or 2 are generally poor candidates for preservation.

- (5) Excellent - health and vigor are exceptional, no pest, disease, or distress symptoms.
- (4) Good - health and vigor are average, no significant or specific distress symptoms, no significant pest or disease.
- (3) Fair - health and vigor are somewhat compromised, distress is visible, pest or disease may be present and affecting health, problems are generally correctable.
- (2) Marginal - health and vigor are significantly compromised, distress is highly visible and present to the degree that survivability is in question.
- (1) Poor - decline has progressed beyond the point of being able to return to a healthy condition again. Long-term survival is not expected. This designation includes dead trees.

Structure

The following descriptions are used to rate the structural integrity of a tree. Trees with a rating of 3 or 4 are generally stable, sound trees which do not require significant pruning, although cleaning, thinning, or raising the canopy might be desirable. Trees with a rating of 2 are generally poor candidates for preservation unless they are preserved well away from improvements or active use areas. Significant time and effort would be required to reconstruct the canopy and improve structural integrity. Trees with a rating of 1 are hazardous and should be removed.

- (4) Good structure - minor structural problems may be present which do not require corrective action.
- (3) Moderate structure - normal, typical structural issues which can be corrected with pruning.
- (2) Marginal structure - serious structural problems are present which may or may not be correctable with pruning, cabling, bracing, etc.
- (1) Poor structure - hazardous structural condition which cannot be effectively corrected with pruning or other measures, may require removal depending on location and the presence of targets.

Development Impacts

Considering the proximity of construction activities, type of activities, tree species, and tree condition - the following ratings are used to estimate the amount of impact on tree health and stability. Most trees will tolerate a (1) rating, many trees could tolerate a (2) rating with careful consideration and mitigation, but trees with a (3) rating are poor candidates for preservation due to their very close proximity to construction or because they are located within the footprint of construction and cannot be preserved.

- (3) A significant impact on long term tree integrity can be expected as a result of proposed development.
- (2) A moderate impact on long term tree integrity can be expected as a result of proposed development.
- (1) A very minor or no impact on long term tree integrity can be expected as a result of proposed development.
- (0) No impact is expected

Recommendations

Recommendations are provided for removal or preservation. For those being preserved, protection measures and mitigation procedures to offset impacts and improve tree health are provided.

- (1) Preservation appears to be possible.
- (2) Removal is required due to significant development impacts.
- (3) Removal is recommended due to poor health or hazardous structure.

- (4) Removal is required due to significant development impacts and poor existing condition.
- (5) Removal is recommended due to poor species characteristics.
- (6) Install temporary protective fencing at the edge of the dripline, or edge of approved construction, prior to beginning grading or construction. Maintain fencing in place for duration of all construction activity in the area.
- (7) Maintain existing grade within the fenced portion of the dripline. Route drainage swales and all underground work outside the dripline.
- (8) Place a 4" layer of chipped bark mulch over the soil surface within the fenced dripline prior to installing temporary fencing. Maintain this layer of mulch throughout construction.

B.3 - Arborist Report Revised 2016

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HORTICULTURAL *Associates*

Consultants in Horticulture and Arboriculture

TREE PRESERVATION AND MITIGATION REPORT (Revised and Updated)

The Oaks at Foss Creek
Healdsburg, CA

Prepared for:

Mr. Doyle Heaton
DRG Builders
3496 Buskirk Avenue, Suite 104
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Prepared by:

John C. Meserve
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American Society of Consulting Arborists
ISA Certified Arborist, WE #0478A
ISA Tree Risk Assessment Qualified

September 11, 2016

TREE INVENTORY CHART

TREE INVENTORY (REVISED)
 The Oaks at Foss Creek
 Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 2ft Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
1	<i>Quercus lobata</i>	Valley Oak	21	45	22	4	3	3	2
2	<i>Quercus lobata</i>	Valley Oak	17	40	18	4	3	3	2
3	<i>Quercus agrifolia</i>	Coast Live Oak	19+19+16	45	30	4	3	2	1, 6, 7, 8, 9
4	<i>Quercus agrifolia</i>	Coast Live Oak	12+21	45	22	4	3	3	2
5	<i>Quercus lobata</i>	Valley Oak	12+18	45	25	4	3	3	2
6	<i>Quercus lobata</i>	Valley Oak	17+14	45	30	4	3	3	2
7	<i>Quercus lobata</i>	Valley Oak	11	30	18	2	3	3	2
8	<i>Quercus agrifolia</i>	Coast Live Oak	23	40	25	4	3	3	2
9	<i>Quercus lobata</i>	Valley Oak	8	40	15	4	3	3	2
10	<i>Quercus lobata</i>	Valley Oak	12	40	15	4	3	3	2
11	<i>Quercus agrifolia</i>	Coast Live Oak	12	35	15	4	3	3	2
12	<i>Quercus agrifolia</i>	Coast Live Oak	26	45	22	4	3	3	2
13	<i>Quercus agrifolia</i>	Coast Live Oak	11	35	16	4	3	3	2
14	<i>Quercus lobata</i>	Valley Oak	7	30	14	4	3	3	2
15	<i>Quercus agrifolia</i>	Coast Live Oak	5	20	10	4	4	3	2
16	<i>Quercus agrifolia</i>	Coast Live Oak	7+4	20	10	4	4	3	2
17	<i>Quercus agrifolia</i>	Coast Live Oak	10	22	12	4	4	3	2
18	<i>Quercus agrifolia</i>	Coast Live Oak	10+8	20	12	4	4	3	2
19	<i>Quercus agrifolia</i>	Coast Live Oak	9+5	20	12	4	4	3	2
20	<i>Quercus agrifolia</i>	Coast Live Oak	10+10	16	14	4	3	3	2
21	<i>Quercus lobata</i>	Valley Oak	12	40	18	4	3	3	2
22	<i>Quercus lobata</i>	Valley Oak	14	40	18	4	3	3	2
23	<i>Quercus lobata</i>	Valley Oak	10+13	40	18	4	3	3	2
24	<i>Quercus agrifolia</i>	Coast Live Oak	20+20	40	21	2.5	3	3	2

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TREE INVENTORY (REVISED)
The Oaks at Foss Creek
Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
25	<i>Olea europaea</i>	Olive	8+14	35	18	3	3	3	2
26	<i>Olea europaea</i>	Olive	16+17	35	25	4	3	3	2
27	<i>Quercus agrifolia</i>	Coast Live Oak	17	45	25	3	3	1	1,6,7,8,9
28	<i>Olea europaea</i>	Olive	23	20	15	3	3	3	2
29	<i>Quercus lobata</i>	Valley Oak	15+10	40	21	4	3	3	2
30	<i>Quercus lobata</i>	Valley Oak	20	40	21	4	3	3	2
31	<i>Juglans regia</i>	English Walnut	16	20	15	2	3	3	2
32	<i>Quercus agrifolia</i>	Coast Live Oak	5x13+8+8+10+12+13	45	30	4	2	3	2
33	<i>Olea europaea</i>	Olive	36	12	8	2	1	3	2
34	<i>Quercus agrifolia</i>	Coast Live Oak	13+17	40	21	4	3	3	2
35	<i>Quercus agrifolia</i>	Coast Live Oak	11+10	35	15	4	3	3	2
36	<i>Ulmus parvifolia</i>	Evergreen Elm	19	18	10	1	1	3	2,3
37	<i>Quercus lobata</i>	Valley Oak	10+10	35	12	4	3	1	1,6,7,8,9
38	<i>Quercus lobata</i>	Valley Oak	6	35	10	4	3	3	2
39	<i>Quercus agrifolia</i>	Coast Live Oak	11+12	35	25	4	3	3	2
40	<i>Quercus lobata</i>	Valley Oak	13	40	16	4	1	1	1,6,7,8,9
41	<i>Phoenix canariensis</i>	Canary Island Date Palm	32	30	15	4	3	3	2
42	<i>Fraxinus latifolia</i>	Oregon Ash	10	35	15	4	3	3	2
43	<i>Juglans nigra</i>	Black Walnut	20	40	20	3	2	3	2
44	<i>Quercus agrifolia</i>	Coast Live Oak	18	40	25	3	3	3	2
45	<i>Quercus agrifolia</i>	Coast Live Oak	7+6	18	12	4	4	3	2
46	<i>Olea europaea</i>	Olive	12+12	20	16	4	3	1	1,6,7,8,9
47	<i>Ficus carica</i>	Fig	6	8	6	4	4	3	2
48	<i>Quercus lobata</i>	Valley Oak	8+12	35	18	4	3	3	2

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TREE INVENTORY (REVISED)
 The Oaks at Foss Creek
 Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
49	<i>Quercus agrifolia</i>	Coast Live Oak	4+4+4	15	12	4	4	3	2
50	<i>Quercus agrifolia</i>	Coast Live Oak	17	25	21	4	3	3	2
51	<i>Quercus agrifolia</i>	Coast Live Oak	10	25	12	3	2	3	2
52	<i>Quercus agrifolia</i>	Coast Live Oak	6	14	10	4	3	3	2
53	<i>Quercus agrifolia</i>	Coast Live Oak	5+6+8	22	12	4	3	3	2
54	<i>Quercus agrifolia</i>	Coast Live Oak	6	15	10	4	3	3	2
55	<i>Quercus agrifolia</i>	Coast Live Oak	6+5	14	10	4	3	3	2
56	<i>Quercus agrifolia</i>	Coast Live Oak	5+5	12	10	4	3	3	2
57	<i>Quercus agrifolia</i>	Coast Live Oak	8+5	21	12	4	3	3	2
58	<i>Quercus lobata</i>	Valley Oak	6	24	14	4	3	3	2
59	<i>Quercus lobata</i>	Valley Oak	12+17	40	28	3	3	3	2
60	<i>Malus domestica</i>	Apple	6+4+3	12	12	3	1	3	2
61	<i>Quercus agrifolia</i>	Coast Live Oak	4x8	15	14	4	3	3	2
62	<i>Quercus agrifolia</i>	Coast Live Oak	8+6	21	12	4	3	3	2
63	<i>Quercus agrifolia</i>	Coast Live Oak	6+4	18	10	4	3	3	2
64	<i>Quercus agrifolia</i>	Coast Live Oak	10	21	10	4	3	3	2
65	<i>Quercus agrifolia</i>	Coast Live Oak	6	18	8	4	3	3	2
66	<i>Platanus acerifolia</i>	Plane Tree	21	45	16	4	3	3	2
67	<i>Quercus agrifolia</i>	Coast Live Oak	19	25	22	3	3	2	1,6,7,8,9
68	<i>Quercus agrifolia</i>	Coast Live Oak	15+25	40	28	3	3	2	2
69	<i>Quercus agrifolia</i>	Coast Live Oak	29	45	28	4	3	2	2
70	<i>Euonymus japonica</i>	Euonymus	10	12	10	4	3	3	2
71	<i>Malus domestica</i>	Apple	7	12	10	4	3	3	2
72	<i>Liquidambar styraciflua</i>	Sweetgum	±24	50	15	3	2	3	2,3

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TREE INVENTORY (REVISED)
The Oaks at Foss Creek
Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
73	<i>Liquidambar styraciflua</i>	Sweetgum	±14+5	50	15	3	3	3	2
74	<i>Quercus agrifolia</i>	Coast Live Oak	23	40	20	4	3	3	2
75	<i>Quercus lobata</i>	Valley Oak	30	45	30	4	3	3	2
76	<i>Quercus agrifolia</i>	Coast Live Oak	22	45	25	4	3	1	2
77	<i>Quercus agrifolia</i>	Coast Live Oak	20+7	45	30	2	1	3	2,3
78	<i>Quercus agrifolia</i>	Coast Live Oak	18	45	30	4	1	3	2
79	<i>Quercus kelloggii</i>	Black Oak	11+11+16	40	25	4	3	3	2
80	<i>Quercus agrifolia</i>	Coast Live Oak	12+12	35	18	4	2	3	2
81	<i>Quercus agrifolia</i>	Coast Live Oak	8+20	40	18	3	3	1	1,6,7,8,9
82	<i>Quercus agrifolia</i>	Coast Live Oak	22	40	25	4	3	1	1,6,7,8,9
83	<i>Quercus agrifolia</i>	Coast Live Oak	16	40	25	3	3	3	2
84	<i>Quercus agrifolia</i>	Coast Live Oak	15+10+12	40	20	3	3	3	2
85	<i>Quercus lobata</i>	Valley Oak	23+19	45	30	4	3	1	1,6,7,8,9
86	<i>Quercus agrifolia</i>	Coast Live Oak	15	15	8	3	3	1	1,6,7,8,9
87	<i>Quercus kelloggii</i>	Black Oak	6+9	40	16	4	1	1	1,6,7,8,9
88	<i>Quercus agrifolia</i>	Coast Live Oak	14	40	16	3	3	1	1,6,7,8,9
89	<i>Quercus agrifolia</i>	Coast Live Oak	18	18	18	2	3	1	1,6,7,8,9
90	<i>Quercus agrifolia</i>	Coast Live Oak	6	21	12	3	3	3	2
Riparian Corridors									
91	<i>Quercus agrifolia</i>	Coast Live Oak	8	20	12	4	4	1	1,6,7
92	<i>Quercus agrifolia</i>	Coast Live Oak	13	20	14	3	3	1	1,6,7
93	<i>Salix species</i>	Willow	12	10	14	4	3	1	1,6,7
94	<i>Quercus agrifolia</i>	Coast Live Oak	5	14	8	5	4	1	1,6,7
95	<i>Quercus lobata</i>	Valley Oak	13	35	15	4	3	1	1,6,7

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TREE INVENTORY (REVISED)
The Oaks at Foss Creek
Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
96	<i>Quercus agrifolia</i>	Coast Live Oak	12	35	15	4	3	1	1, 6, 7
97	<i>Quercus agrifolia</i>	Coast Live Oak	12	35	15	4	3	1	1, 6, 7
98	<i>Quercus agrifolia</i>	Coast Live Oak	6	12	12	3	3	1	1, 6, 7
99	<i>Quercus agrifolia</i>	Coast Live Oak	24	40	20	3	3	1	1, 6, 7
100	<i>Quercus agrifolia</i>	Coast Live Oak	13	15	15	3	3	1	1, 6, 7
101	<i>Quercus lobata</i>	Valley Oak	31	45	21	4	3	1	1, 6, 7
102	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	12	3	3	1	1, 6, 7
103	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	12	3	3	1	1, 6, 7
104	<i>Quercus agrifolia</i>	Coast Live Oak	7	25	12	2	3	1	1, 6, 7
105	<i>Quercus agrifolia</i>	Coast Live Oak	15	25	12	2	3	1	1, 6, 7
106	<i>Quercus agrifolia</i>	Coast Live Oak	10	14	12	2	3	1	1, 6, 7
107	<i>Quercus lobata</i>	Valley Oak	42	45	25	3	3	1	1, 6, 7
108	<i>Quercus lobata</i>	Valley Oak	30+8	45	30	4	3	1	1, 6, 7
109	<i>Quercus agrifolia</i>	Coast Live Oak	25+31+11	40	30	3	3	1	1, 6, 7
110	<i>Quercus lobata</i>	Valley Oak	14	40	20	3	3	1	1, 6, 7
111	<i>Quercus lobata</i>	Valley Oak	22	40	25	3	3	1	1, 6, 7
112	<i>Quercus agrifolia</i>	Coast Live Oak	36+17+17+20+8	45	30	3	3	1	1, 6, 7
113	<i>Quercus agrifolia</i>	Coast Live Oak	6	12	10	2	3	1	1, 6, 7
114	<i>Quercus agrifolia</i>	Coast Live Oak	12+10	15	14	3	3	1	1, 6, 7
115	<i>Quercus agrifolia</i>	Coast Live Oak	9	24	12	3	3	1	1, 6, 7
116	<i>Quercus agrifolia</i>	Coast Live Oak	16+18+25	45	30	3	3	1	1, 6, 7
117	<i>Quercus agrifolia</i>	Coast Live Oak	15	45	18	3	3	1	1, 6, 7
118	<i>Quercus agrifolia</i>	Coast Live Oak	11+13	35	16	3	3	1	1, 6, 7
119	<i>Quercus agrifolia</i>	Coast Live Oak	21	45	18	3	3	1	1, 6, 7

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TREE INVENTORY (REVISED)
 The Oaks at Foss Creek
 Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
120	<i>Quercus agrifolia</i>	Coast Live Oak	10	18	12	3	3	1	1, 6, 7
121	<i>Quercus agrifolia</i>	Coast Live Oak	52	50	30	4	2	1	1, 6, 7
122	<i>Quercus agrifolia</i>	Coast Live Oak	12	21	25	4	2	1	1, 6, 7
123	<i>Quercus lobata</i>	Valley Oak	12+13+24+28	50	30	3	2	1	1, 6, 7
124	<i>Quercus agrifolia</i>	Coast Live Oak	18+26+24	20	30	4	3	1	1, 6, 7
125	<i>Quercus lobata</i>	Valley Oak	10	14	21	4	3	1	1, 6, 7
126	<i>Quercus agrifolia</i>	Coast Live Oak	18	40	18	4	3	1	1, 6, 7
127	<i>Quercus agrifolia</i>	Coast Live Oak	18	35	18	4	3	1	1, 6, 7
128	<i>Quercus lobata</i>	Valley Oak	18+21+20+15	45	30	3	3	1	1, 6, 7
129	<i>Quercus agrifolia</i>	Coast Live Oak	20	40	16	4	3	1	1, 6, 7
130	<i>Quercus agrifolia</i>	Coast Live Oak	20	35	16	4	3	3	2
131	<i>Quercus agrifolia</i>	Coast Live Oak	6	16	12	4	3	3	2
132	<i>Quercus agrifolia</i>	Coast Live Oak	15	40	18	4	3	1	1, 6, 7
133	<i>Quercus lobata</i>	Valley Oak	9	15	12	3	3	1	1, 6, 7
134	<i>Quercus lobata</i>	Valley Oak	8	15	12	3	3	1	1, 6, 7
135	<i>Quercus agrifolia</i>	Coast Live Oak	10	25	15	3	3	3	2
136	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	12	4	3	1	1, 6, 7
137	<i>Quercus lobata</i>	Valley Oak	12+12+14+20+8	40	30	3	3	1	1, 6, 7
138	<i>Quercus lobata</i>	Valley Oak	12	40	16	4	3	1	1, 6, 7
139	<i>Quercus agrifolia</i>	Coast Live Oak	14	40	15	4	3	1	1, 6, 7
140	<i>Quercus agrifolia</i>	Coast Live Oak	12+6	35	15	4	3	1	1, 6, 7
141	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	12	4	3	1	1, 6, 7
142	<i>Quercus lobata</i>	Valley Oak	20+12+15+10+10+15+	50	30	3	3	1	1, 6, 7
143	<i>Quercus lobata</i>	Valley Oak	12	25	12	4	3	1	1, 6, 7

HORTICULTURAL ASSOCIATES
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TREE INVENTORY (REVISED)
The Oaks at Foss Creek
Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 2ft Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
144	<i>Quercus lobata</i>	Valley Oak	9	21	12	4	3	1	1, 6, 7
145	<i>Quercus agrifolia</i>	Coast Live Oak	6	20	12	4	3	1	1, 6, 7
146	<i>Quercus lobata</i>	Valley Oak	12	40	14	4	3	1	1, 6, 7
147	<i>Quercus agrifolia</i>	Coast Live Oak	7	18	12	4	3	1	1, 6, 7
148	<i>Quercus lobata</i>	Valley Oak	10	25	12	4	3	3	2
149	<i>Quercus agrifolia</i>	Coast Live Oak	15	30	18	4	3	3	2
150	<i>Quercus lobata</i>	Valley Oak	12	30	18	4	3	3	2
151	<i>Quercus lobata</i>	Valley Oak	31	30	18	3	3	1	1, 6, 7
152	<i>Quercus lobata</i>	Valley Oak	24	40	21	4	3	3	2
153	<i>Quercus lobata</i>	Valley Oak	8	35	16	4	3	1	1, 6, 7
154	<i>Quercus lobata</i>	Valley Oak	11+11+11+6	35	18	4	3	1	1, 6, 7
155	<i>Quercus agrifolia</i>	Coast Live Oak	12	40	16	4	3	1	1, 6, 7
156	<i>Quercus lobata</i>	Valley Oak	7	30	15	3	3	1	1, 6, 7
157	<i>Quercus agrifolia</i>	Coast Live Oak	7	30	15	3	3	1	1, 6, 7
158	<i>Quercus lobata</i>	Valley Oak	9	35	18	4	3	1	1, 6, 7
159	<i>Quercus agrifolia</i>	Coast Live Oak	7+9	35	18	3	3	1	1, 6, 7
160	<i>Quercus agrifolia</i>	Coast Live Oak	8	35	18	3	3	1	1, 6, 7
161	<i>Acacia decurrens</i>	Green Wattle	6+6+5	30	15	4	3	1	1, 6, 7
162	<i>Acacia decurrens</i>	Green Wattle	8	30	15	4	3	1	1, 6, 7
163	<i>Olea europaea</i>	Olive	7	18	16	3	3	1	1, 6, 7
164	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	12	4	3	1	1, 6, 7
165	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	12	4	3	1	1, 6, 7
166	<i>Quercus lobata</i>	Valley Oak	12	35	14	4	3	3	2
167	<i>Quercus lobata</i>	Valley Oak	12+14	35	18	3	3	3	2

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TREE INVENTORY (REVISED)
The Oaks at Foss Creek
Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
168	<i>Quercus agrifolia</i>	Coast Live Oak	13	35	18	3	3	3	2
169	<i>Quercus lobata</i>	Valley Oak	19+12	40	20	3	3	3	2
170	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	14	1	3	3	2
171	<i>Quercus agrifolia</i>	Coast Live Oak	12	35	16	4	3	3	2
172	<i>Quercus lobata</i>	Valley Oak	12+12	30	16	4	3	3	2
173	<i>Quercus agrifolia</i>	Coast Live Oak	12	35	16	4	3	3	2
174	<i>Quercus lobata</i>	Valley Oak	18	40	25	4	3	3	2
175	<i>Quercus agrifolia</i>	Coast Live Oak	6+4	30	15	4	3	3	2
176	<i>Quercus agrifolia</i>	Coast Live Oak	6	30	16	4	3	3	2
177	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	14	3	3	3	2
178	<i>Quercus agrifolia</i>	Coast Live Oak	10	25	14	3	3	3	2
179	<i>Quercus lobata</i>	Valley Oak	16	40	16	3	3	3	2
180	<i>Quercus agrifolia</i>	Coast Live Oak	8	30	15	4	3	1	1, 6, 7
181	<i>Quercus agrifolia</i>	Coast Live Oak	18	45	25	3	3	3	2
182	<i>Quercus agrifolia</i>	Coast Live Oak	6	25	15	3	3	3	2
183	<i>Quercus agrifolia</i>	Coast Live Oak	6	15	18	3	3	3	2
184	<i>Quercus lobata</i>	Valley Oak	12	35	20	4	3	1	1, 6, 7
165	<i>Quercus agrifolia</i>	Coast Live Oak	16	30	25	3	3	1	1, 6, 7
186	<i>Quercus agrifolia</i>	Coast Live Oak	6	21	12	4	3	1	1, 6, 7
187	<i>Quercus lobata</i>	Valley Oak	50	50	30	3	3	1	1, 6, 7
188	<i>Quercus agrifolia</i>	Coast Live Oak	8	20	12	4	3	1	1, 6, 7
189	<i>Quercus agrifolia</i>	Coast Live Oak	25	40	25	3	3	1	1, 6, 7
190	<i>Quercus lobata</i>	Valley Oak	12+14+18	50	25	3	3	1	1, 6, 7
191	<i>Quercus lobata</i>	Valley Oak	4x12+13+15	40	25	3	3	1	1, 6, 7

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TREE INVENTORY (REVISED)
 The Oaks at Foss Creek
 Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 2ft Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
192	<i>Quercus lobata</i>	Valley Oak	12+11+5	35	20	3	3	1	1, 6, 7
193	<i>Quercus lobata</i>	Valley Oak	14	35	20	3	3	1	1, 6, 7
194	<i>Quercus lobata</i>	Valley Oak	6	20	12	3	3	1	1, 6, 7
195	<i>Quercus lobata</i>	Valley Oak	4x6+7	30	15	3	3	1	1, 6, 7
196	<i>Quercus lobata</i>	Valley Oak	12	25	20	2	3	1	1, 6, 7
197	<i>Quercus lobata</i>	Valley Oak	12	30	18	4	3	1	1, 6, 7
198	<i>Quercus lobata</i>	Valley Oak	6+10	30	18	4	3	1	1, 6, 7
199	<i>Quercus lobata</i>	Valley Oak	14	35	18	4	3	1	1, 6, 7
200	<i>Quercus lobata</i>	Valley Oak	6+12	35	20	4	3	1	1, 6, 7
201	<i>Quercus lobata</i>	Valley Oak	13	45	16	4	3	1	1, 6, 7
202	<i>Quercus agrifolia</i>	Coast Live Oak	13+17	45	30	4	3	1	1, 6, 7
203	<i>Quercus lobata</i>	Valley Oak	4x6+5+8+9	35	20	3	3	1	1, 6, 7
204	<i>Quercus agrifolia</i>	Coast Live Oak	8	35	15	4	3	1	1, 6, 7
205	<i>Quercus lobata</i>	Valley Oak	24+17+28	50	30	3	3	1	1, 6, 7
206	<i>Arbutus menziesii</i>	Madrone	10	35	18	4	3	1	1, 6, 7
207	<i>Quercus agrifolia</i>	Coast Live Oak	6+8	22	16	3	3	1	1, 6, 7
208	<i>Quercus kelloggii</i>	Black Oak	6	18	16	3	3	1	1, 6, 7
209	<i>Quercus agrifolia</i>	Coast Live Oak	48	40	30	3	3	1	1, 6, 7
210	<i>Quercus agrifolia</i>	Coast Live Oak	10+22+22	40	30	3	3	1	1, 6, 7
211	<i>Quercus lobata</i>	Valley Oak	14+18	45	30	3	3	1	1, 6, 7
212	<i>Quercus agrifolia</i>	Coast Live Oak	22	45	30	2	3	1	1, 6, 7
213	<i>Quercus agrifolia</i>	Coast Live Oak	12	35	20	4	3	1	1, 6, 7
214	<i>Quercus agrifolia</i>	Coast Live Oak	14	35	20	4	3	1	1, 6, 7
215	<i>Quercus agrifolia</i>	Coast Live Oak	14	30	25	3	3	1	1, 6, 7

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TREE INVENTORY (REVISED)
The Oaks at Foss Creek
Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
216	<i>Quercus agrifolia</i>	Coast Live Oak	6	15	15	3	3	1	1, 6, 7
217	<i>Quercus agrifolia</i>	Coast Live Oak	13	35	18	4	3	1	1, 6, 7
218	<i>Quercus agrifolia</i>	Coast Live Oak	7	25	18	4	3	1	1, 6, 7
219	<i>Quercus kelloggii</i>	Black Oak	7	25	15	4	3	1	1, 6, 7
220	<i>Limbellularia californica</i>	California Bay	12	40	16	4	3	1	1, 6, 7
221	<i>Quercus agrifolia</i>	Coast Live Oak	10	30	16	4	3	1	1, 6, 7
222	<i>Quercus lobata</i>	Valley Oak	17+24	40	30	3	3	1	1, 6, 7
223	<i>Quercus agrifolia</i>	Coast Live Oak	9+23	40	30	3	3	1	1, 6, 7
224	<i>Quercus agrifolia</i>	Coast Live Oak	12+12	40	25	2.5	3	1	1, 6, 7
225	<i>Quercus agrifolia</i>	Coast Live Oak	9	35	18	3	3	1	1, 6, 7
226	<i>Quercus kelloggii</i>	Black Oak	12+17+18	50	30	4	3	1	1, 6, 7
227	<i>Quercus agrifolia</i>	Coast Live Oak	25	45	30	3	3	1	1, 6, 7
228	<i>Quercus agrifolia</i>	Coast Live Oak	10	30	15	3	3	1	1, 6, 7
229	<i>Quercus agrifolia</i>	Coast Live Oak	8	12	15	2	3	1	1, 6, 7
230	<i>Quercus kelloggii</i>	Black Oak	13+16	35	30	3	3	1	1, 6, 7
231	<i>Quercus agrifolia</i>	Coast Live Oak	20	50	26	2	3	1	1, 6, 7
232	<i>Quercus kelloggii</i>	Black Oak	24	50	30	3	3	1	1, 6, 7
233	<i>Aesculus californica</i>	California Buckeye	10	22	18	4	3	1	1, 6, 7
234	<i>Aesculus californica</i>	California Buckeye	8	14	12	4	3	1	1, 6, 7
235	<i>Quercus lobata</i>	Valley Oak	14	40	30	4	3	1	1, 6, 7
236	<i>Quercus lobata</i>	Valley Oak	19	50	28	4	3	1	1, 6, 7
237	<i>Quercus lobata</i>	Valley Oak	12	40	25	4	3	1	1, 6, 7
Added Areas									
238	<i>Quercus lobata</i>	Valley Oak	14	35	20	4	3	3	2

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TREE INVENTORY (REVISED)
The Oaks at Foss Creek
Healdsburg, CA

September 11, 2016

Tree #	Species	Common Name	Trunk Diameter ± 24" Height	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Dev. Impacts	Recommendations
239	<i>Quercus lobata</i>	Valley Oak	4x6	20	15	4	3	3	2
240	<i>Quercus lobata</i>	Valley Oak	8+10+5	35	20	4	3	3	2
241	<i>Umbellularia californica</i>	Bay Laurel	14+11+28+26	45	25	4	3	1	1,6,7
242	<i>Quercus agrifolia</i>	Coast Live Oak	14+17	40	25	4	3	1	1,6,7
243	<i>Quercus lobata</i>	Valley Oak	9	20	15	4	3	3	2
244	<i>Pinus radiata</i>	Monterey Pine	24	40	25	4	3	3	2
245	<i>Pinus radiata</i>	Monterey Pine	24	40	25	1	1	3	3
246	<i>Quercus lobata</i>	Valley Oak	18	30	20	4	3	1	1,6,7
247	<i>Quercus lobata</i>	Valley Oak	15	25	20	4	3	1	1,6,7
248	<i>Quercus agrifolia</i>	Coast Live Oak	8	18	20	4	3	1	1,6,7

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KEY TO TREE
INVENTORY CHART

KEY TO TREE INVENTORY CHART

The Oaks at Foss Creek
Healdsburg, California

Tree Number

Each tree has been identified in the field with an aluminum tag and reference number. Tags are attached to the trunk at approximately eye level and the *Tree Location Plan* illustrates the location of each numbered tree that is outside the creek setback area. Trees in the creek setback area have been tagged and numbered, but only their approximate locations have been illustrated.

Species

Each tree has been identified by genus, species and common name. Many species have more than one common name.

Trunk

Each trunk has been measured or estimated, in inches, to document its diameter at 2 feet above adjacent grade. Trunk diameter is a good indicator of age, and is commonly used to determine mitigation replacement requirements.

Height

Height is estimated in feet, using visual assessment.

Radius

Radius is estimated in feet, using visual assessment. Since many canopies are asymmetrical, it is not uncommon for a radius estimate to be an average of the canopy size.

Health

The following descriptions are used to rate the health of a tree. Trees with a rating of 4 or 5 are very good candidates for preservation and will tolerate more construction impacts than trees in poorer condition. Trees with a rating of 3 may or may not be good candidates for preservation, depending on the species and expected construction impacts. Trees with a rating of 1 or 2 are generally poor candidates for preservation.

- (5) Excellent - health and vigor are exceptional, no pest, disease, or distress symptoms.
- (4) Good - health and vigor are average, no significant or specific distress symptoms, no significant pest or disease.
- (3) Fair - health and vigor are somewhat compromised, distress is visible, pest or disease may be present and affecting health, problems are generally correctable.
- (2) Marginal - health and vigor are significantly compromised, distress is highly visible and present to the degree that survivability is in question.
- (1) Poor - decline has progressed beyond the point of being able to return to a healthy condition again. Long-term survival is not expected. This designation includes dead trees.

Structure

The following descriptions are used to rate the structural integrity of a tree. Trees with a rating of 3 or 4 are generally stable, sound trees which do not require significant pruning, although cleaning, thinning, or raising the canopy might be desirable. Trees with a rating of 2 are generally poor candidates for preservation unless they are preserved well away from improvements or active use areas. Significant time and effort would be required to reconstruct the canopy and improve structural integrity. Trees with a rating of 1 are hazardous and should be removed.

- (4) Good structure - minor structural problems may be present which do not require corrective action.
- (3) Moderate structure - normal, typical structural issues which can be corrected with pruning.
- (2) Marginal structure - serious structural problems are present which may or may not be correctable with pruning, cabling, bracing, etc.
- (1) Poor structure - hazardous structural condition which cannot be effectively corrected with pruning or other measures, may require removal depending on location and the presence of targets.

Development Impacts

Considering the proximity of construction activities, type of activities, tree species, and tree condition - the following ratings are used to estimate the amount of impact on tree health and stability. Most trees will tolerate a (1) rating, many trees could tolerate a (2) rating with careful consideration and mitigation, but trees with a (3) rating are poor candidates for preservation due to their very close proximity to construction or because they are located within the footprint of construction and cannot be preserved.

- (3) A significant impact on long term tree integrity can be expected as a result of proposed development.
- (2) A moderate impact on long term tree integrity can be expected as a result of proposed development.
- (1) A very minor or no impact on long term tree integrity can be expected as a result of proposed development.
- (0) No impact is expected

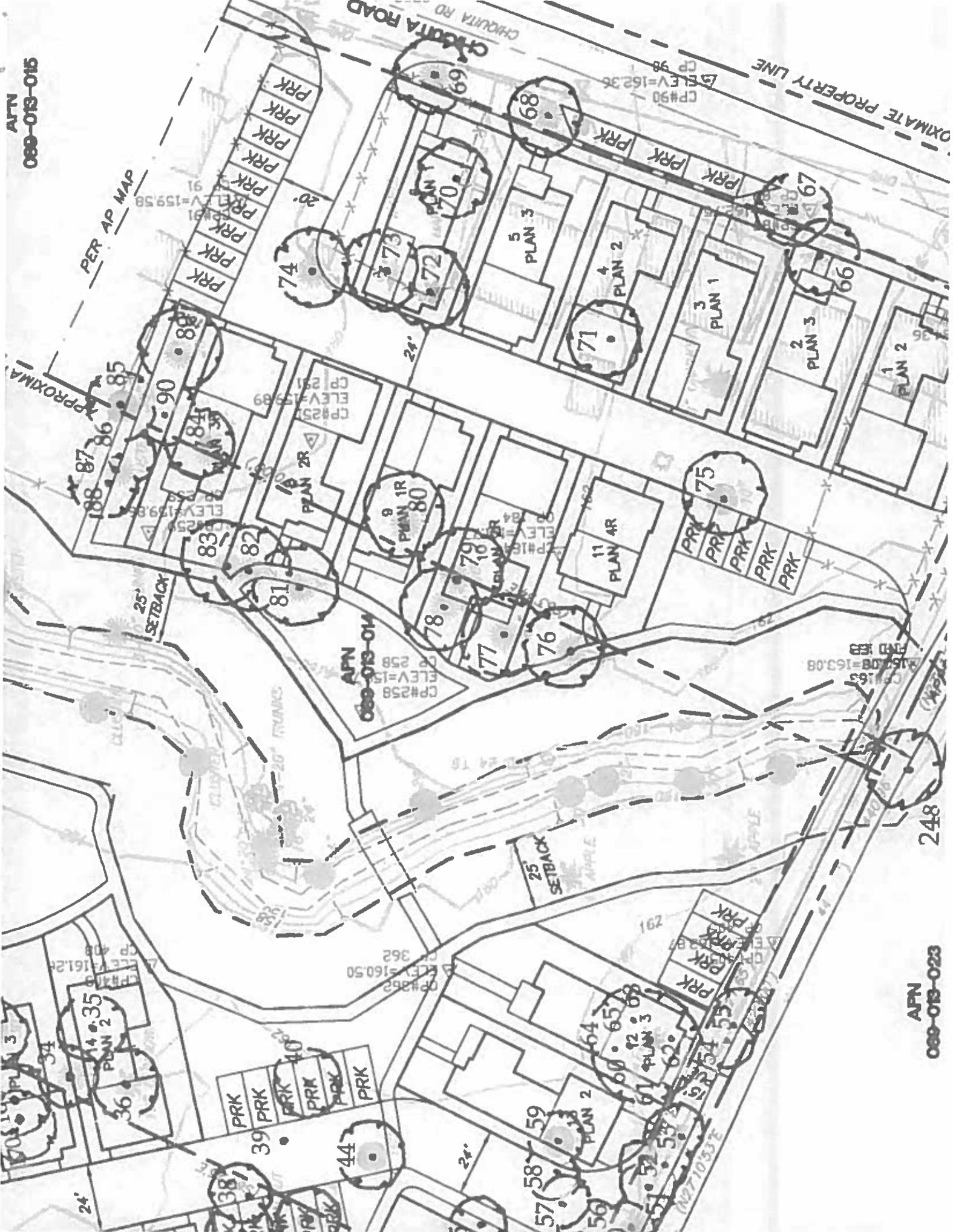
Recommendations

Recommendations are provided for removal or preservation. For those being preserved, protection measures and mitigation procedures to offset impacts and improve tree health are provided.

- (1) Preservation appears to be possible.
- (2) Removal is required due to significant development impacts.

- (3) Removal is recommended due to poor health or hazardous structure.
- (4) Removal is required due to significant development impacts and poor existing condition.
- (5) Removal is recommended due to poor species characteristics.
- (6) Install temporary protective fencing at the edge of the dripline, or edge of approved construction, prior to beginning grading or construction. Maintain fencing in place for duration of all construction activity in the area.
- (7) Maintain existing grade within the fenced portion of the dripline. Route drainage swales and all underground work outside the dripline.
- (8) Place a 4" layer of chipped bark mulch over the soil surface within the fenced dripline prior to installing temporary fencing. Maintain this layer of mulch throughout construction.
- (9) Prune to clean, raise, or provide necessary clearance, per International Society of Arboriculture Pruning Standards. Pruning to occur by, or under the supervision of, an Arborist certified by the International Society of Arboriculture. Pruning Standards are attached to this report.

TREE LOCATION PLAN



ATTN
069-013-015

OXIMATE PROPERTY LINE

PER AP MAP

CHICUITA ROAD

APN
069-013-014

APN
069-013-023

248

25' SETBACK

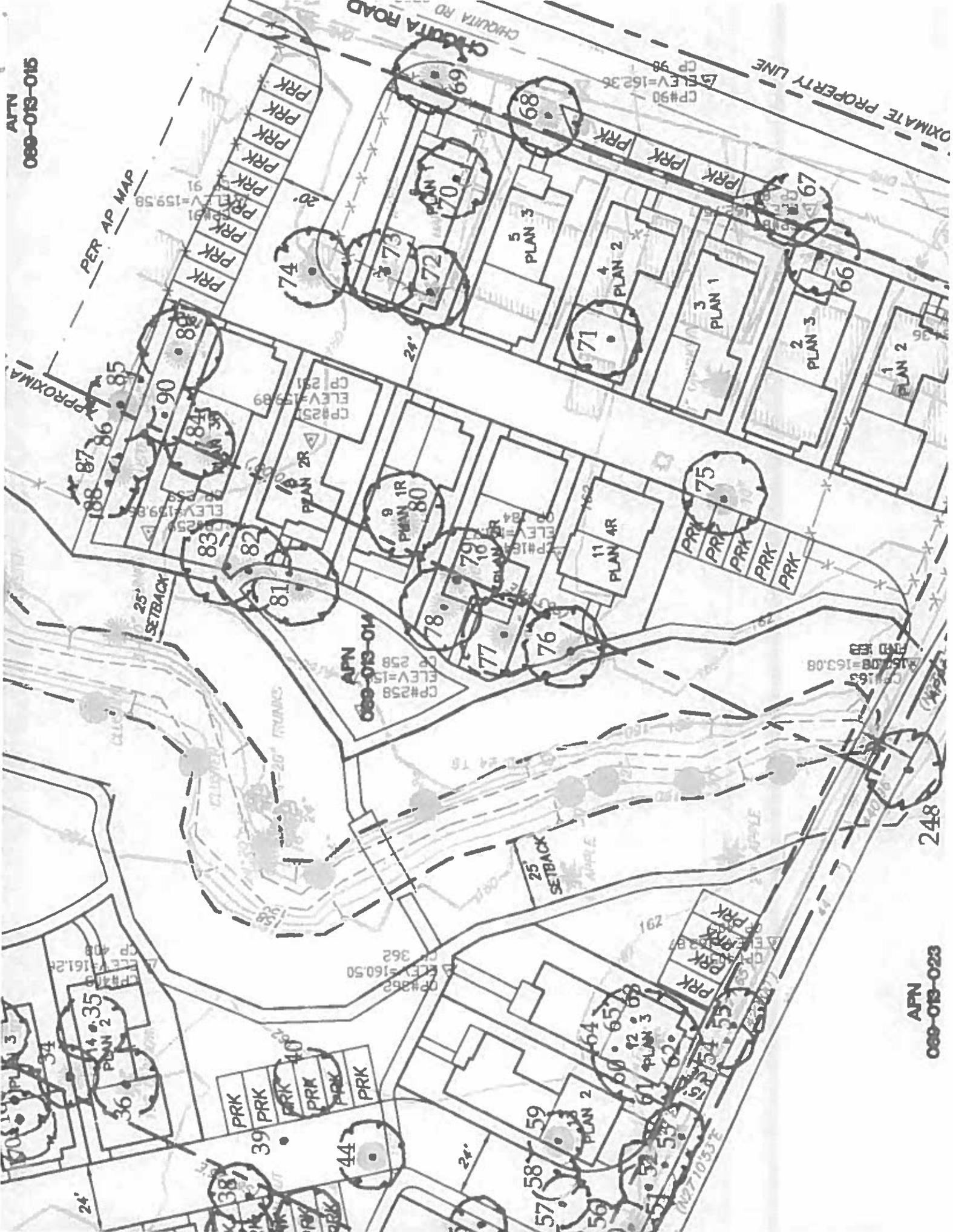
25' SETBACK

APPROXIMATE

24'

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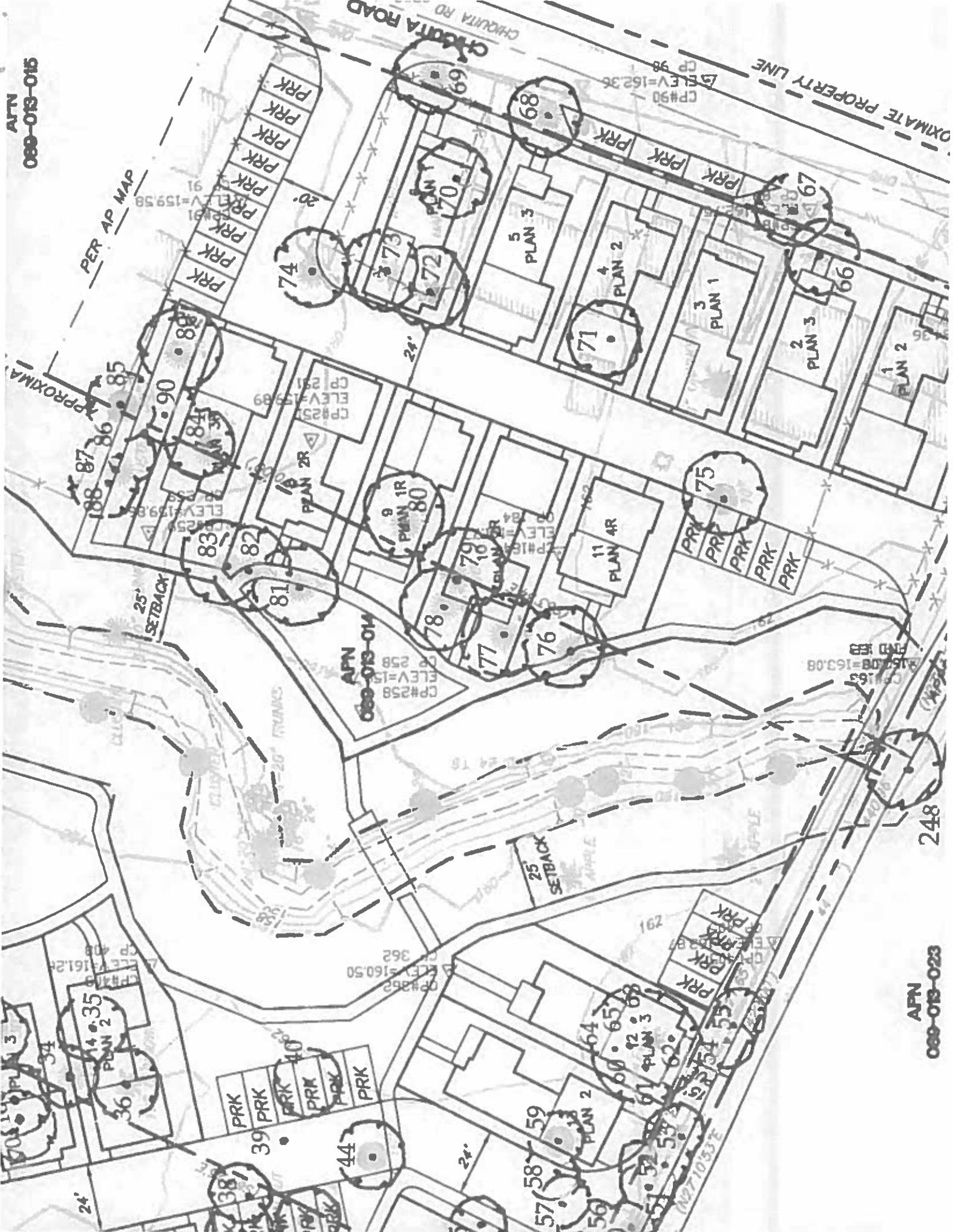
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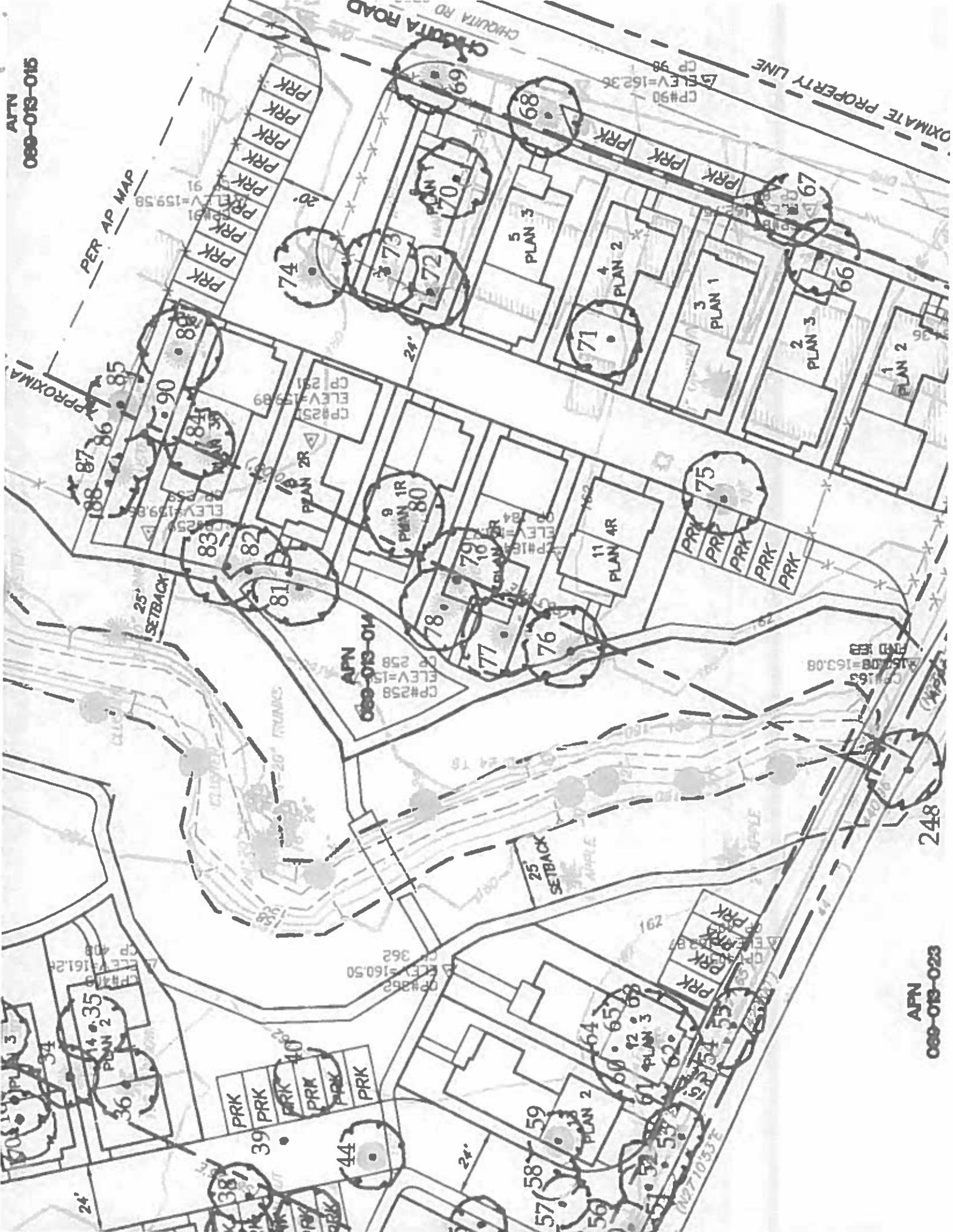
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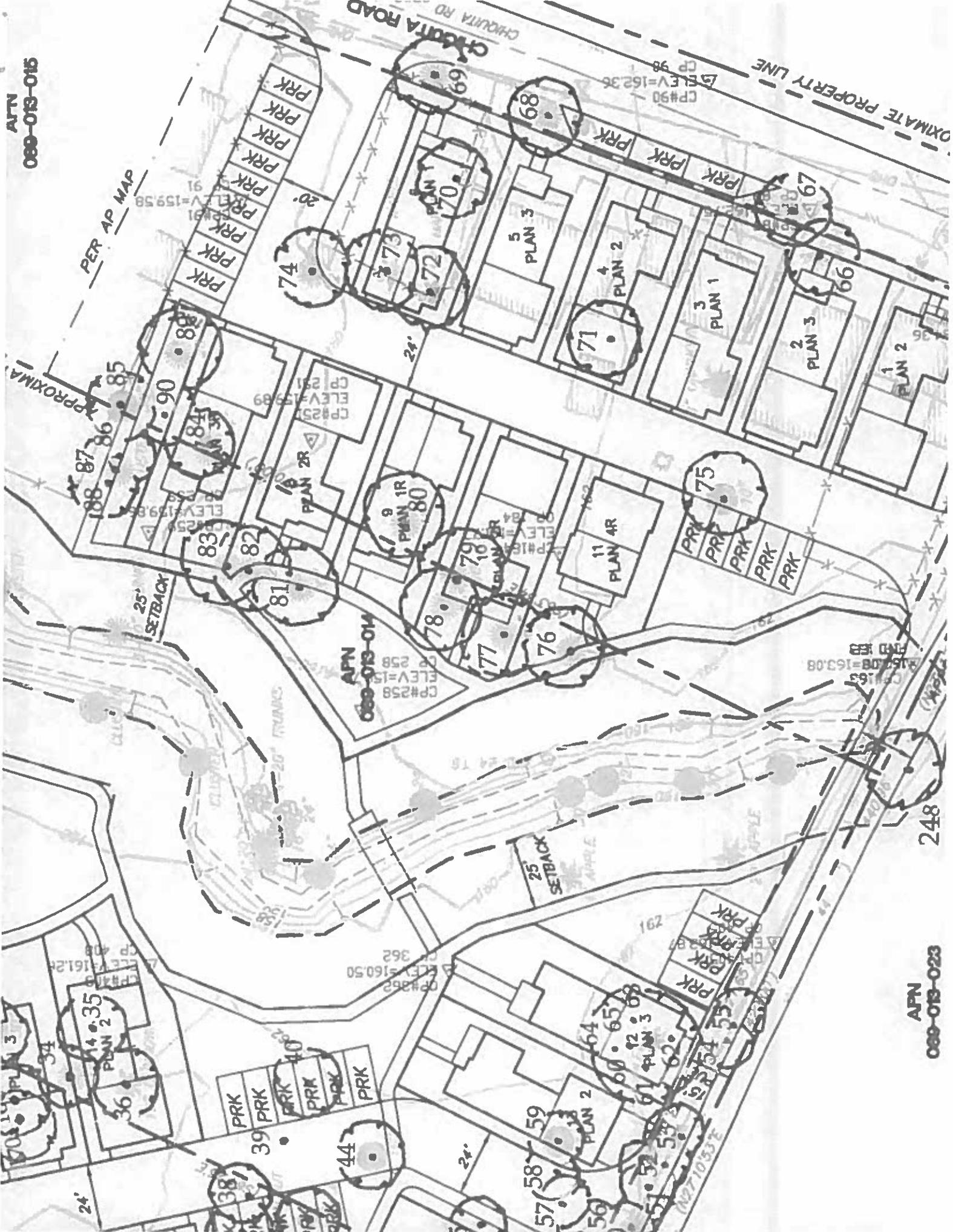
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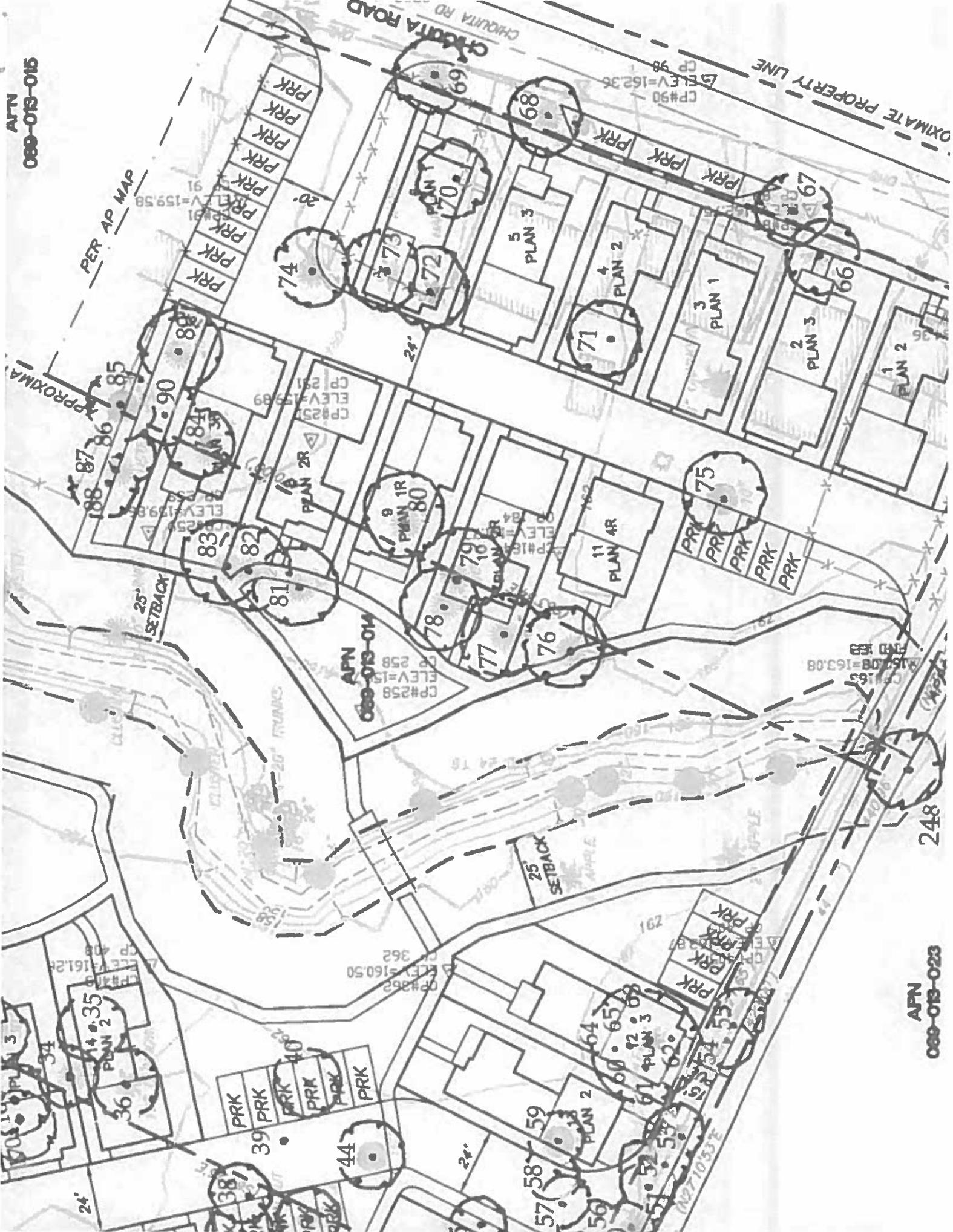
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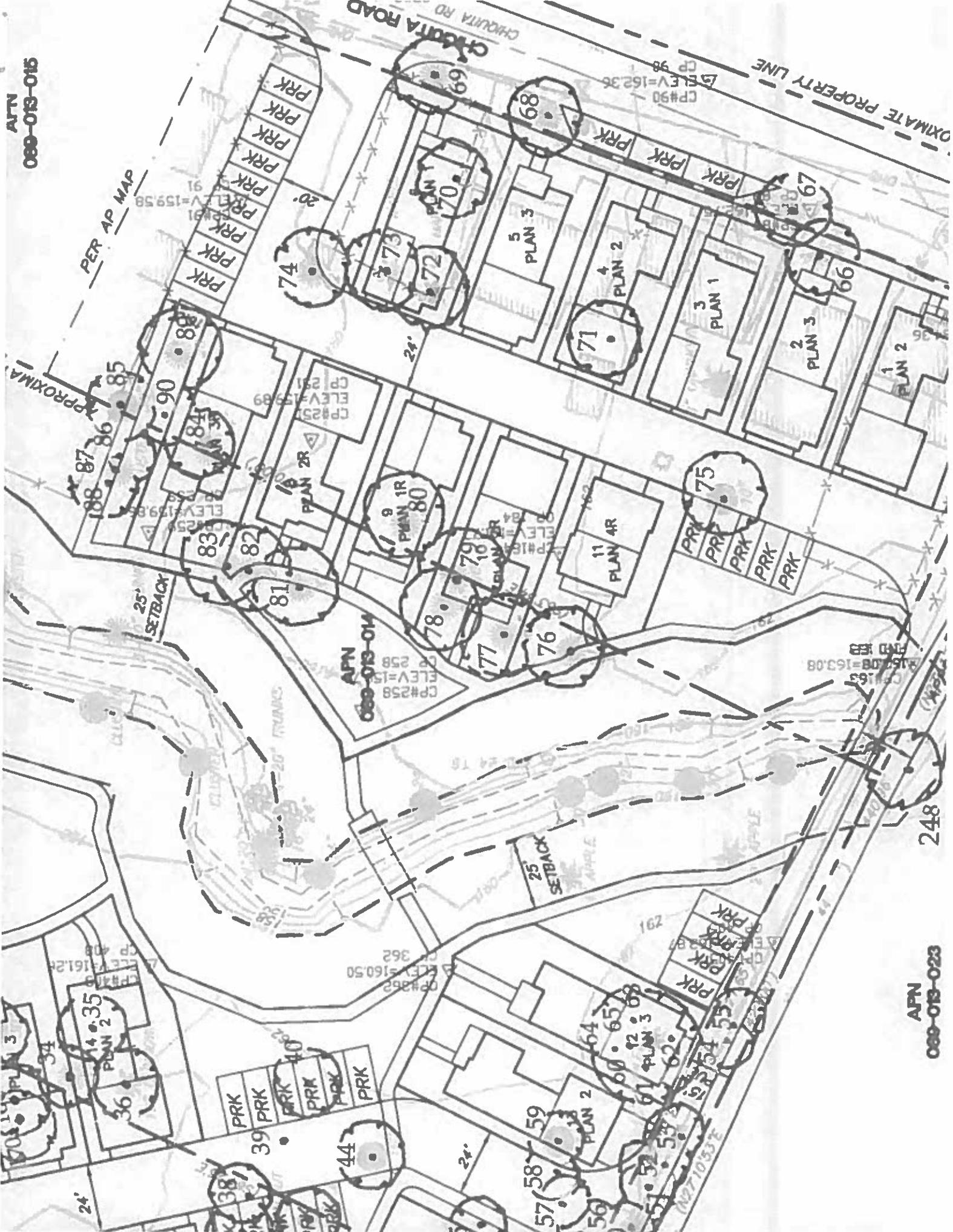
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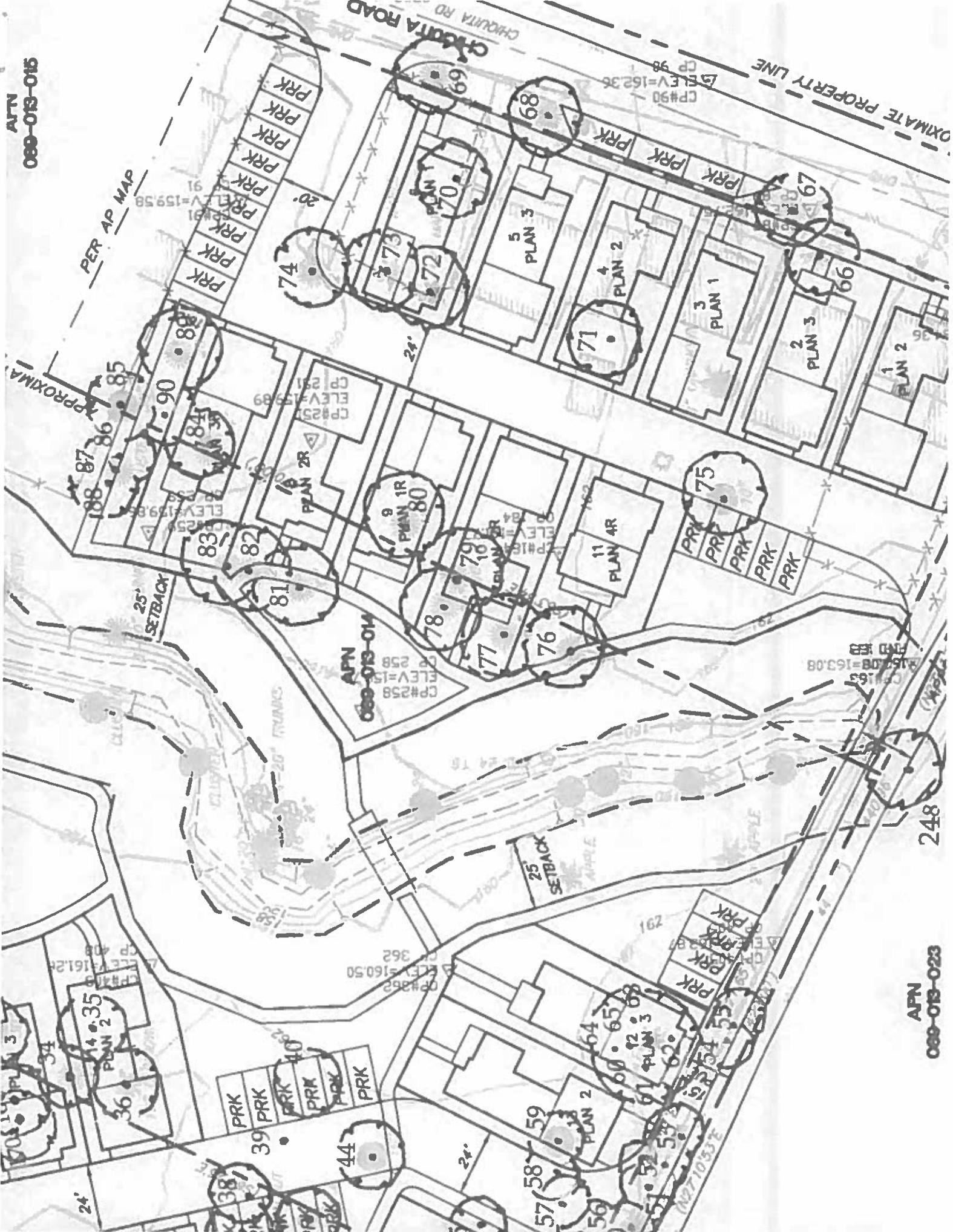
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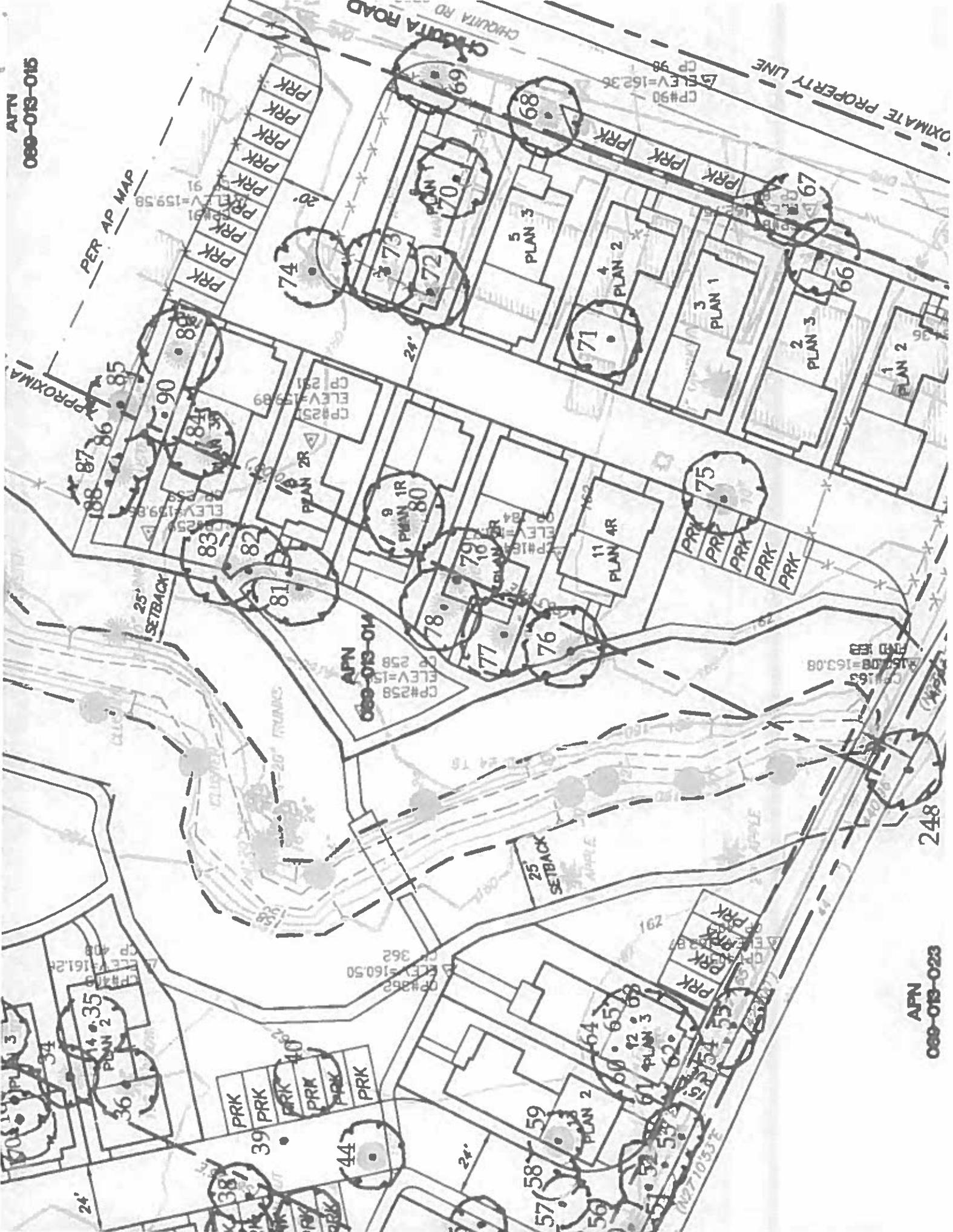
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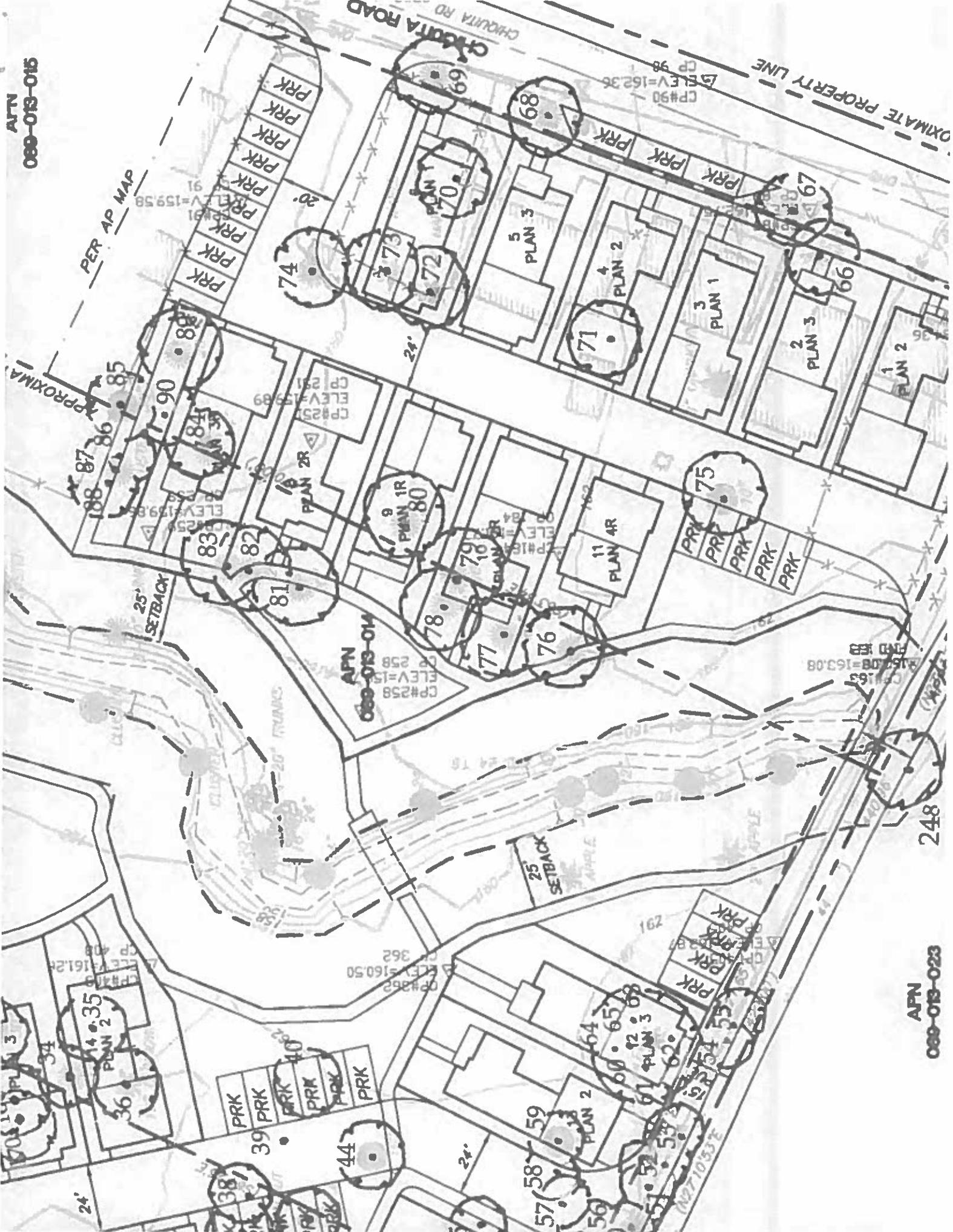
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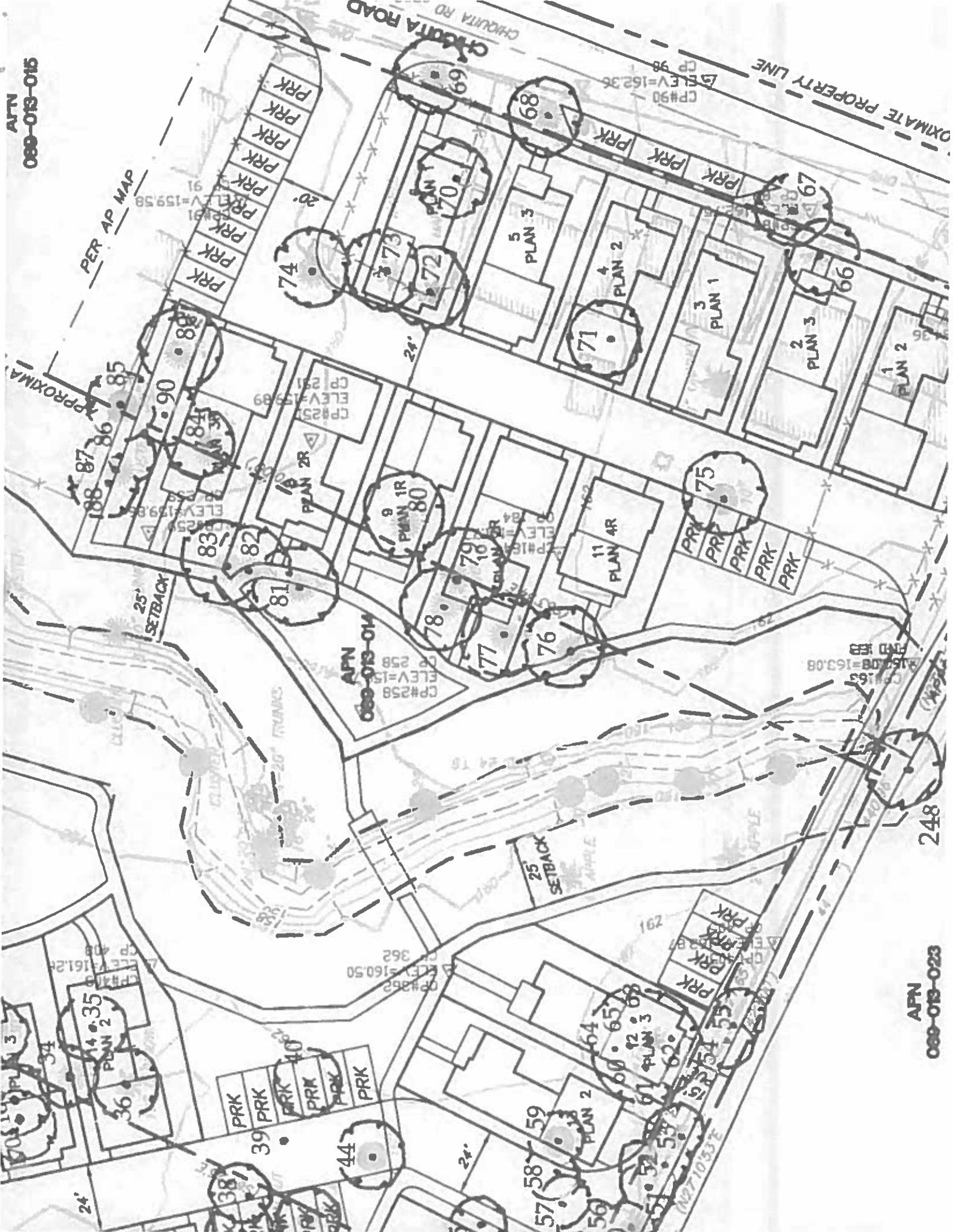
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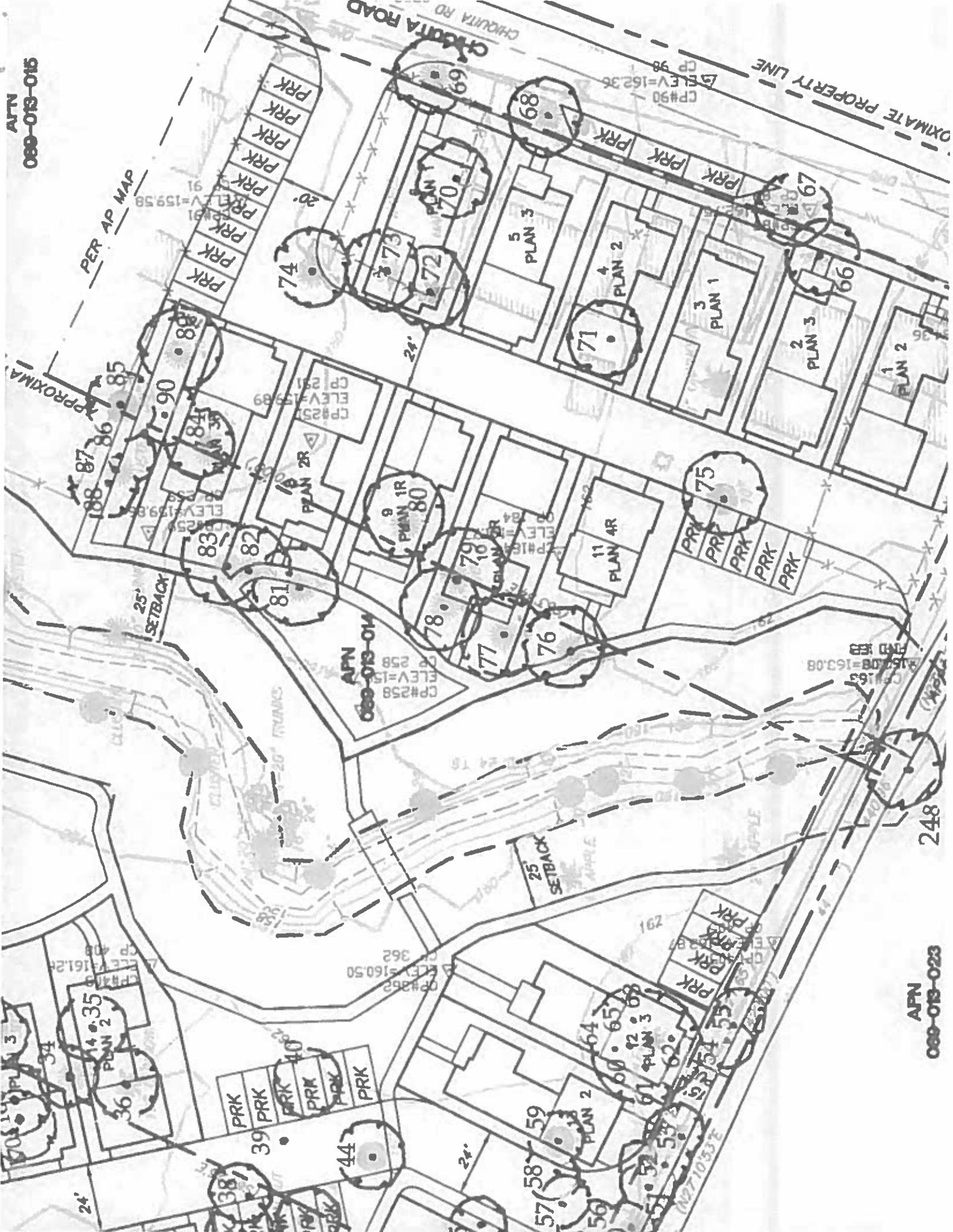
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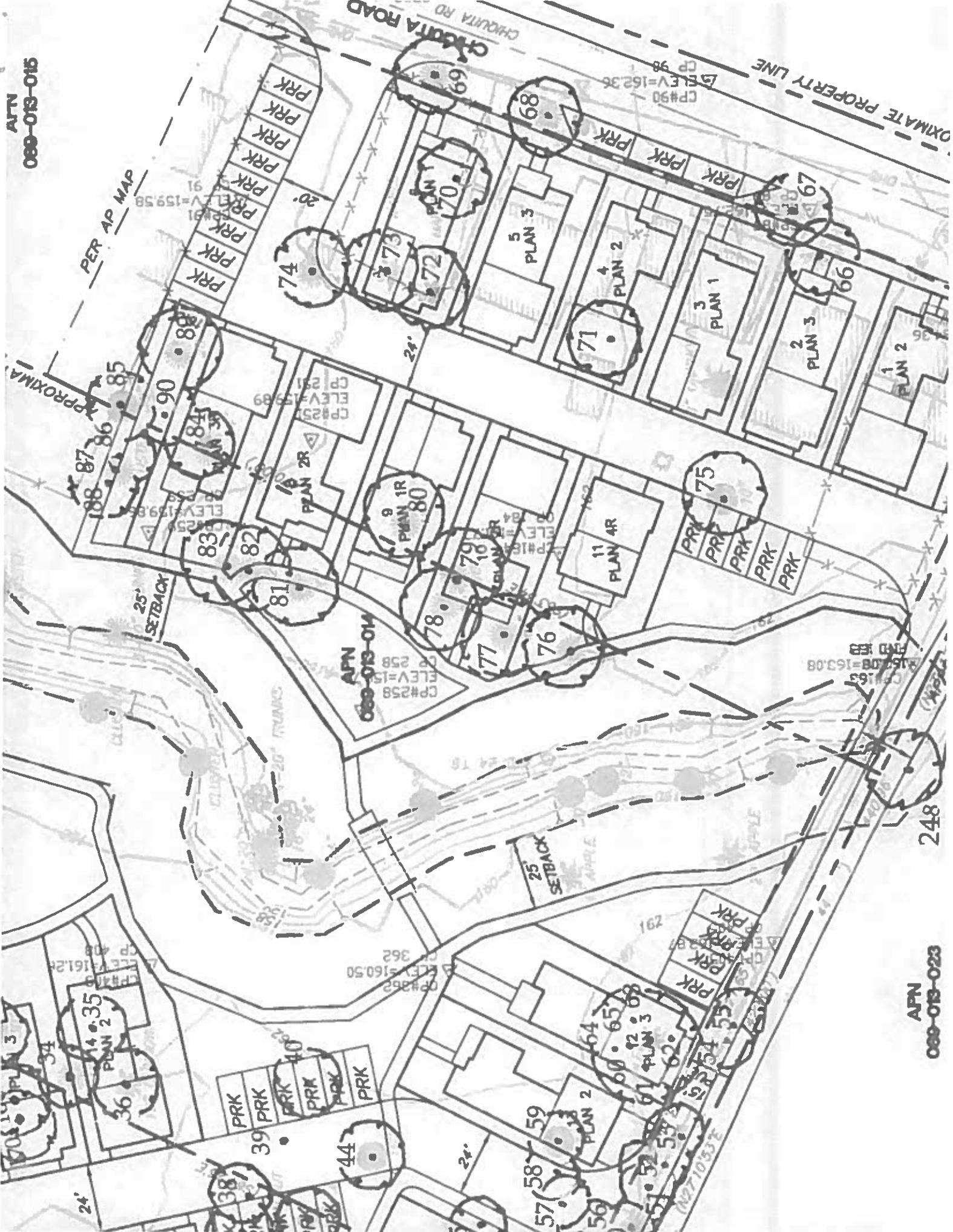
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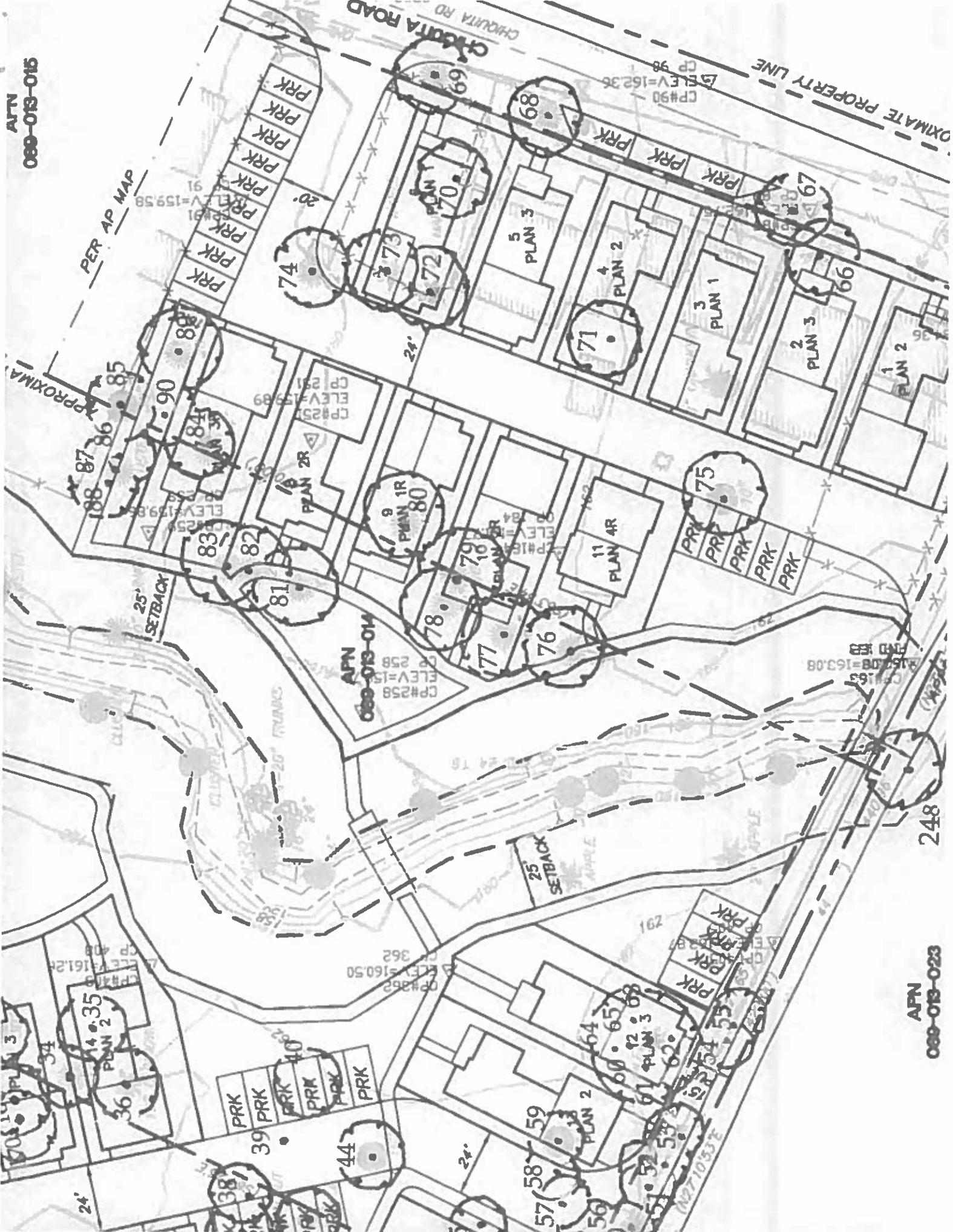
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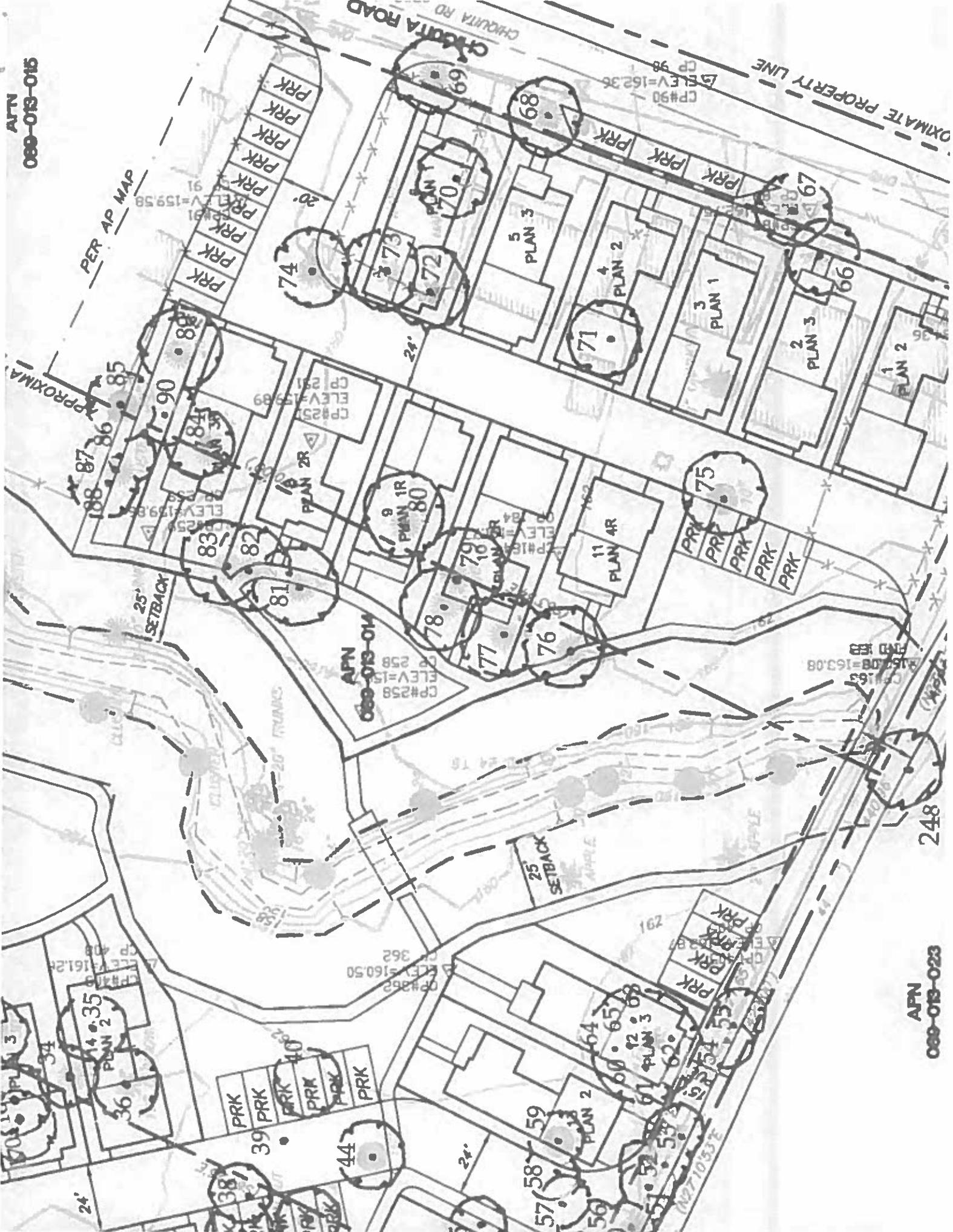
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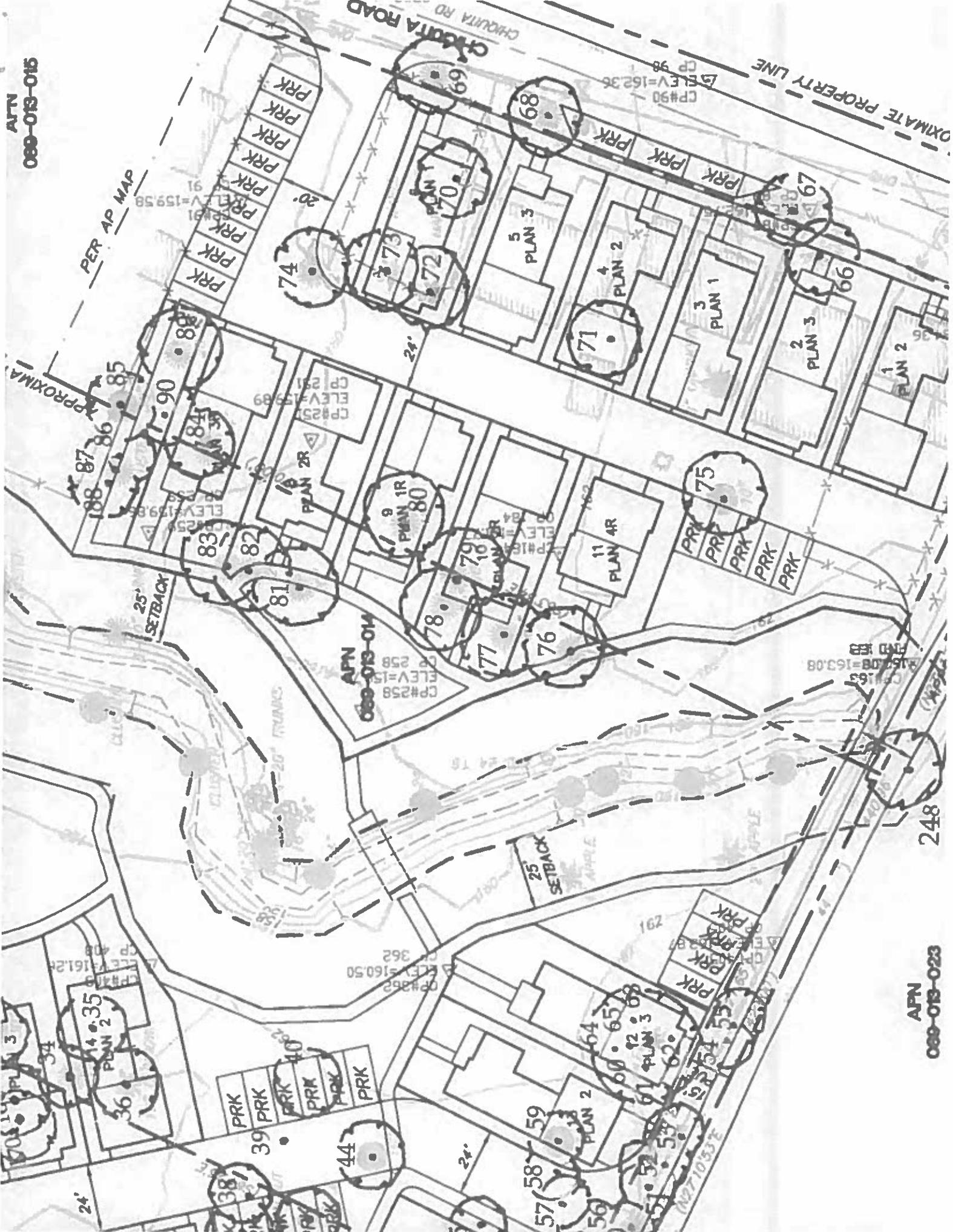
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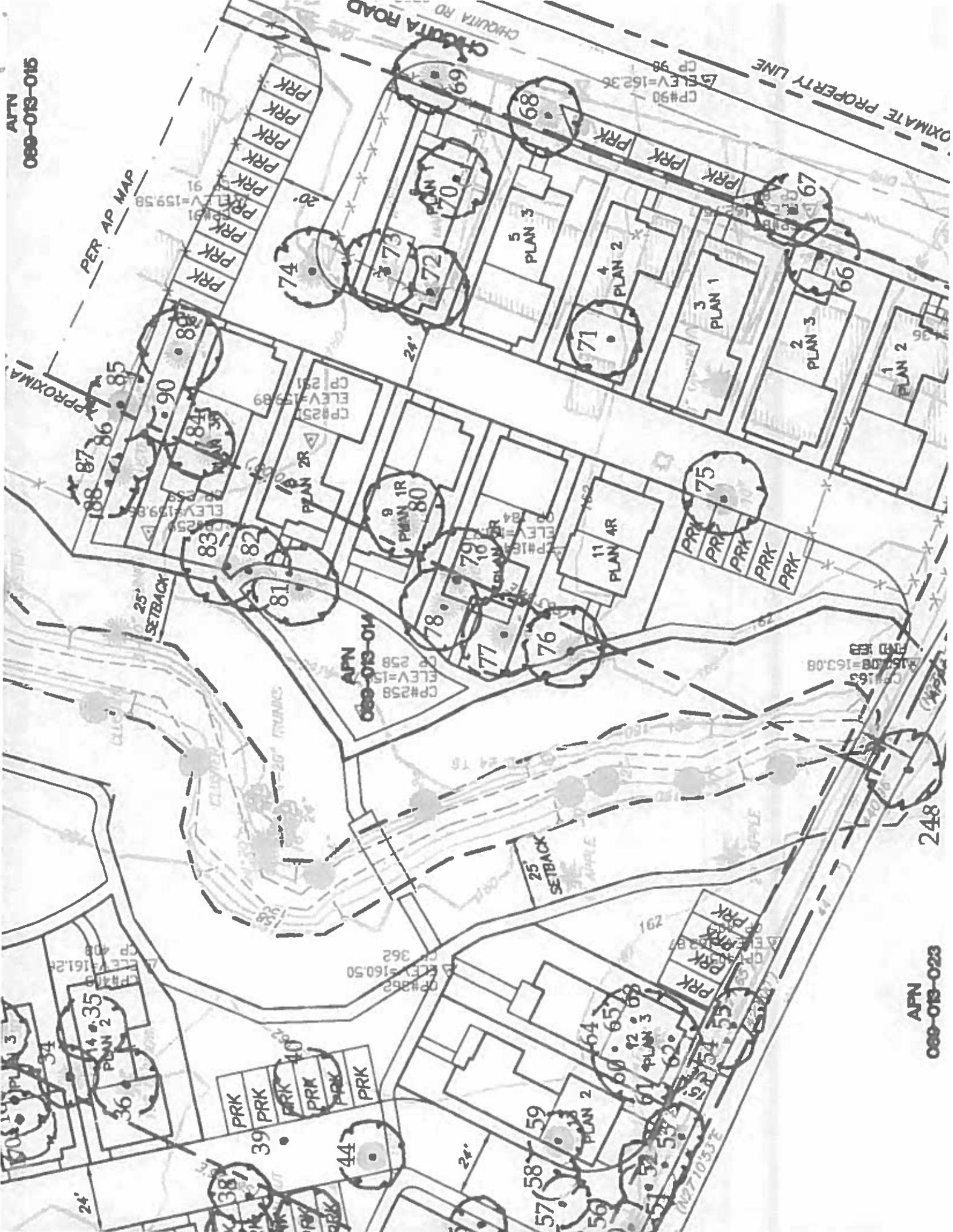
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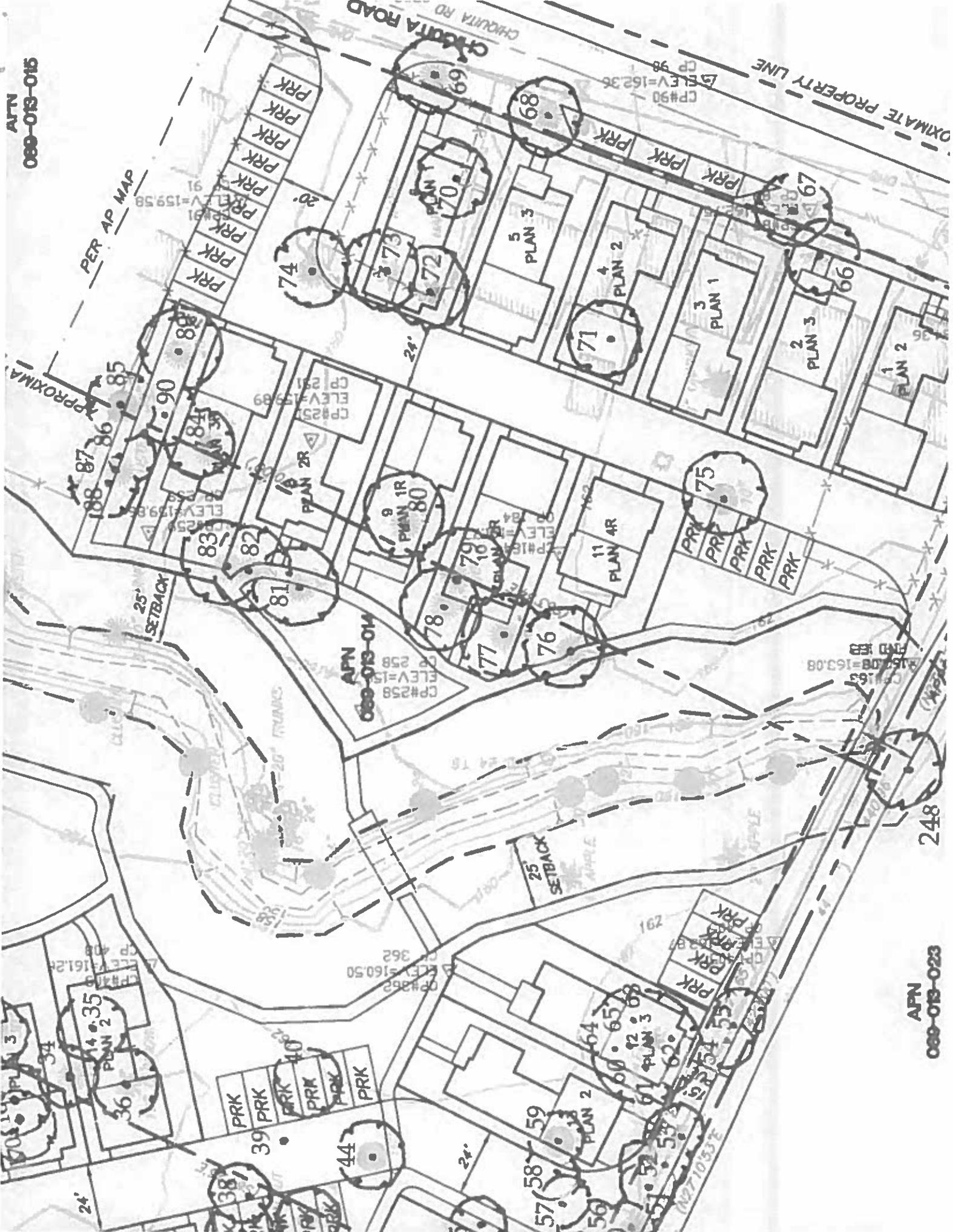
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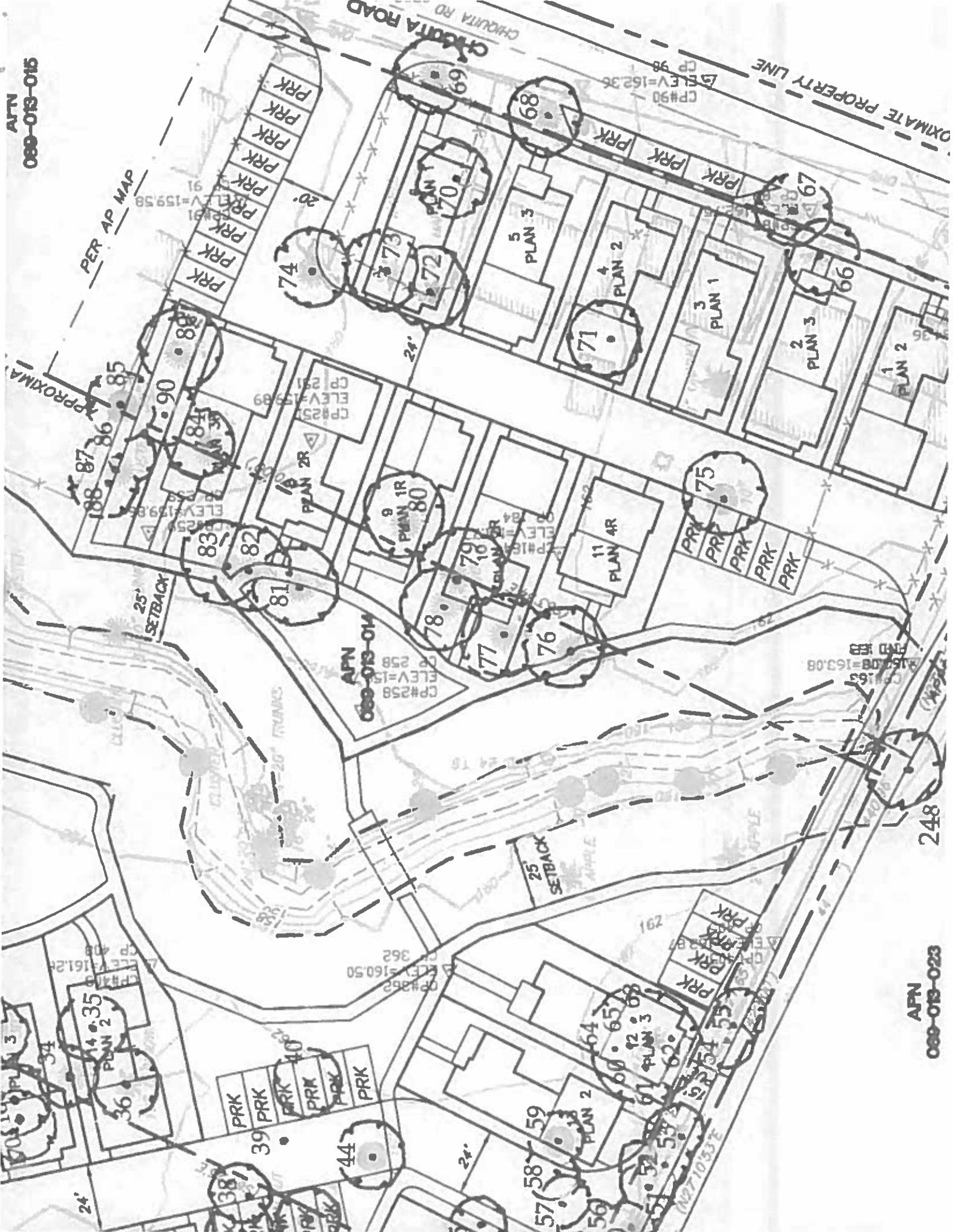
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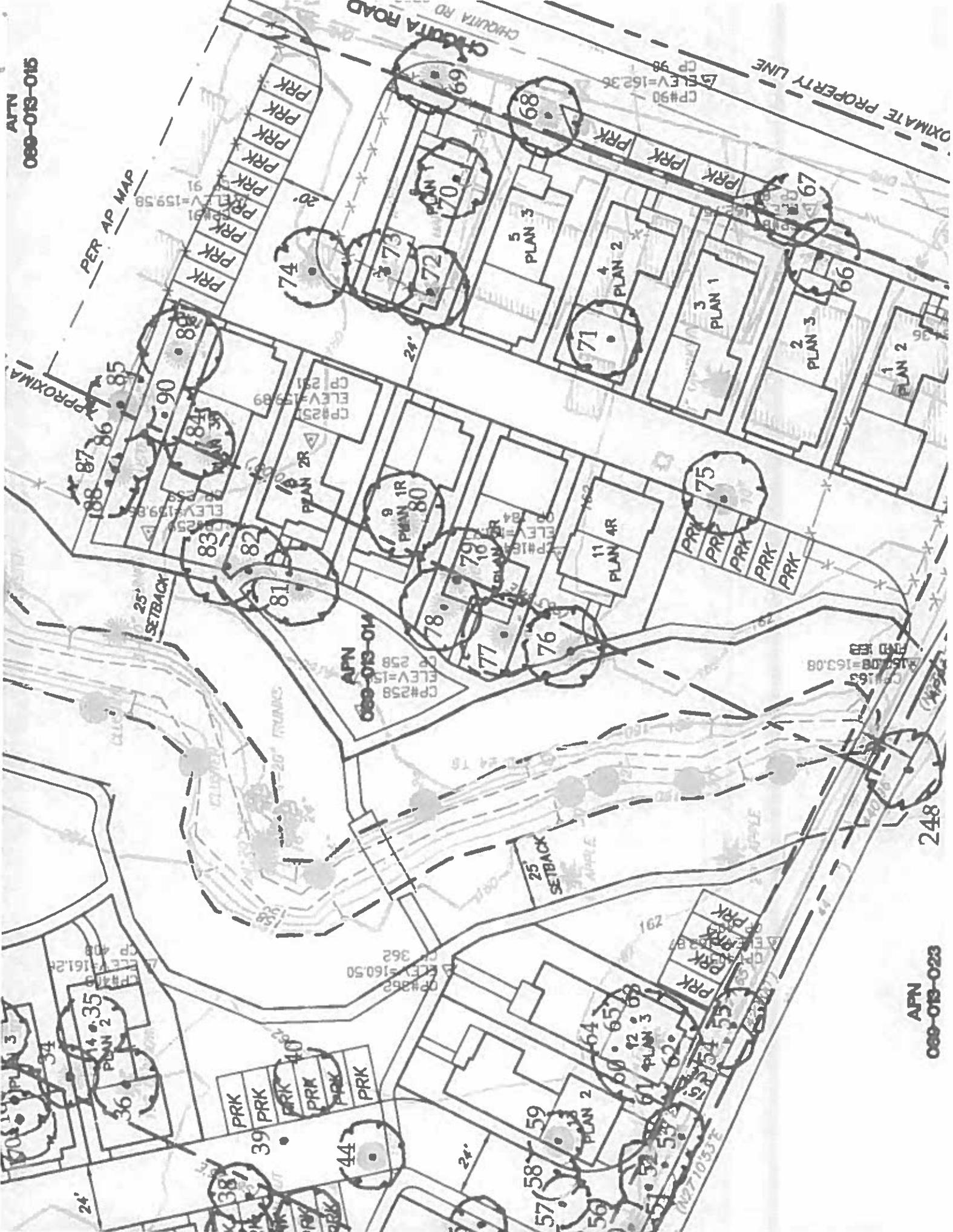
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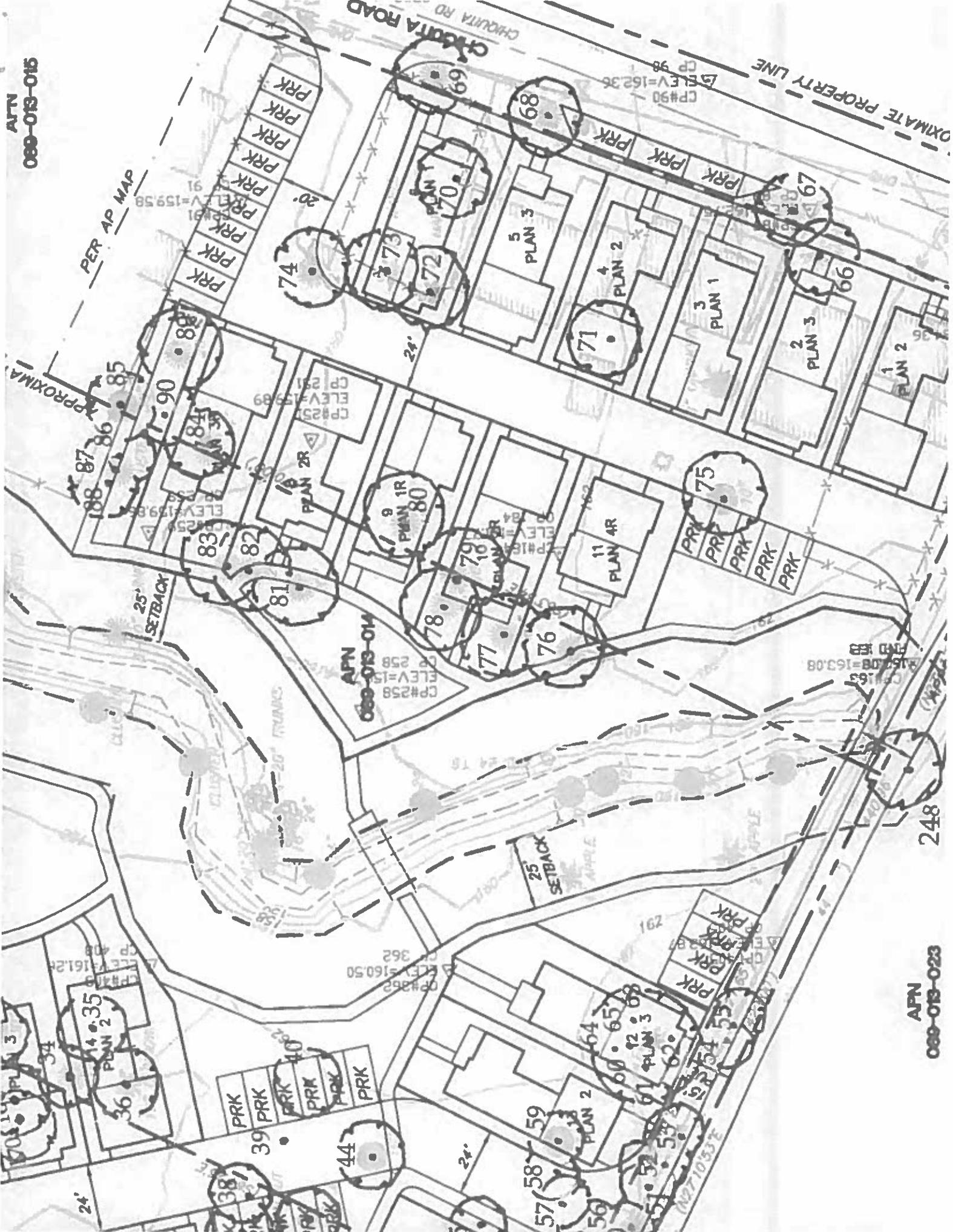
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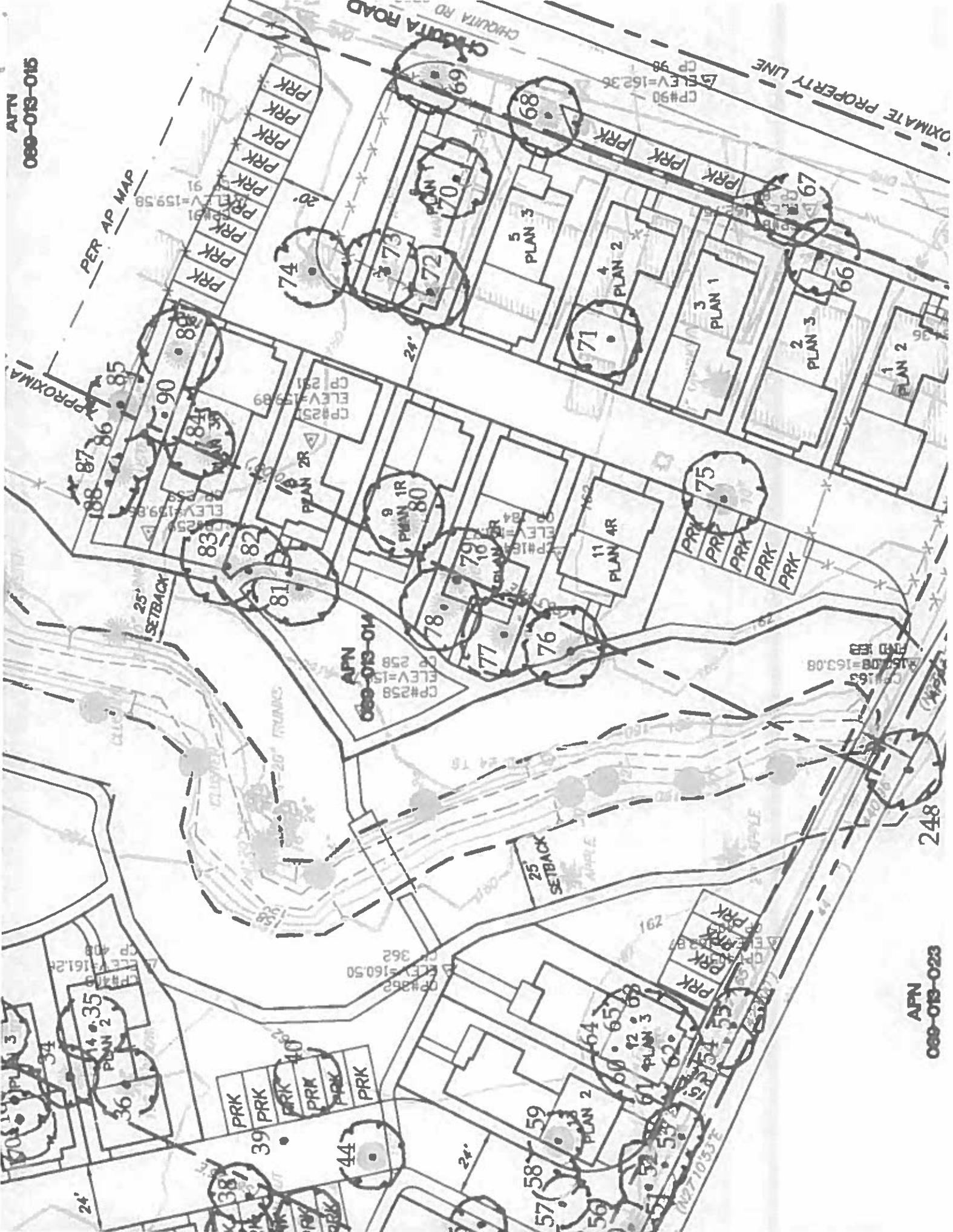
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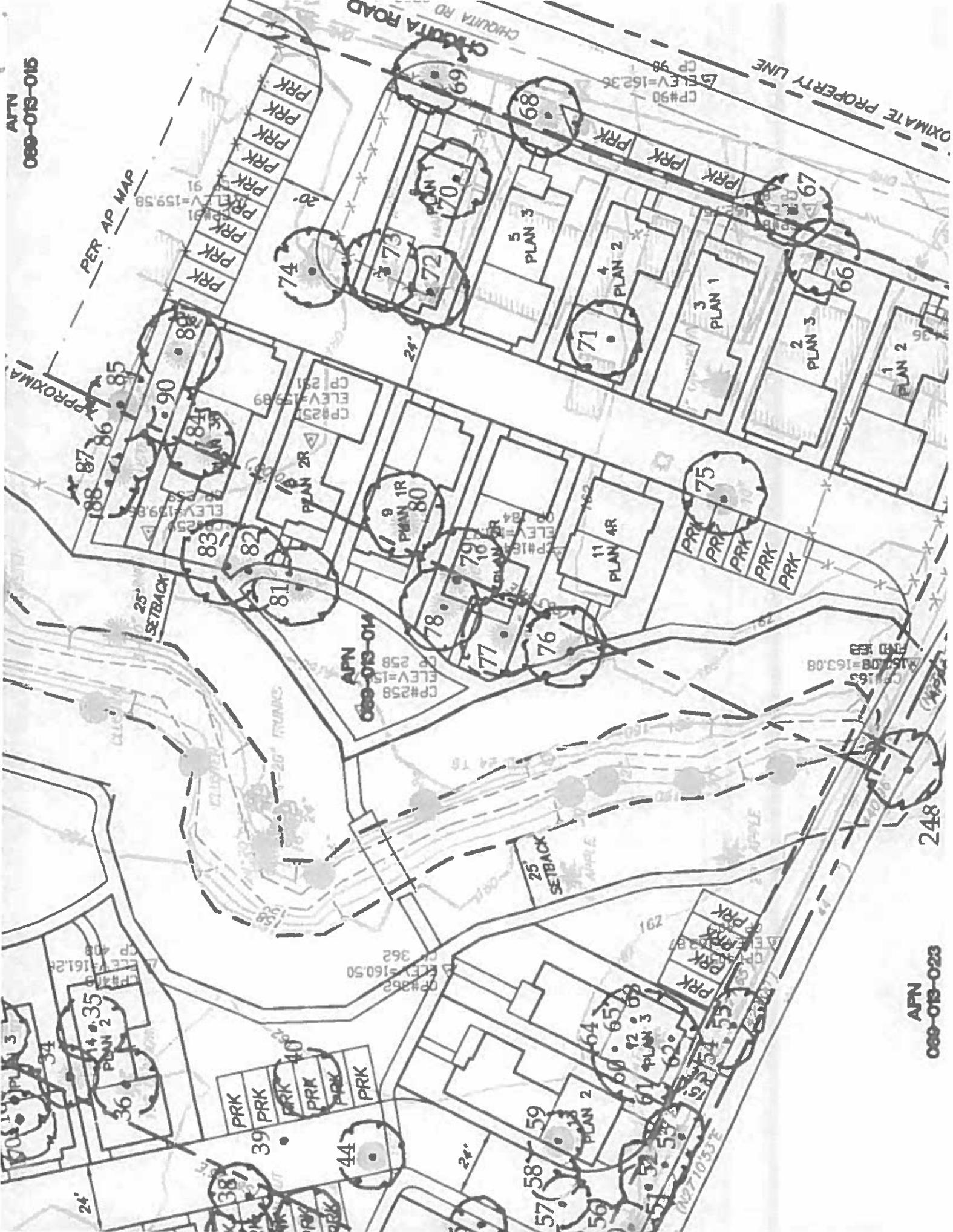
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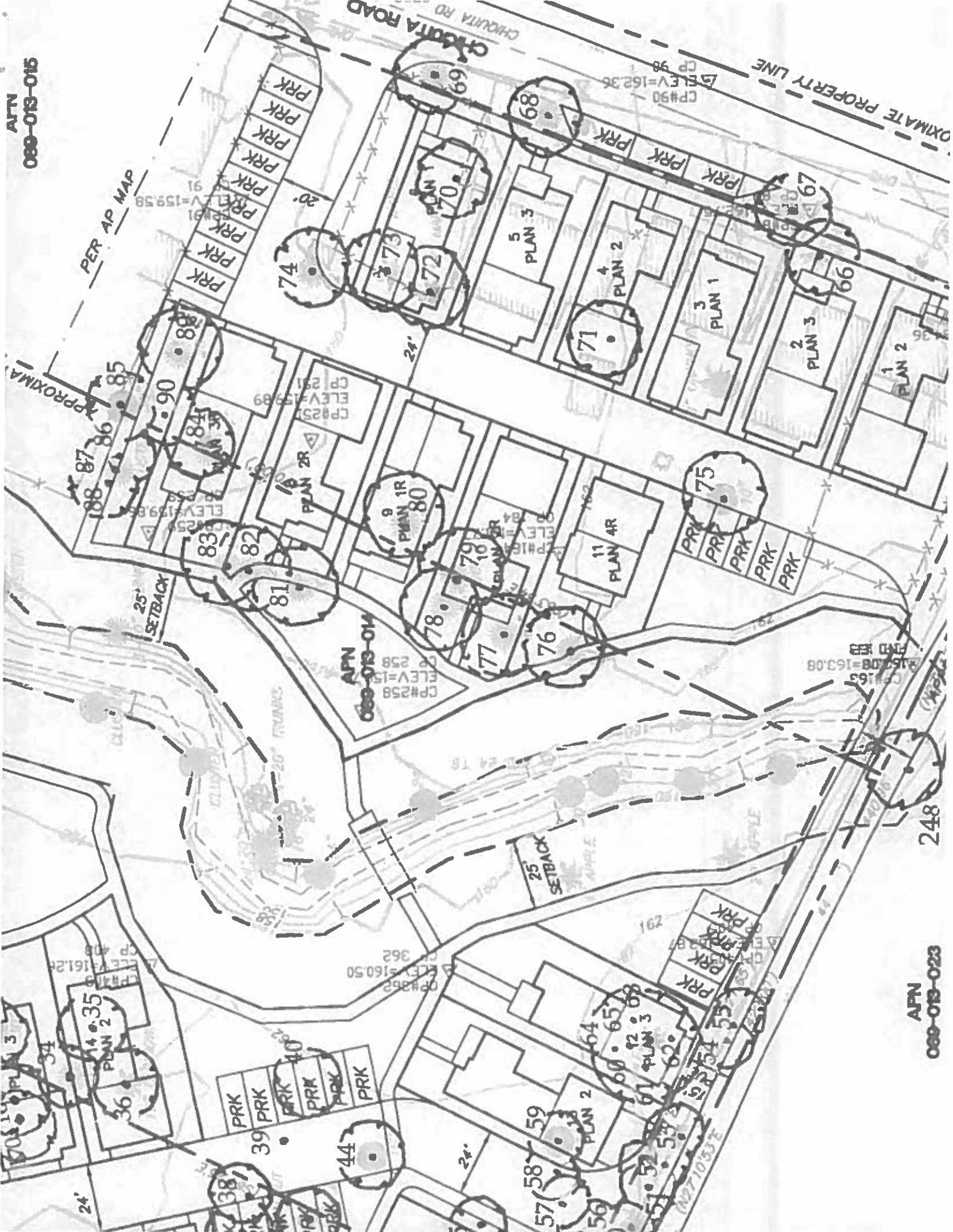
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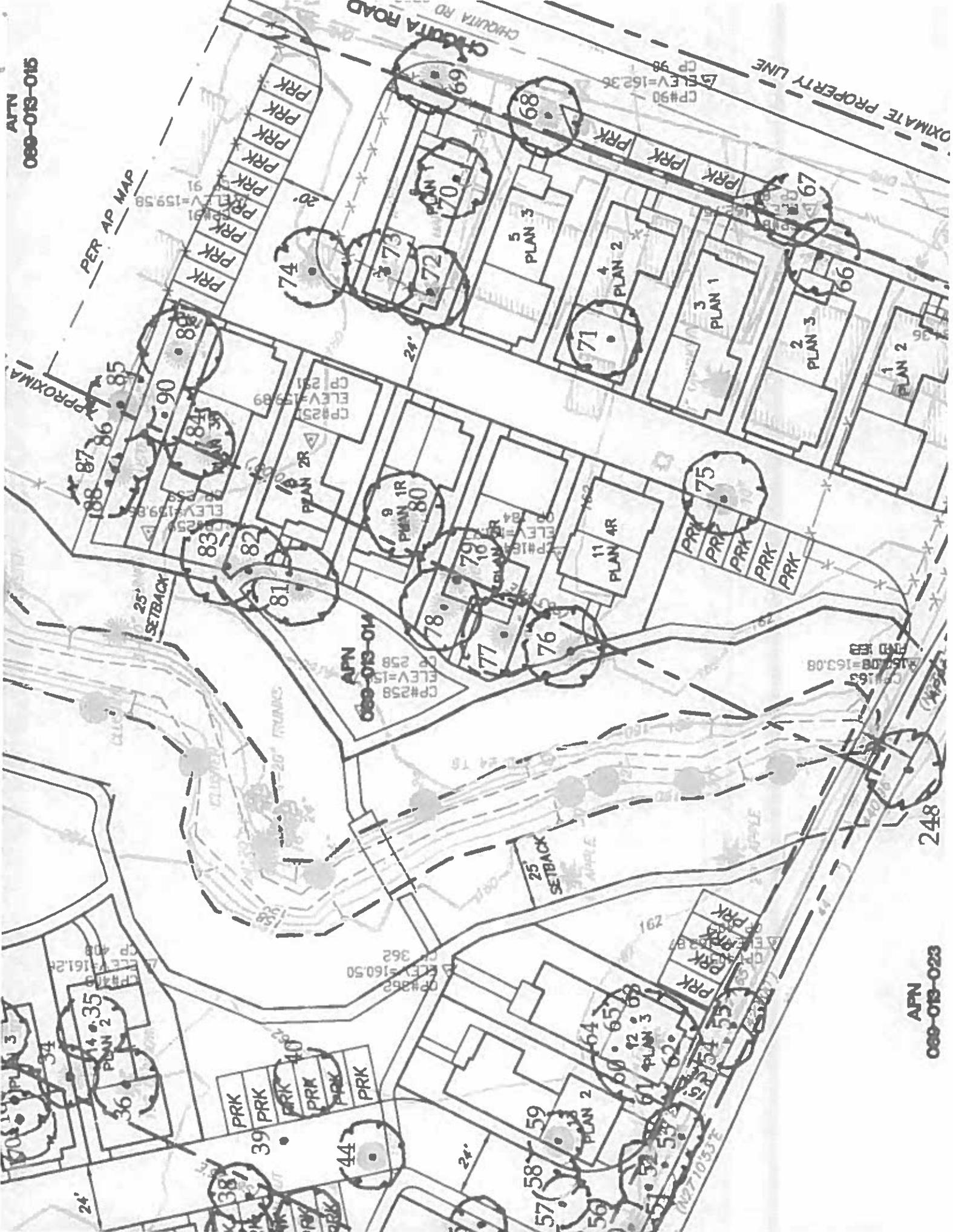
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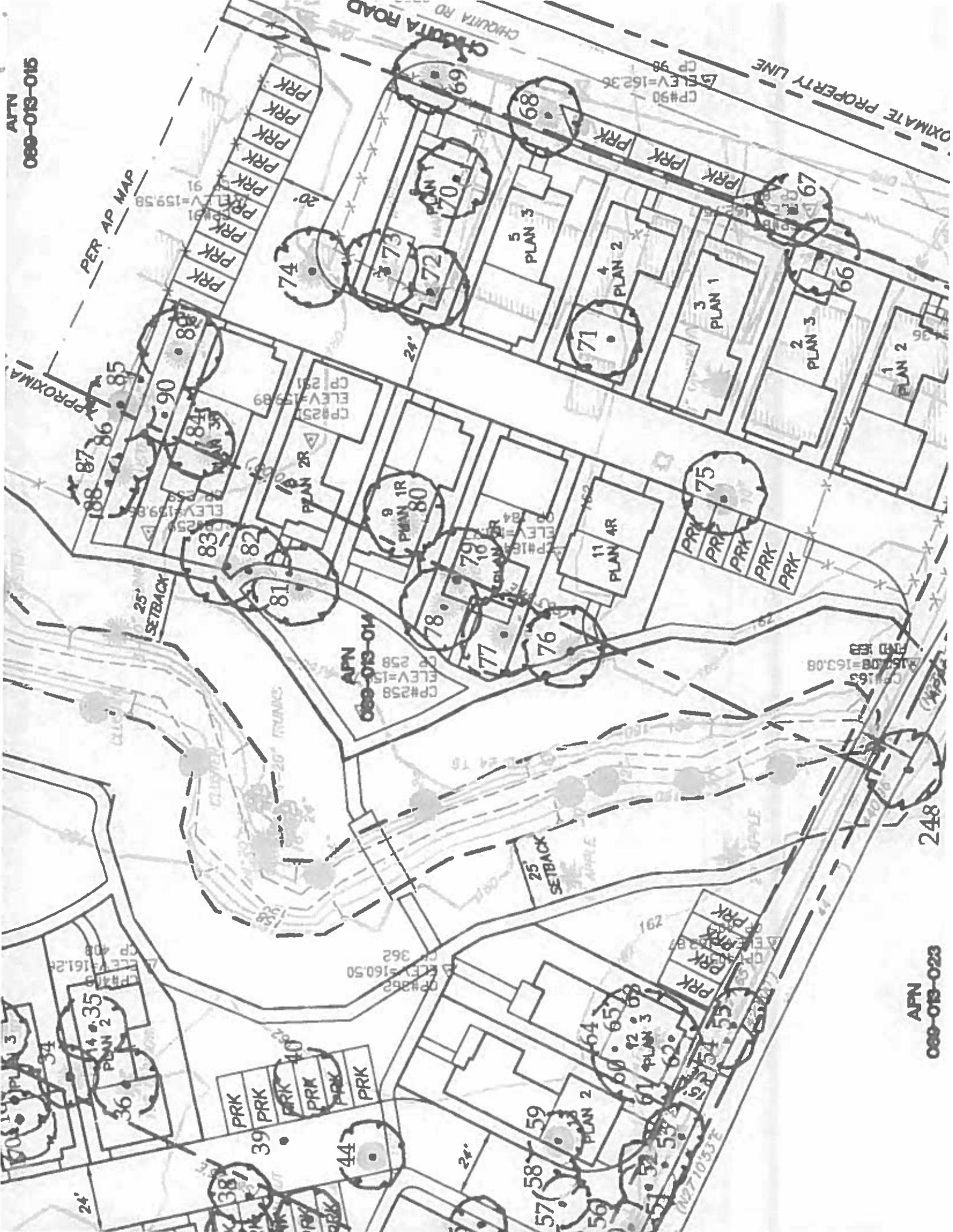
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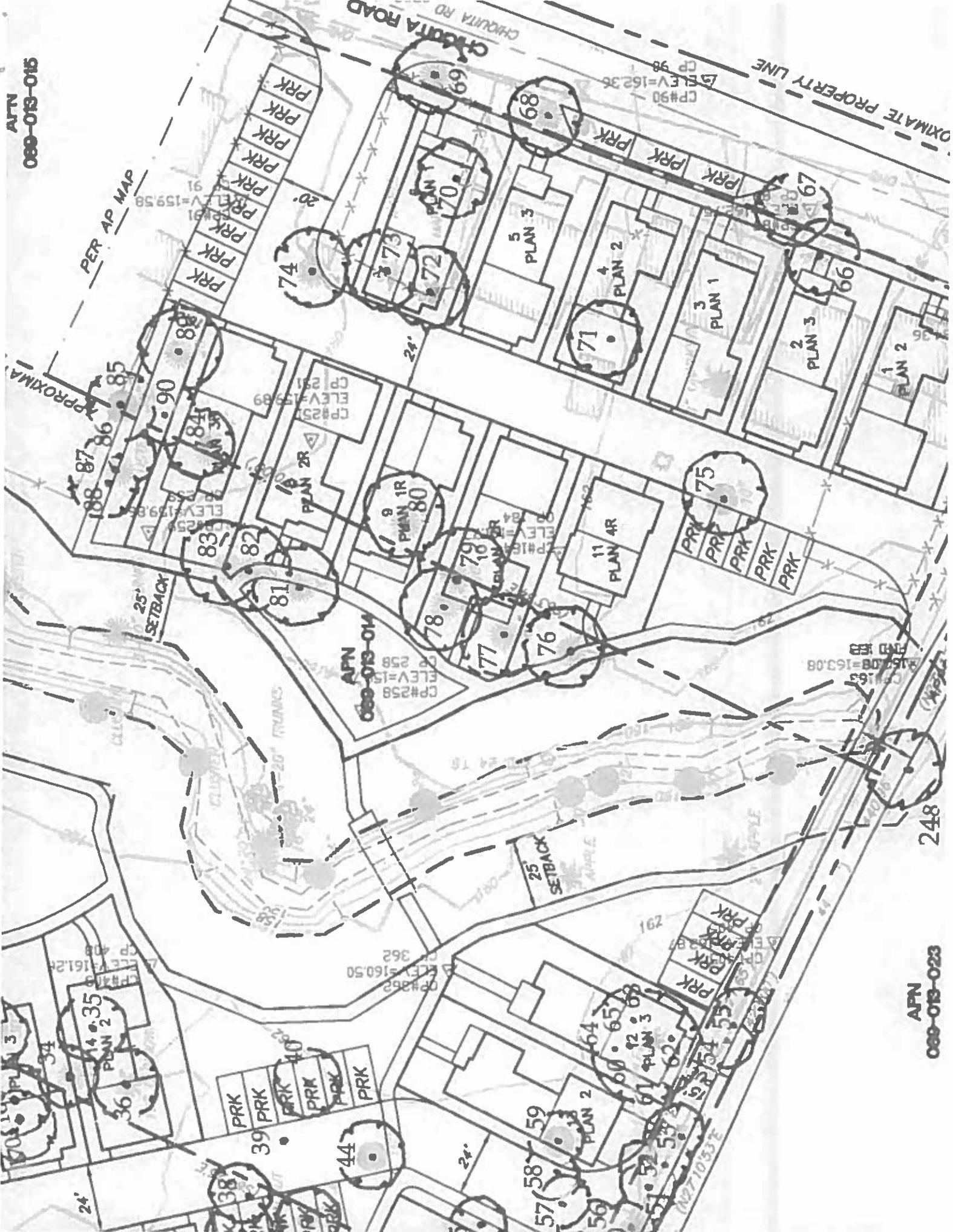
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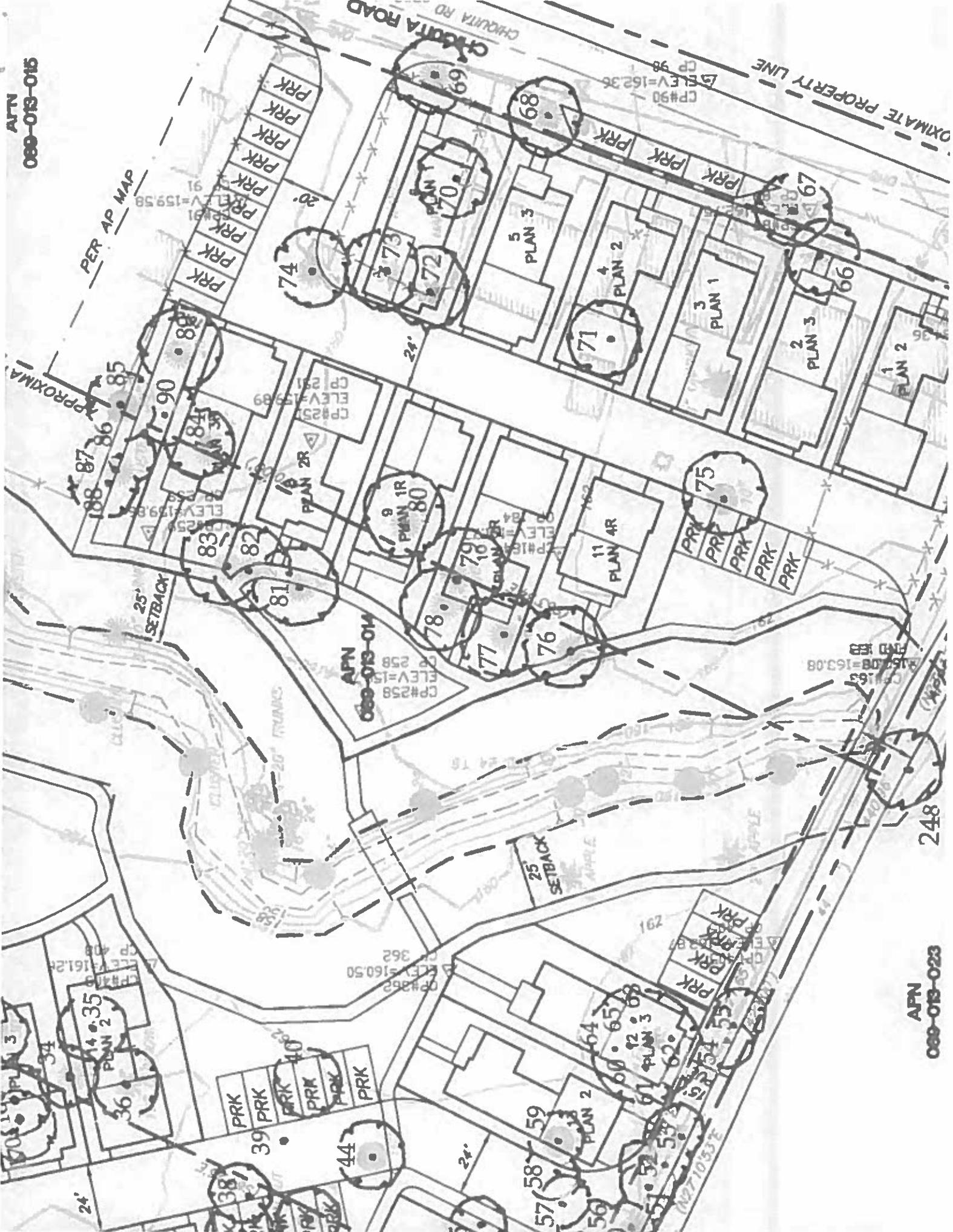
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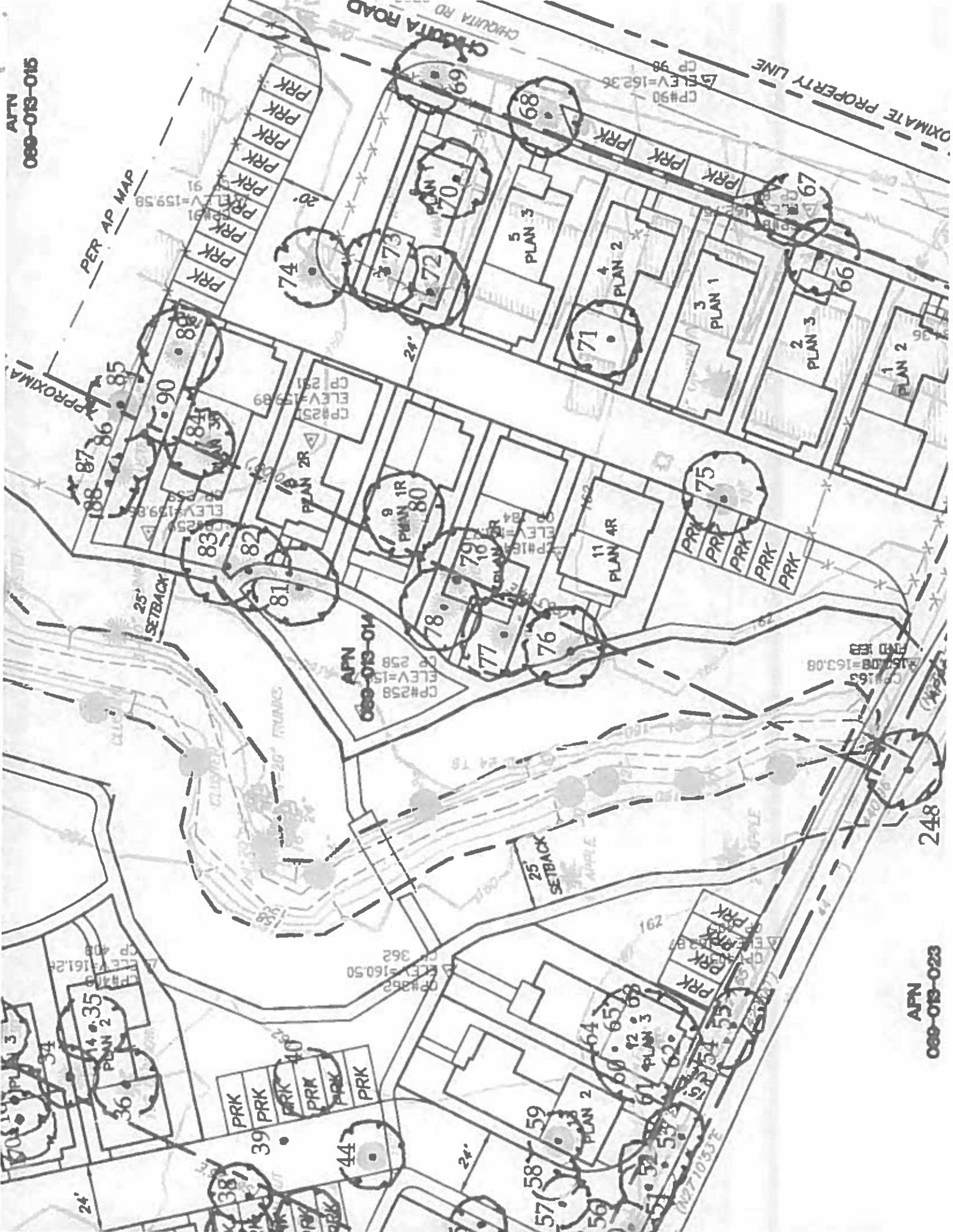
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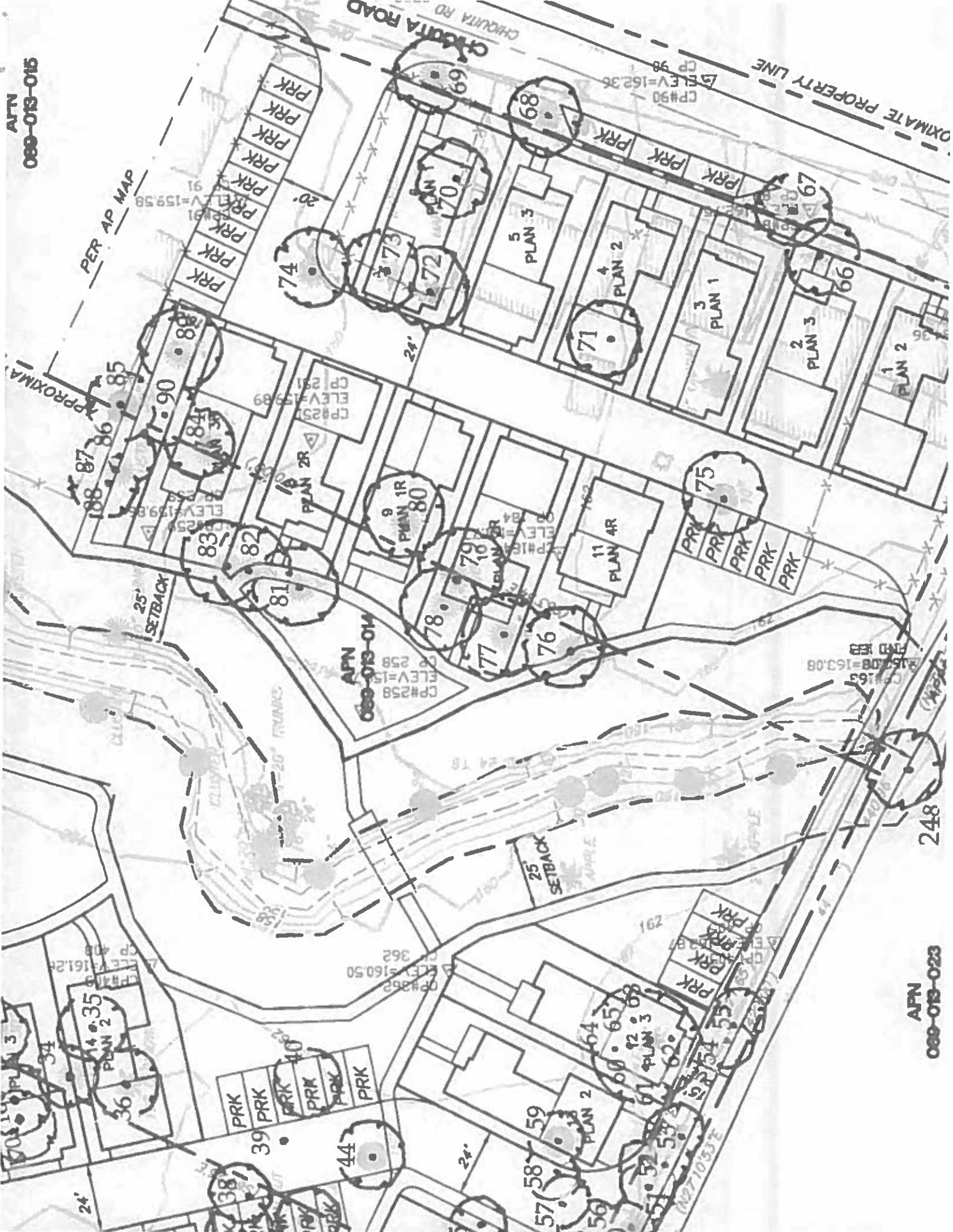
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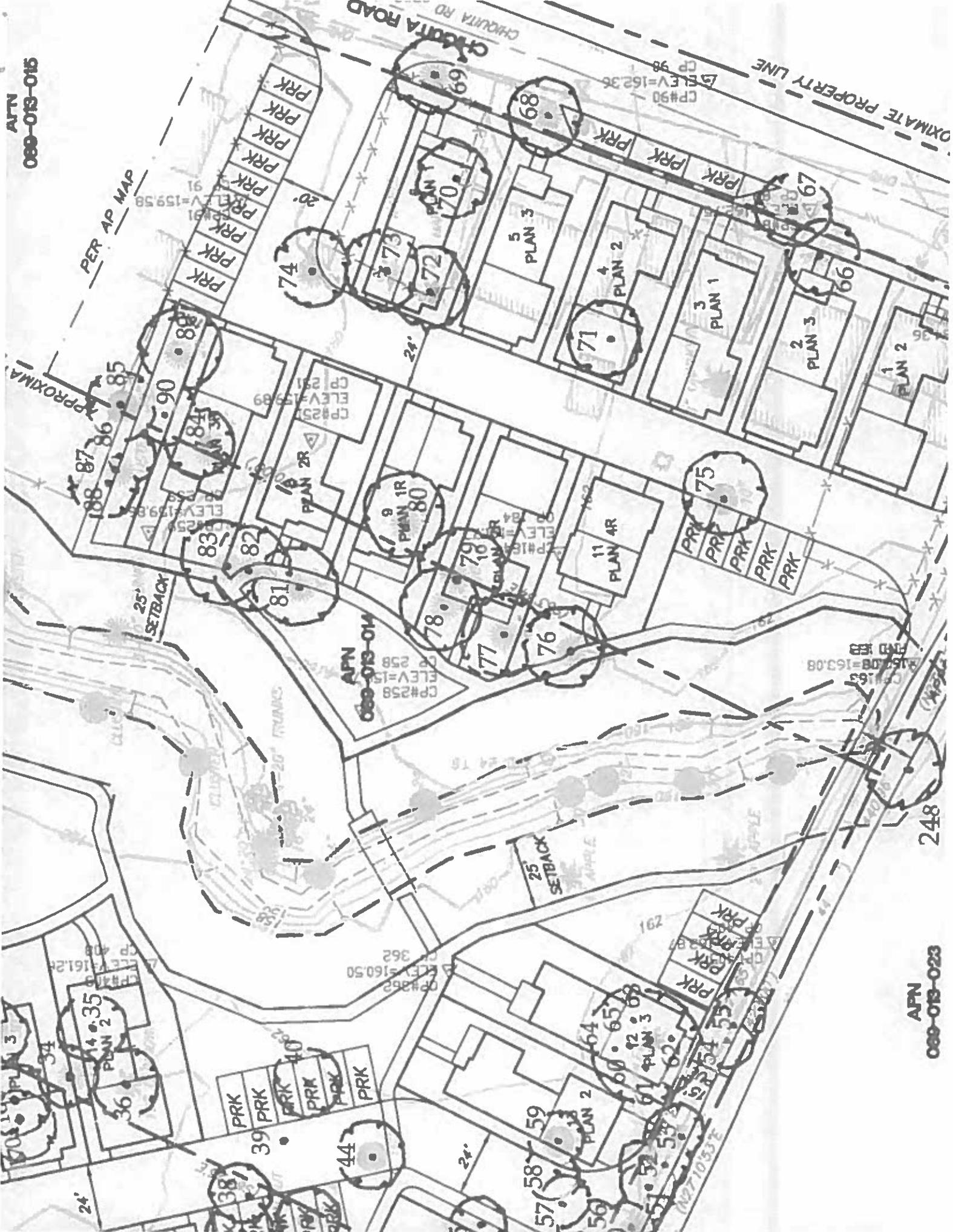
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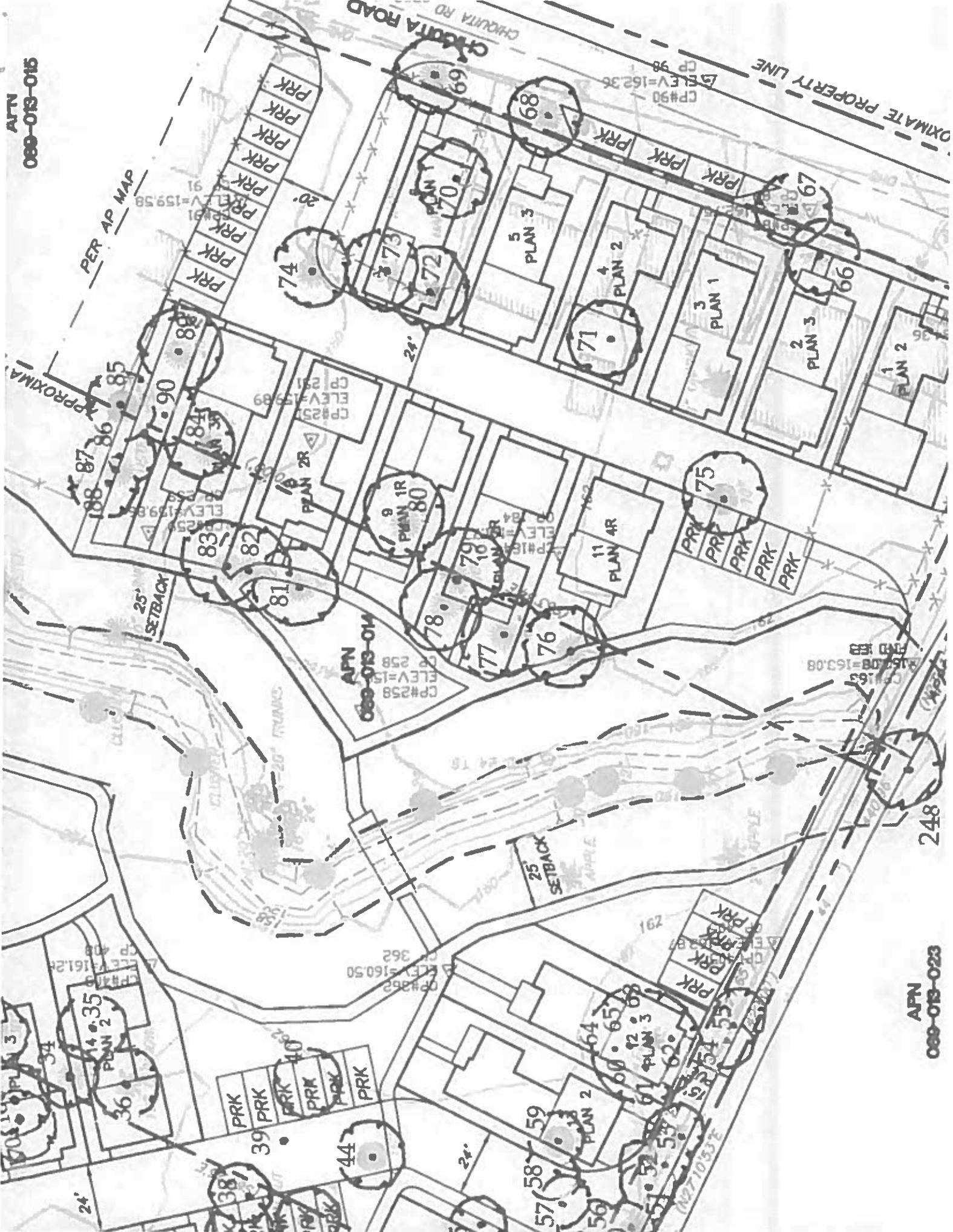
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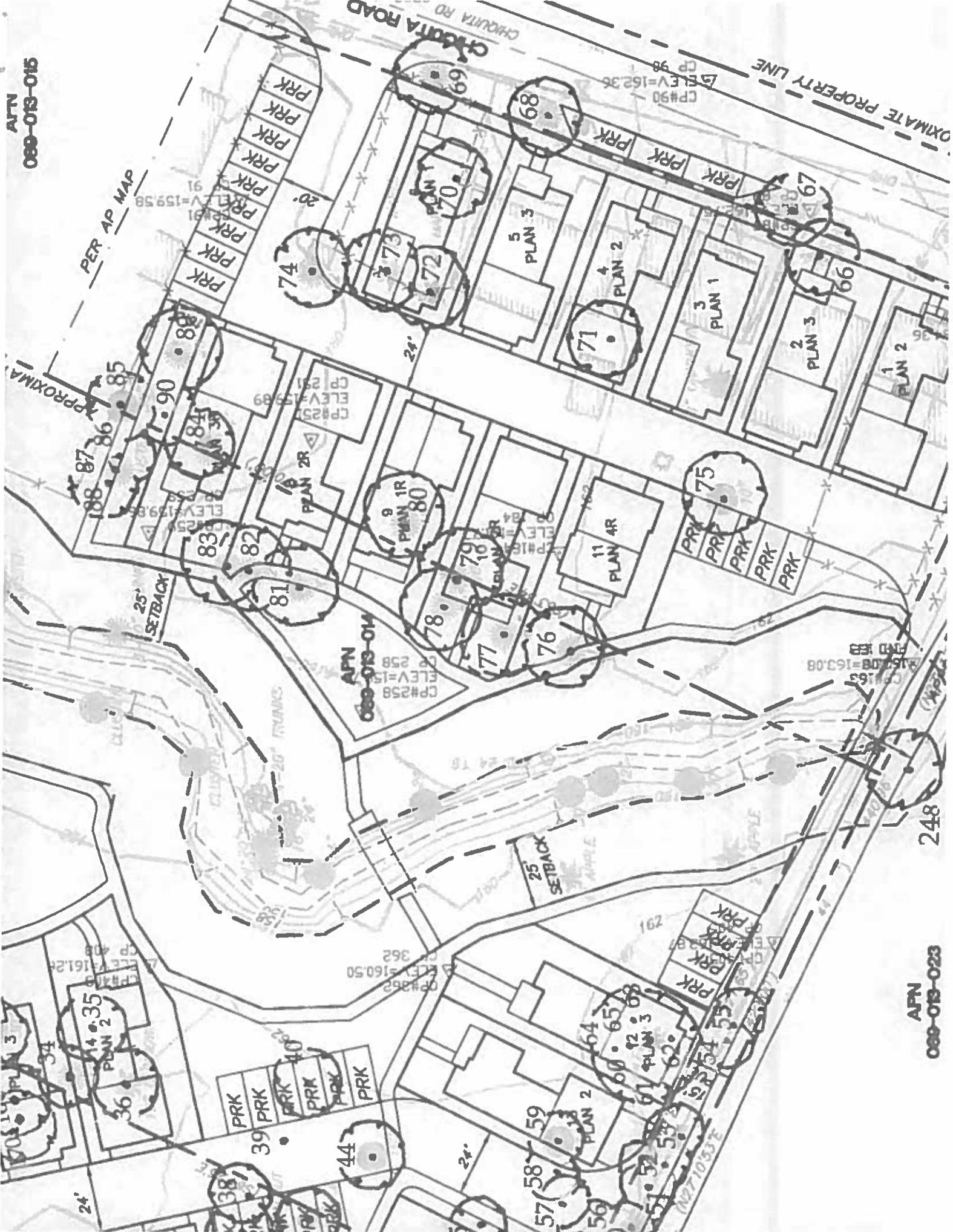
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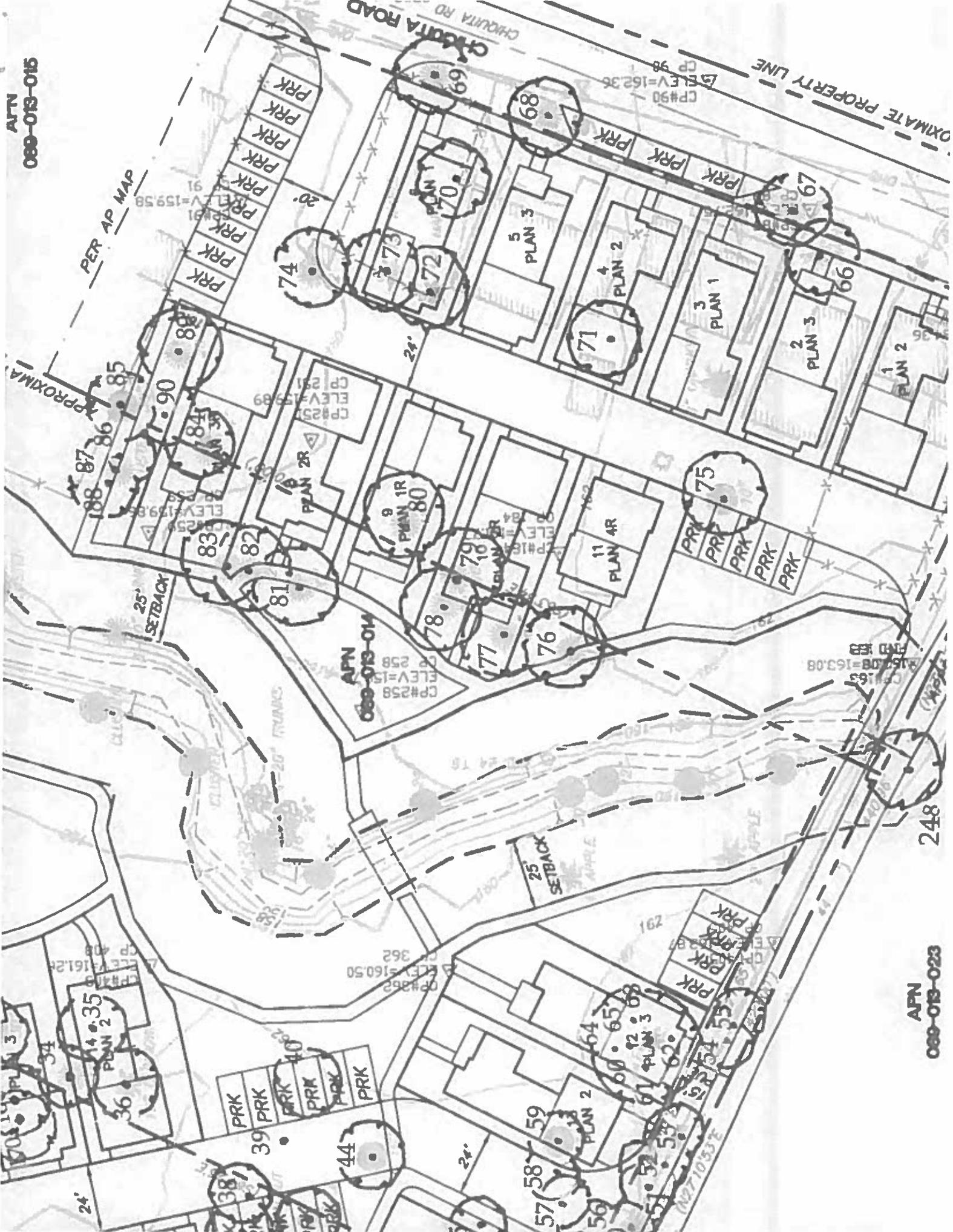
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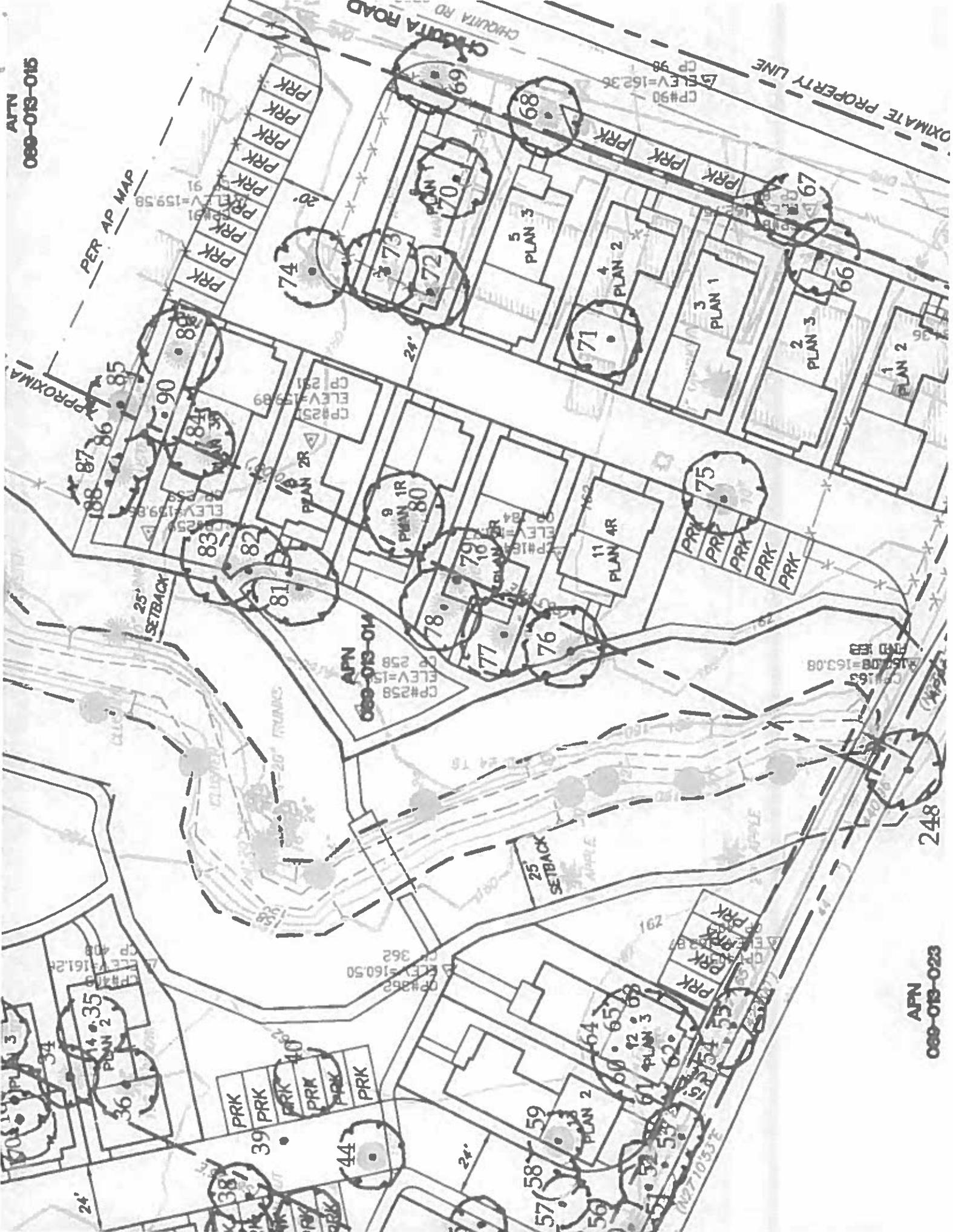
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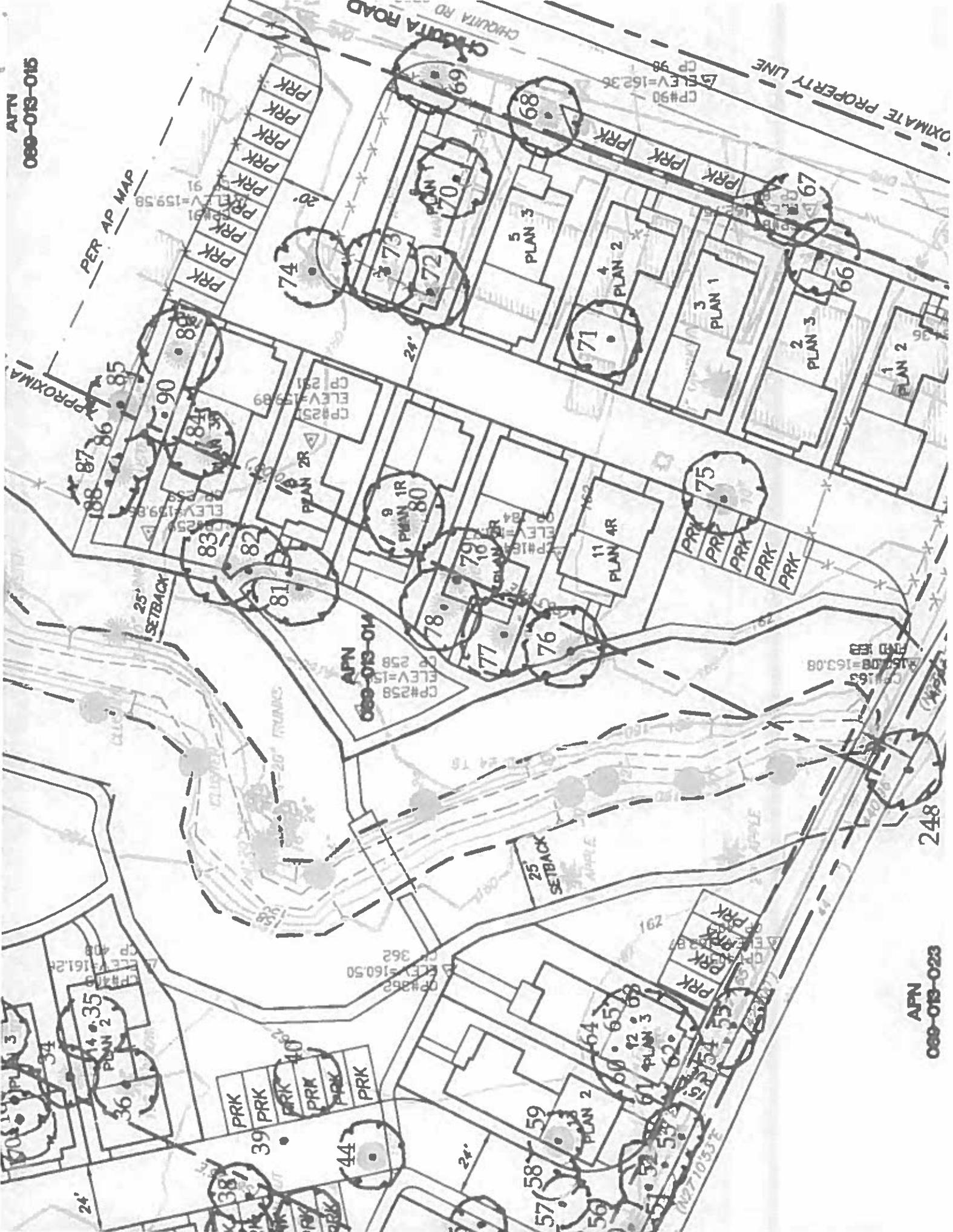
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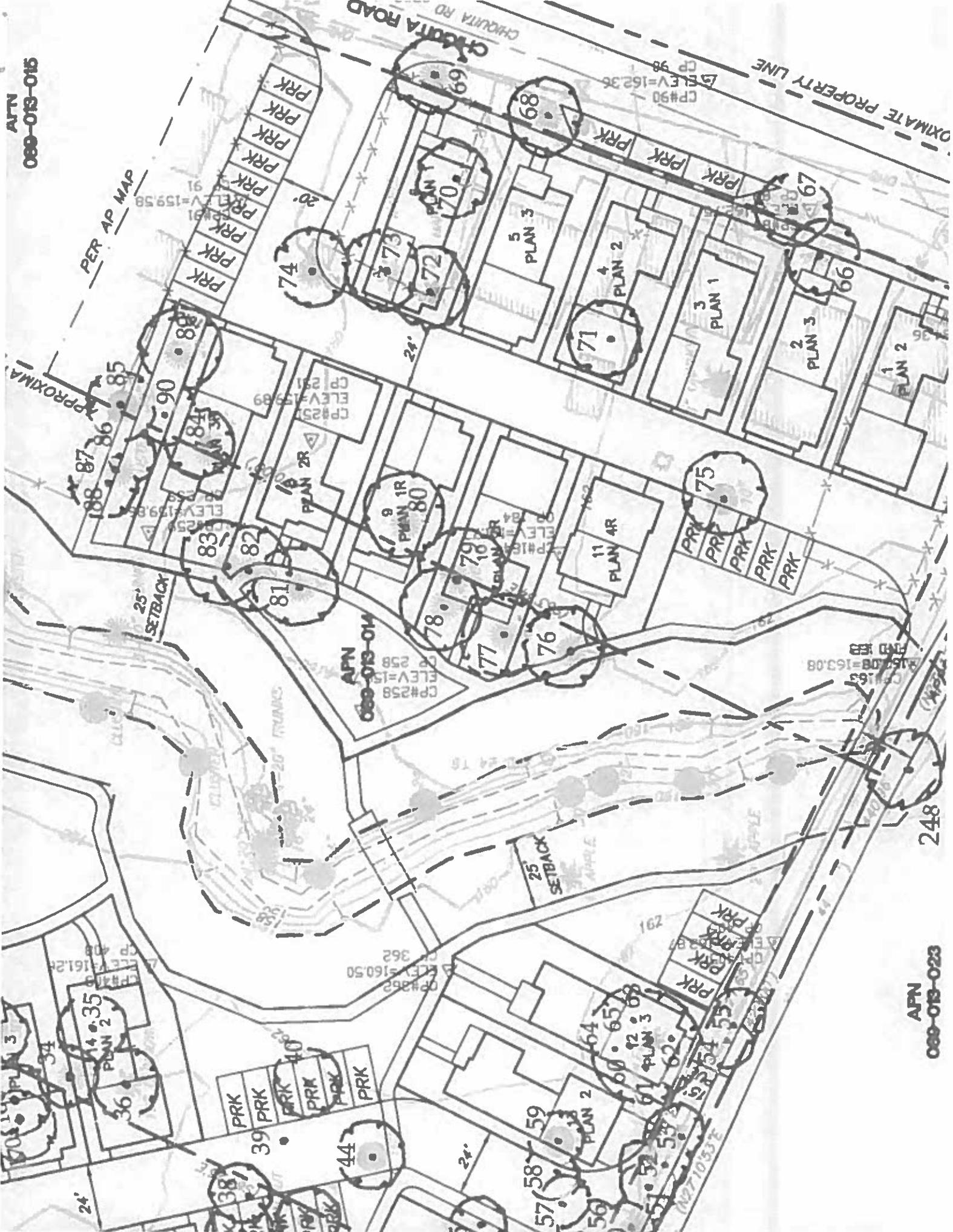
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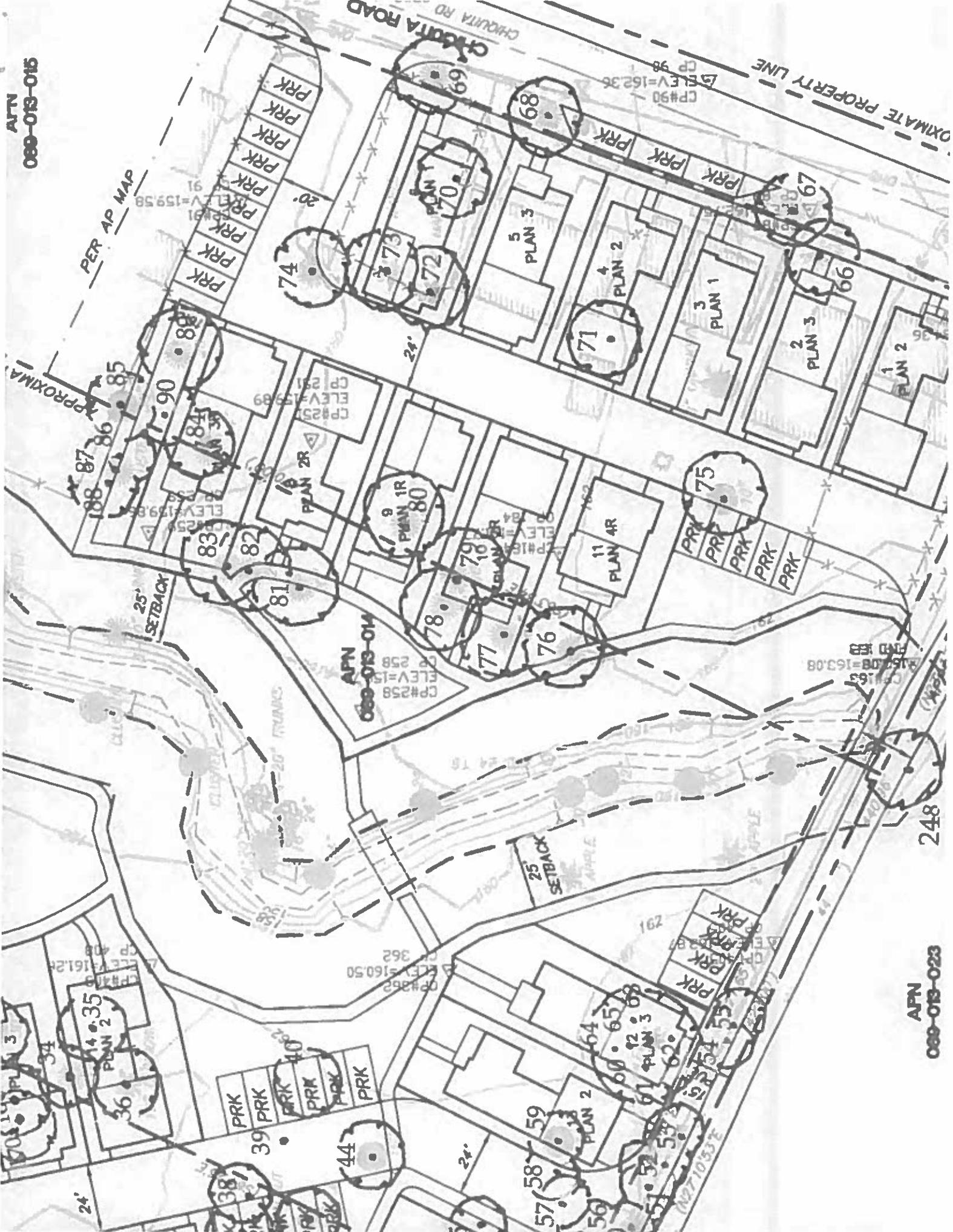
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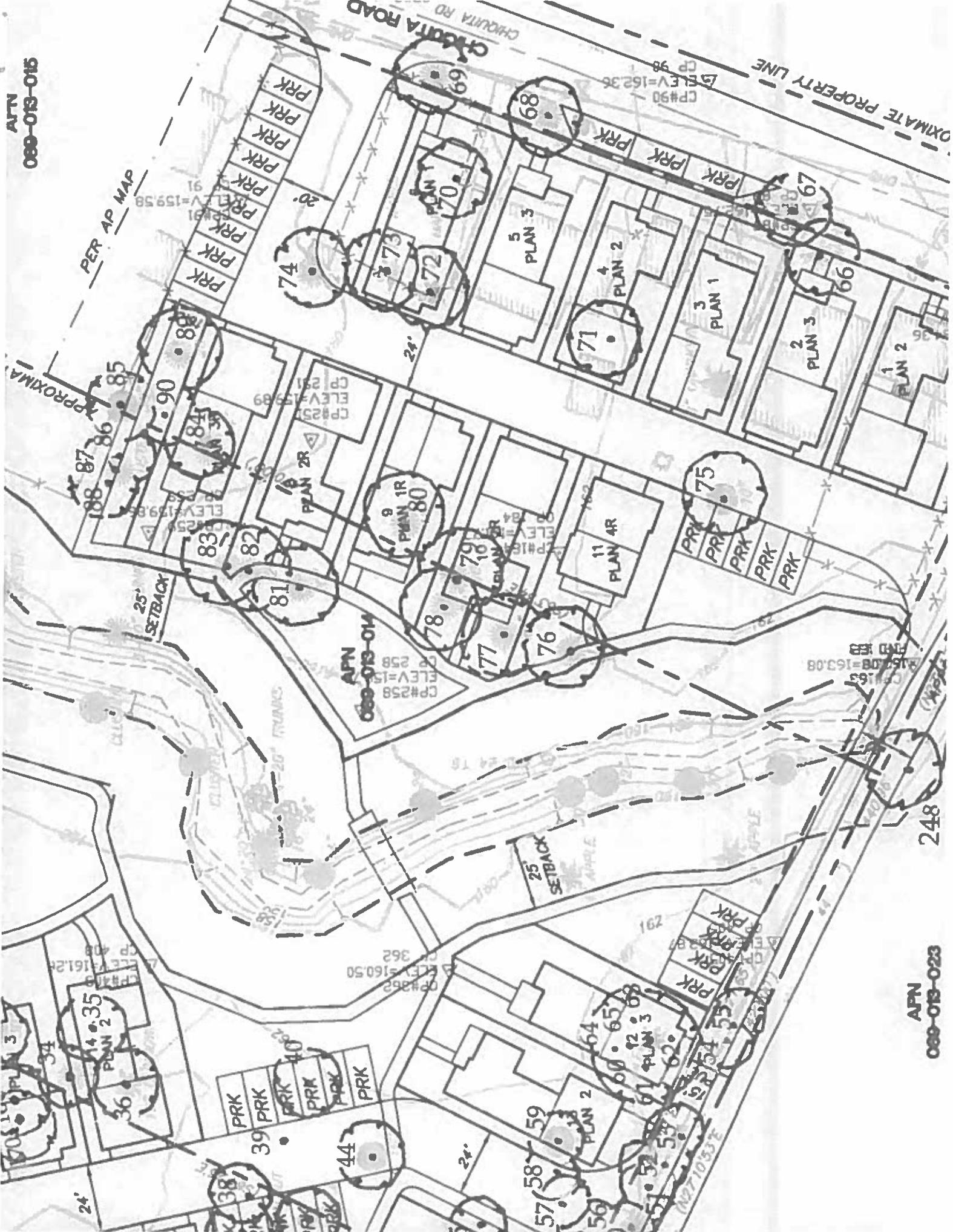
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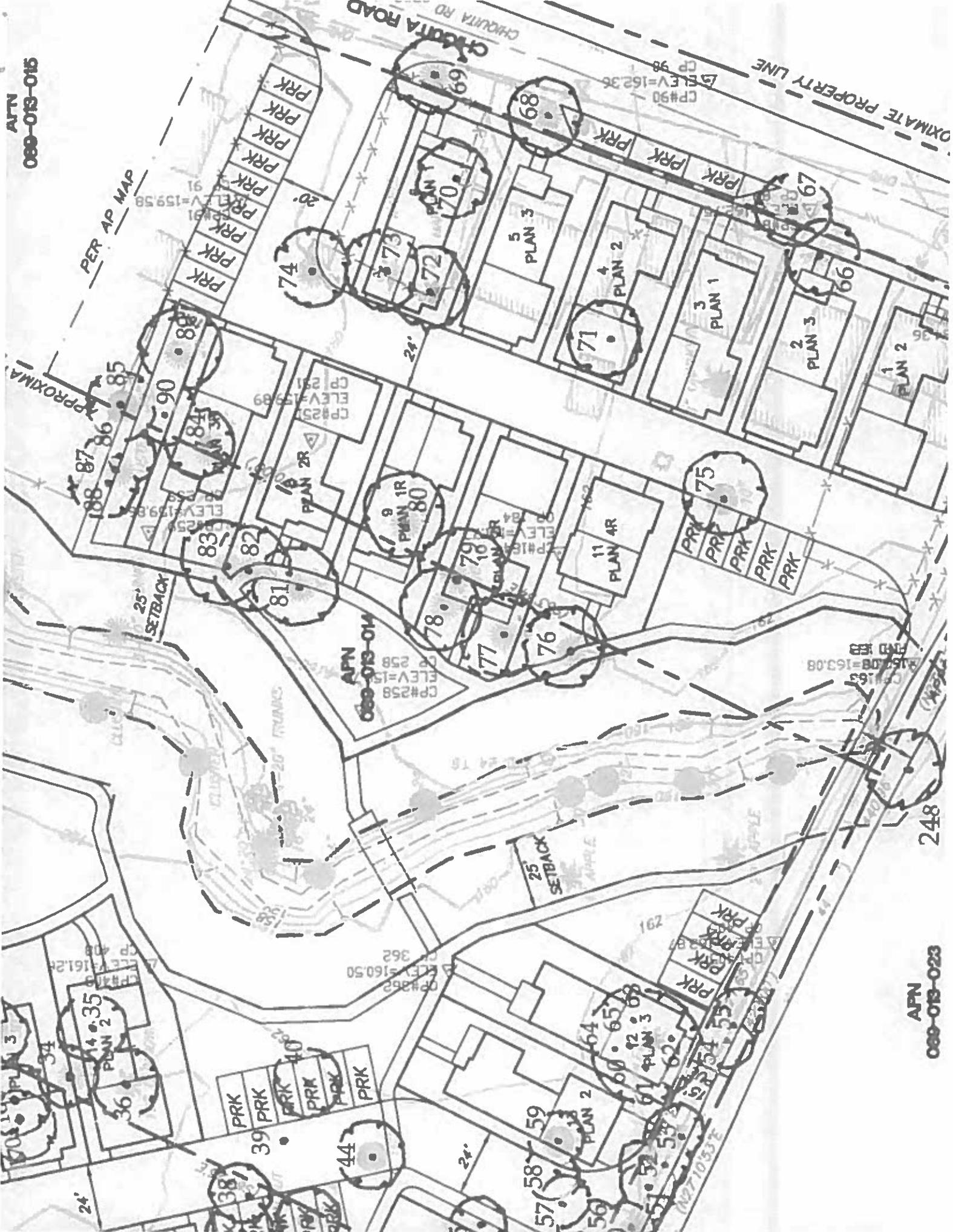
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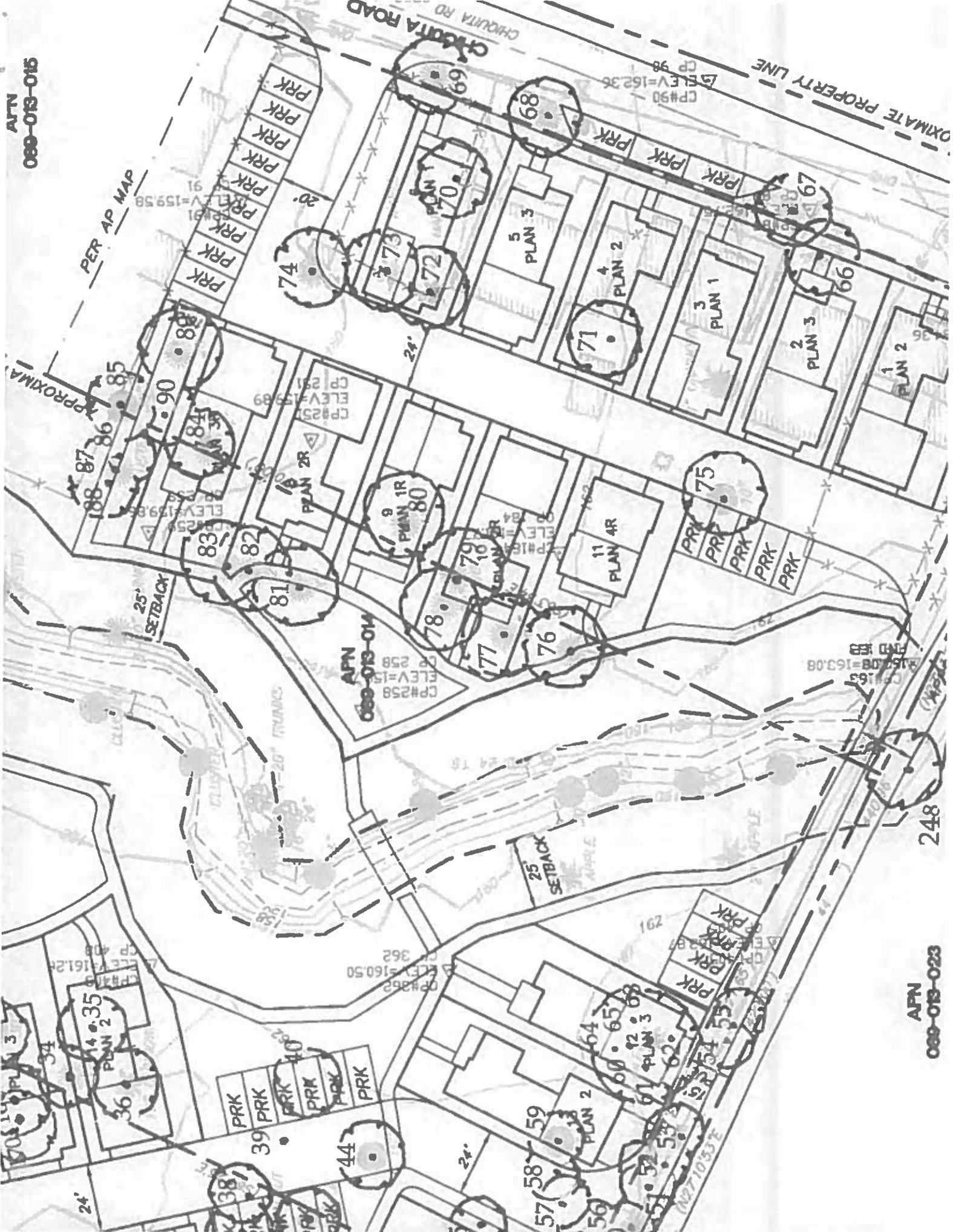
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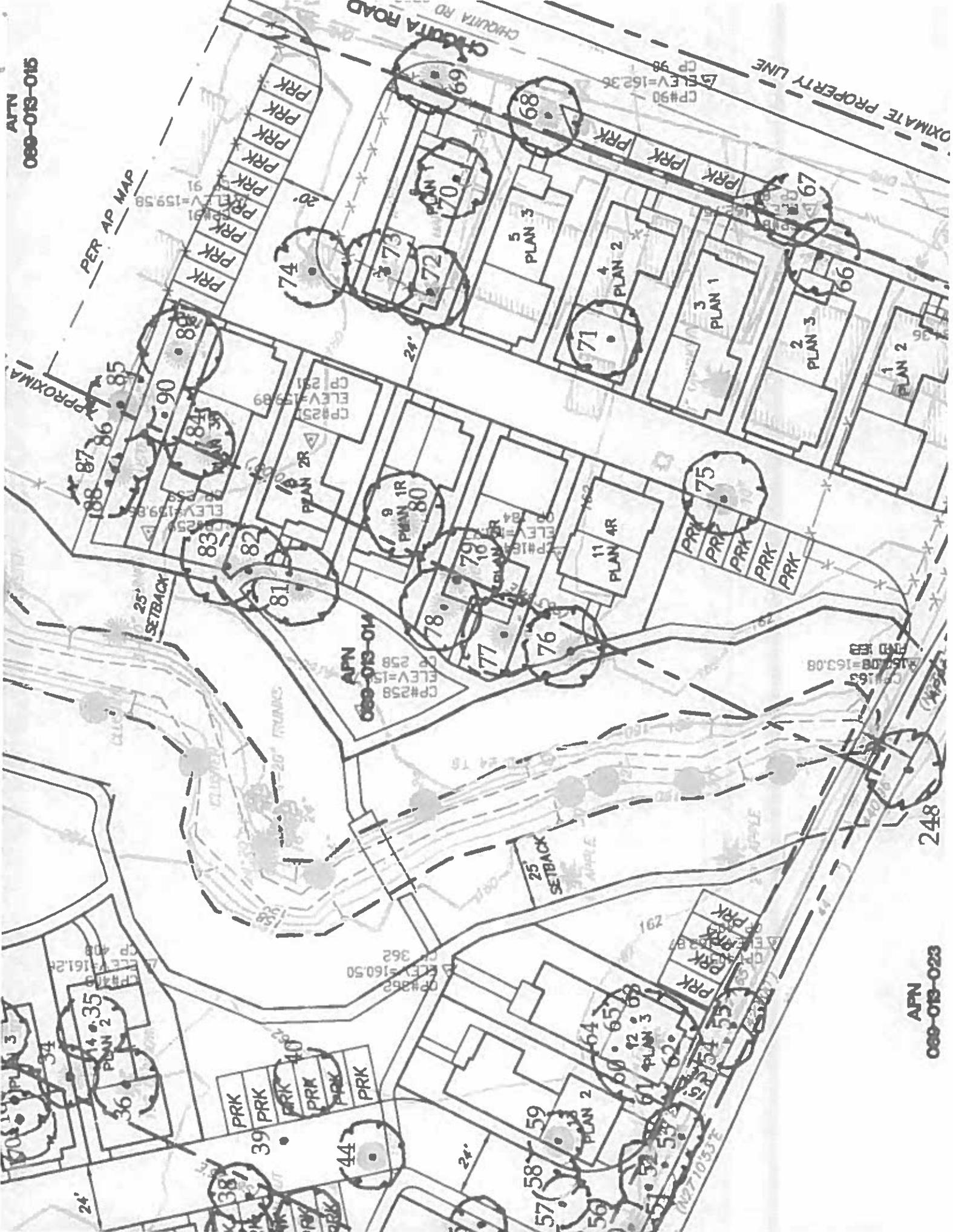
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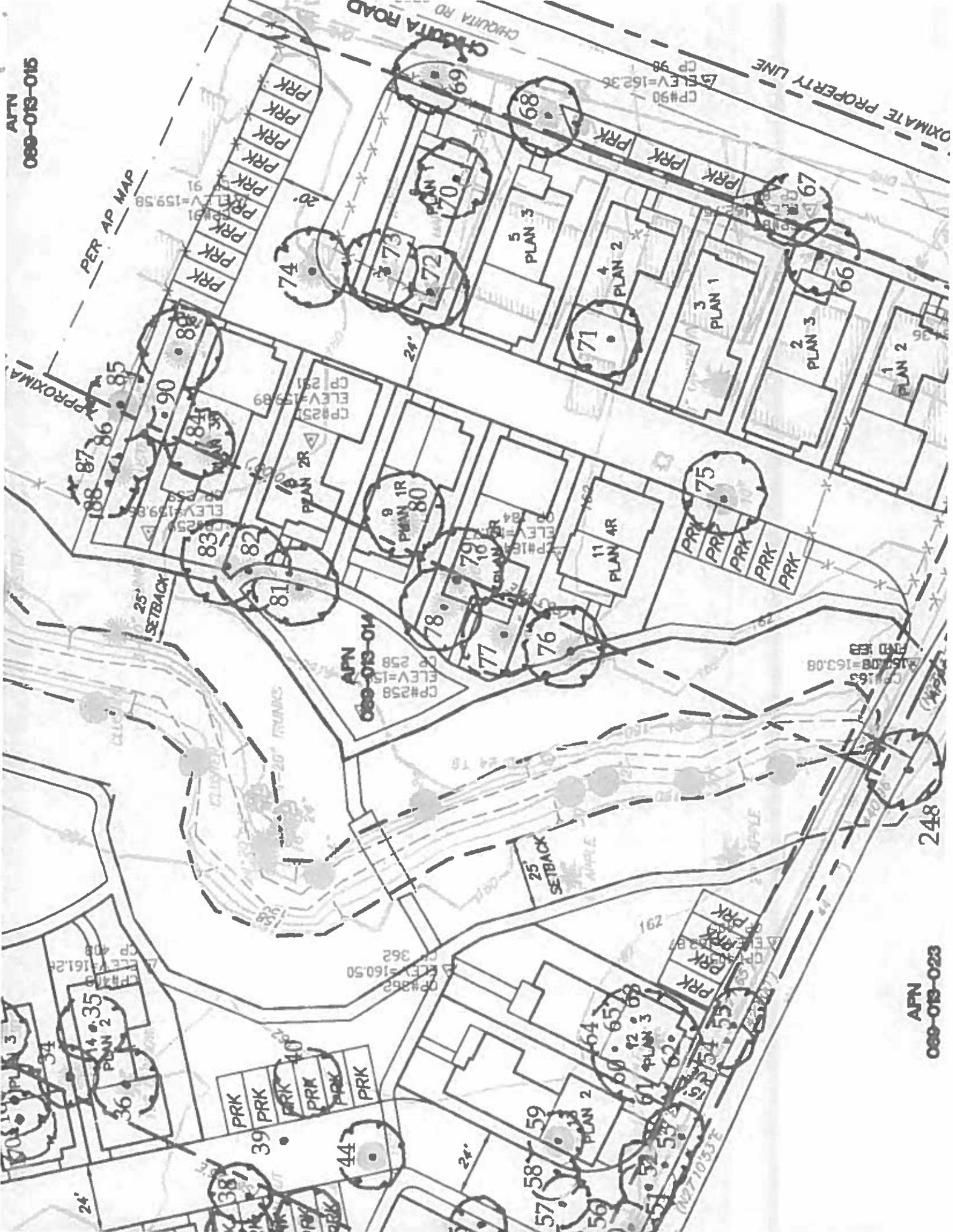
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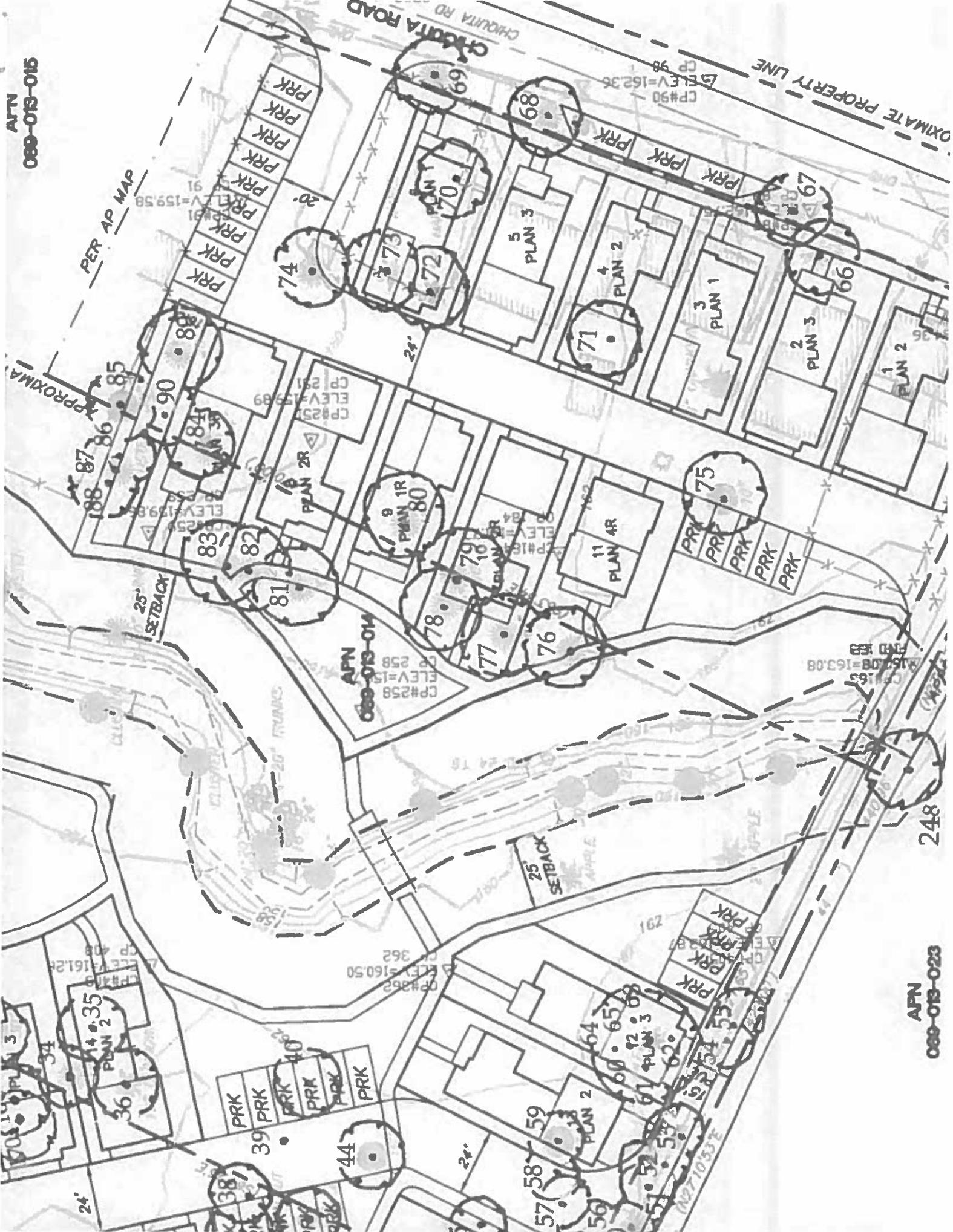
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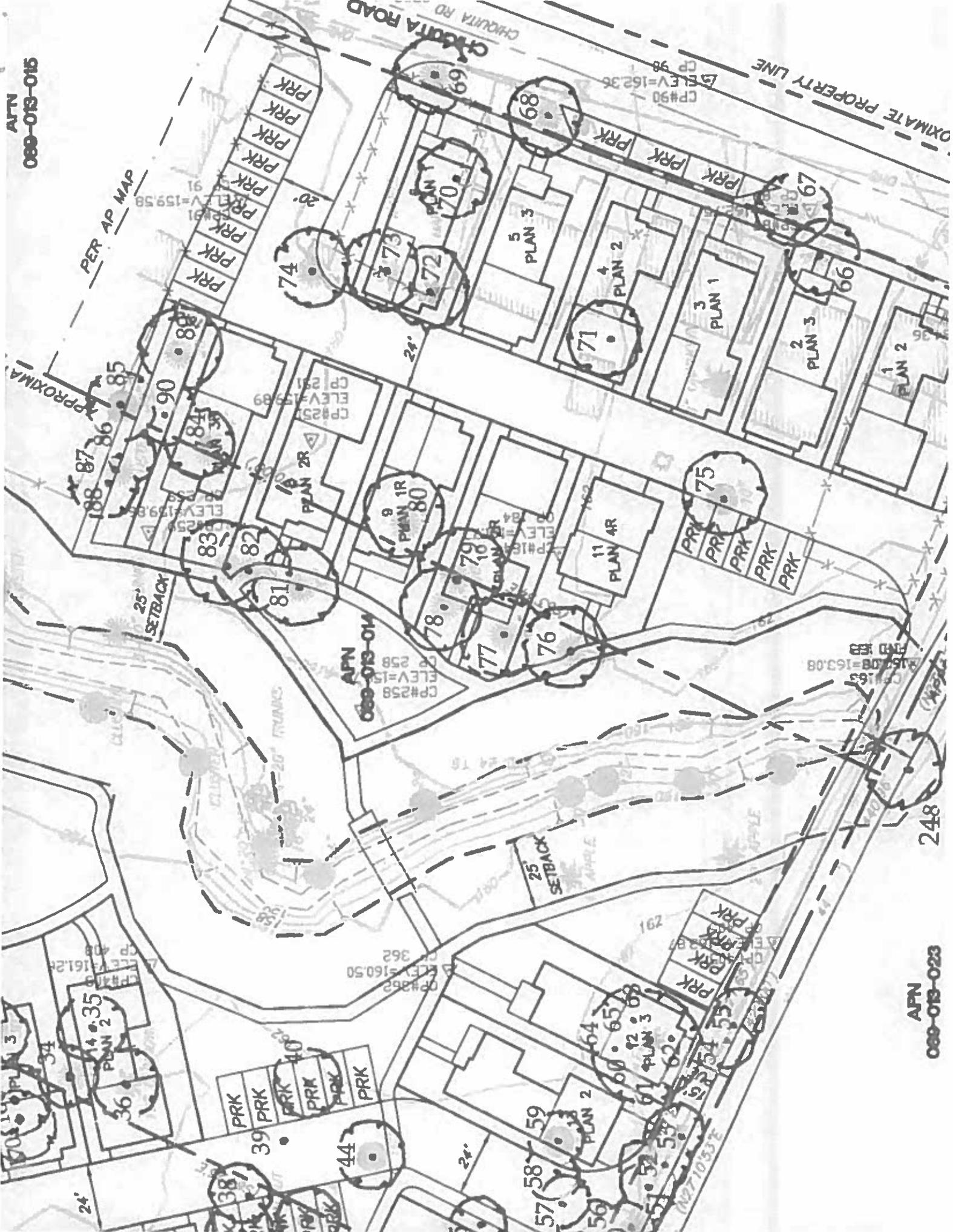
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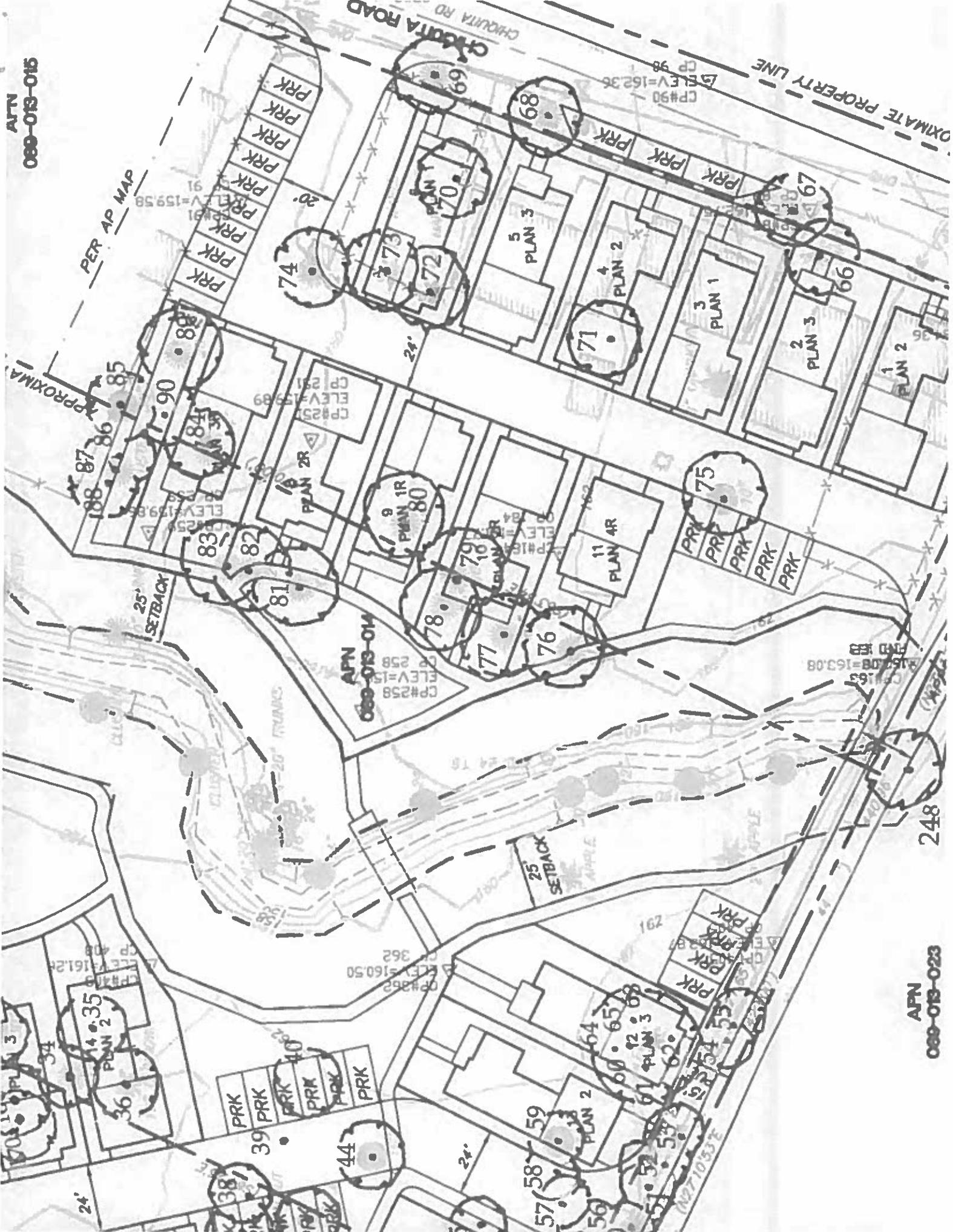
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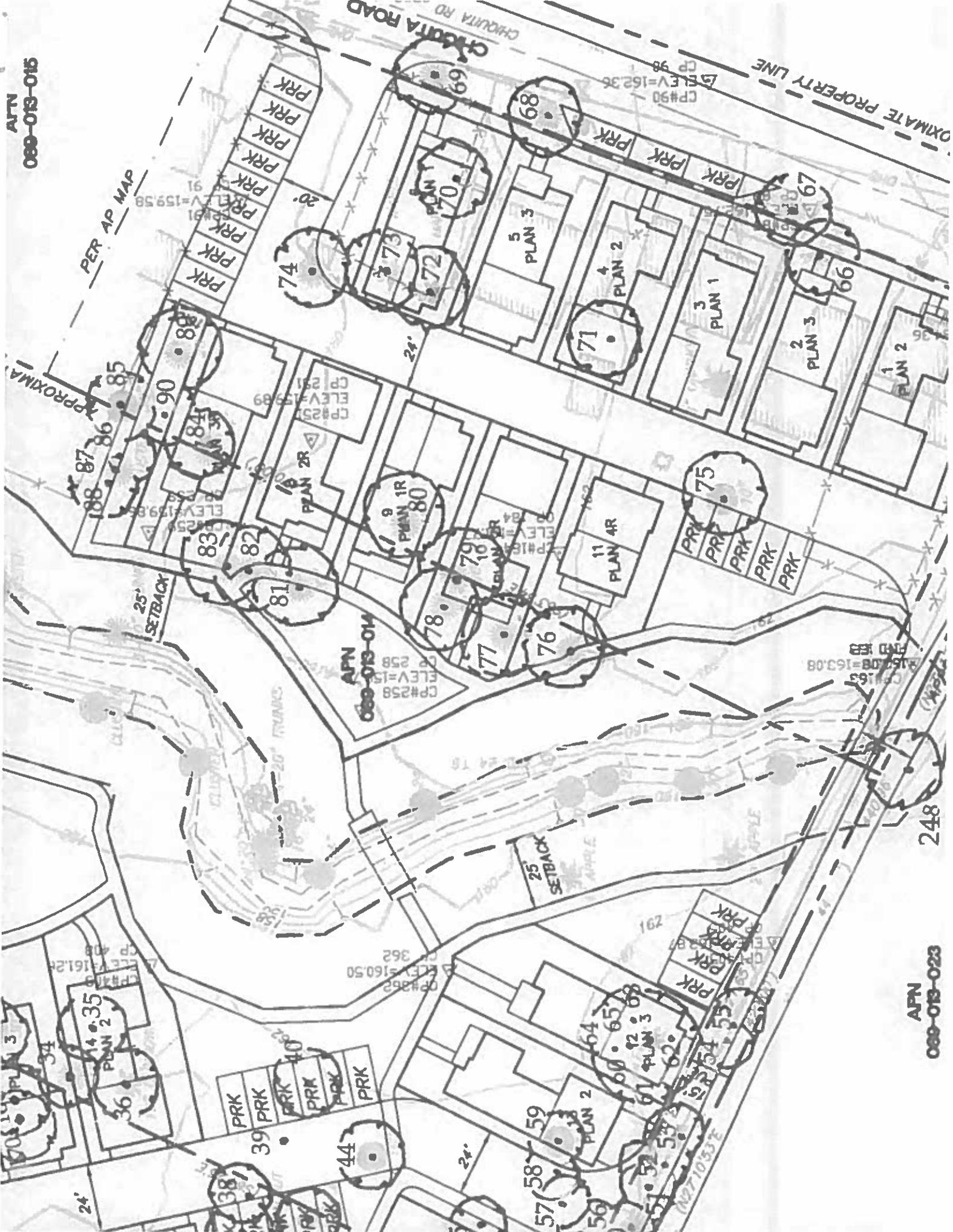
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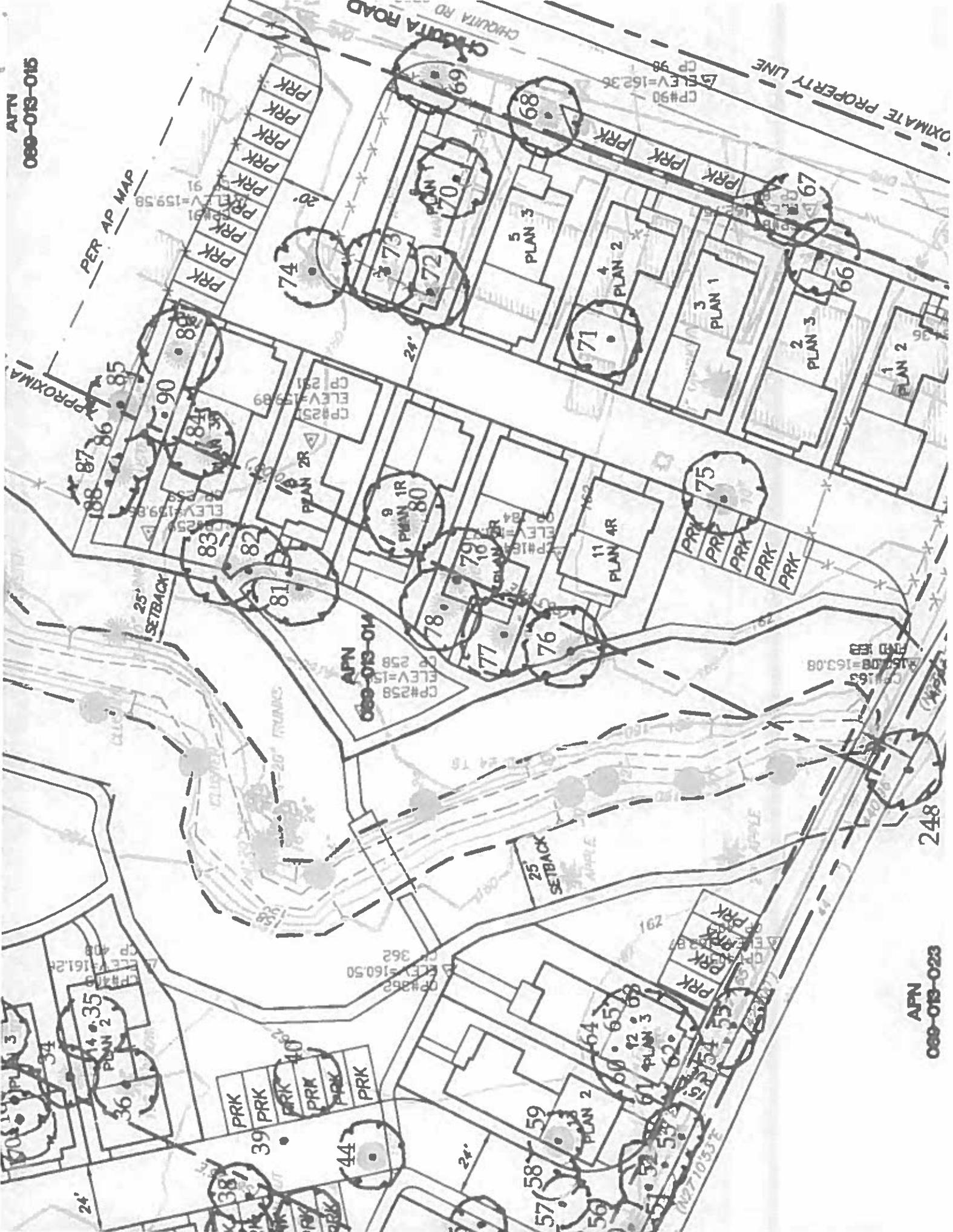
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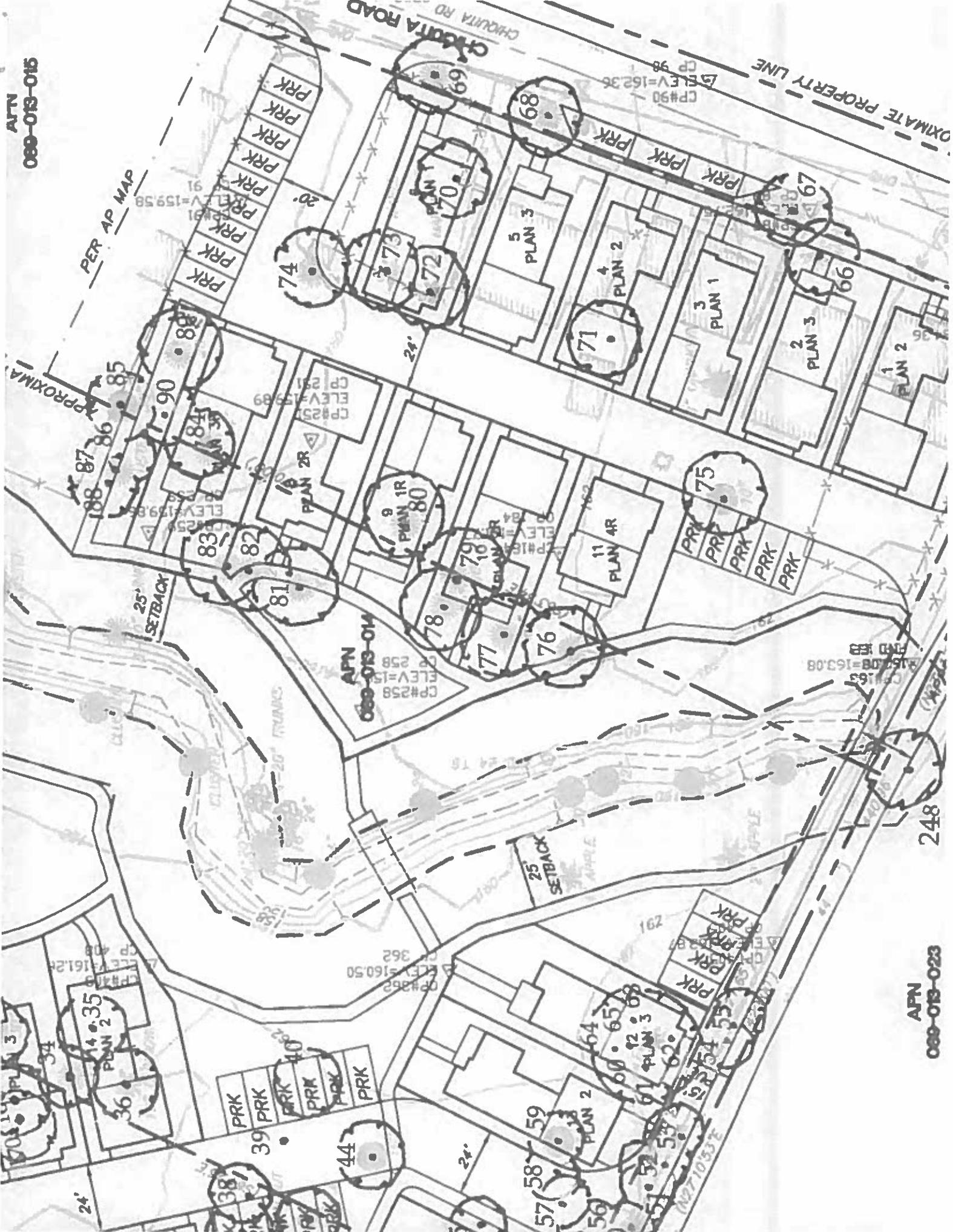
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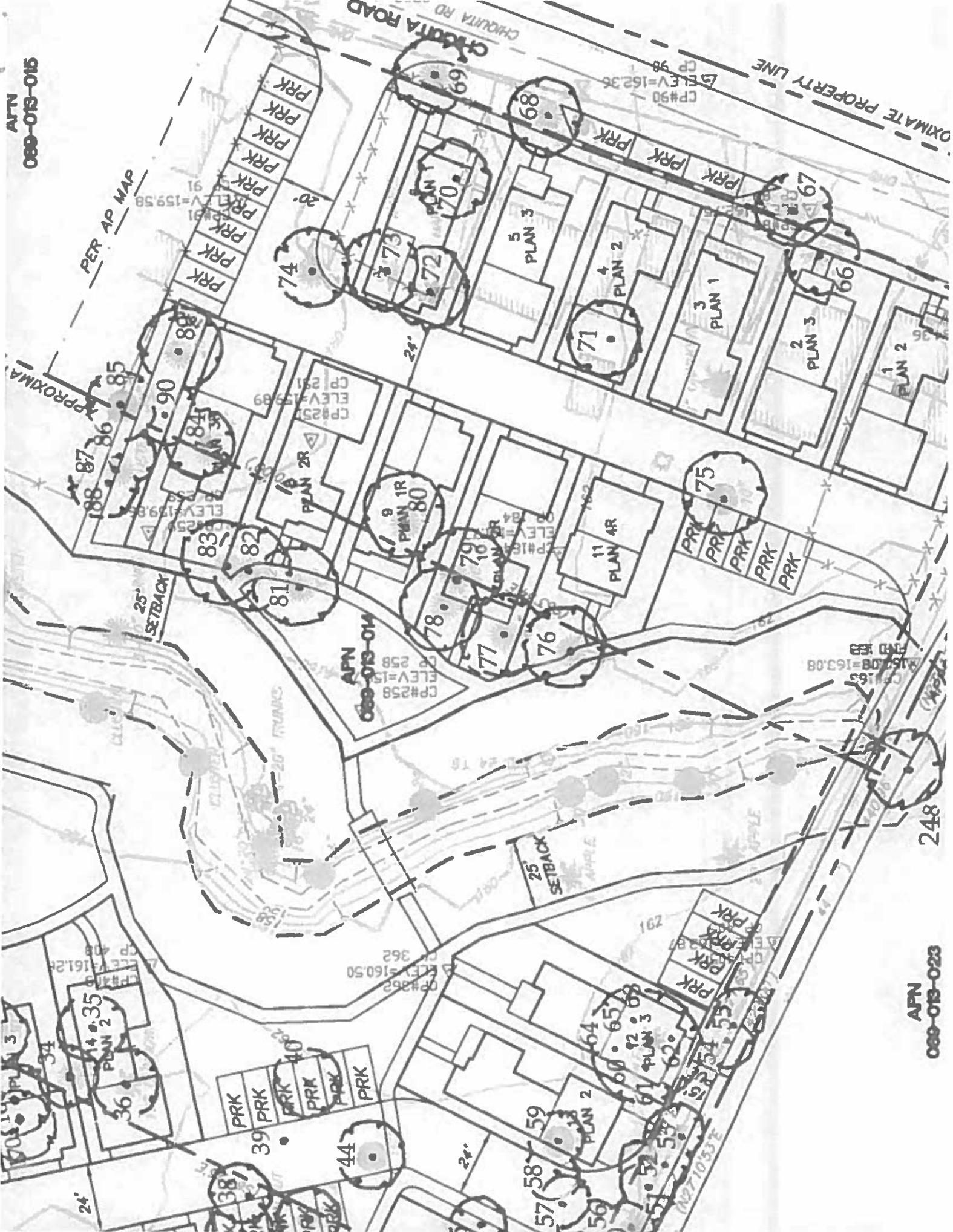
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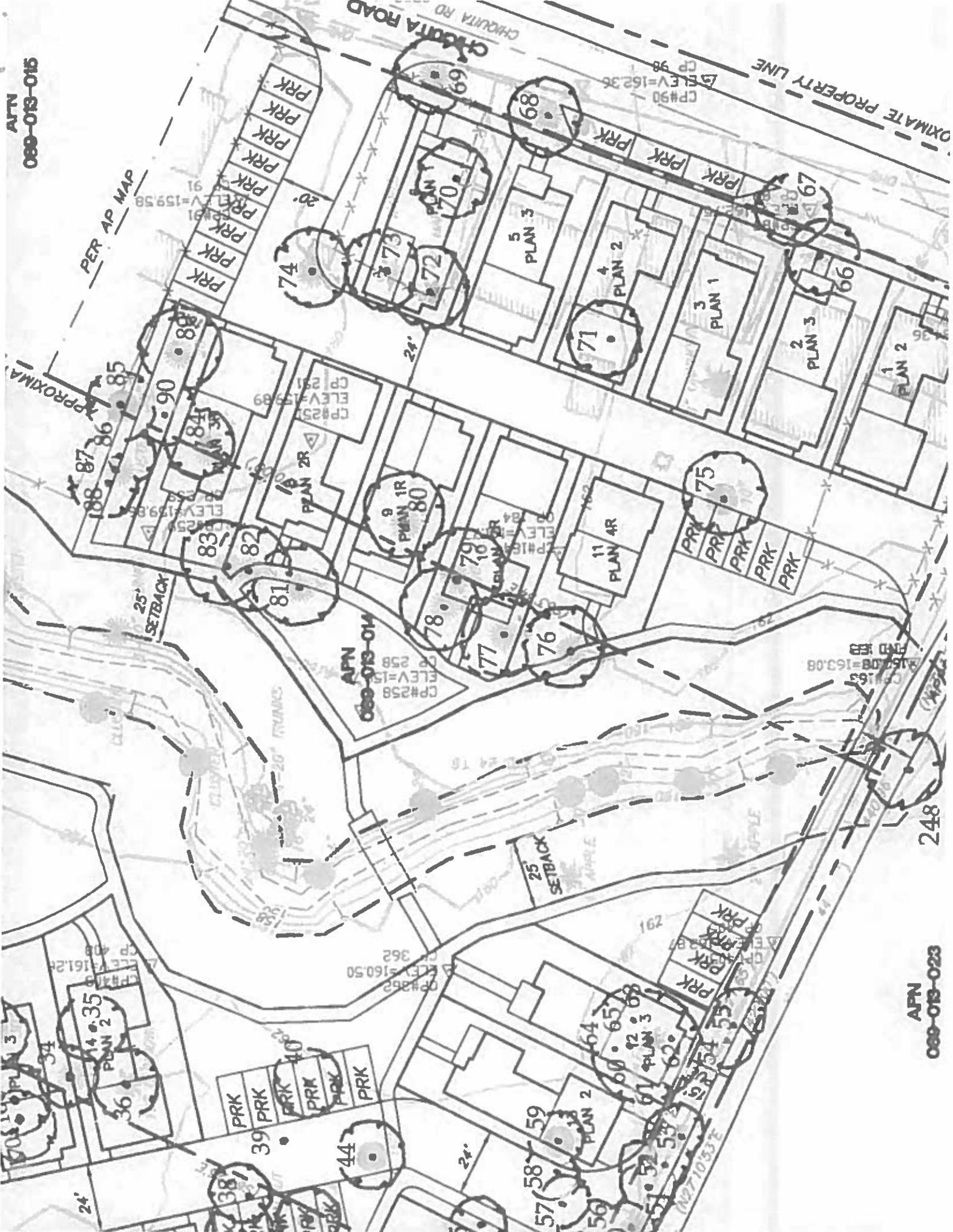
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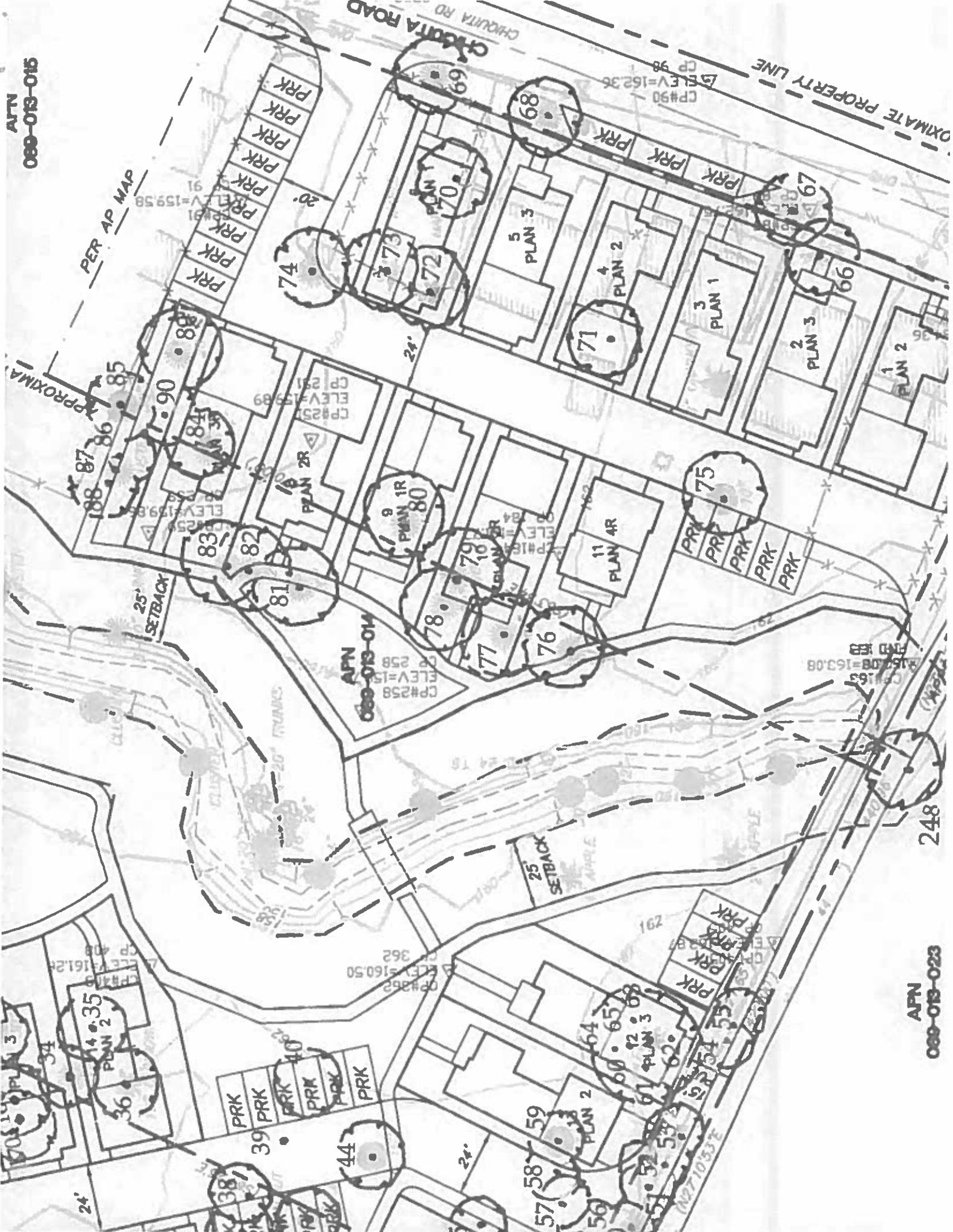
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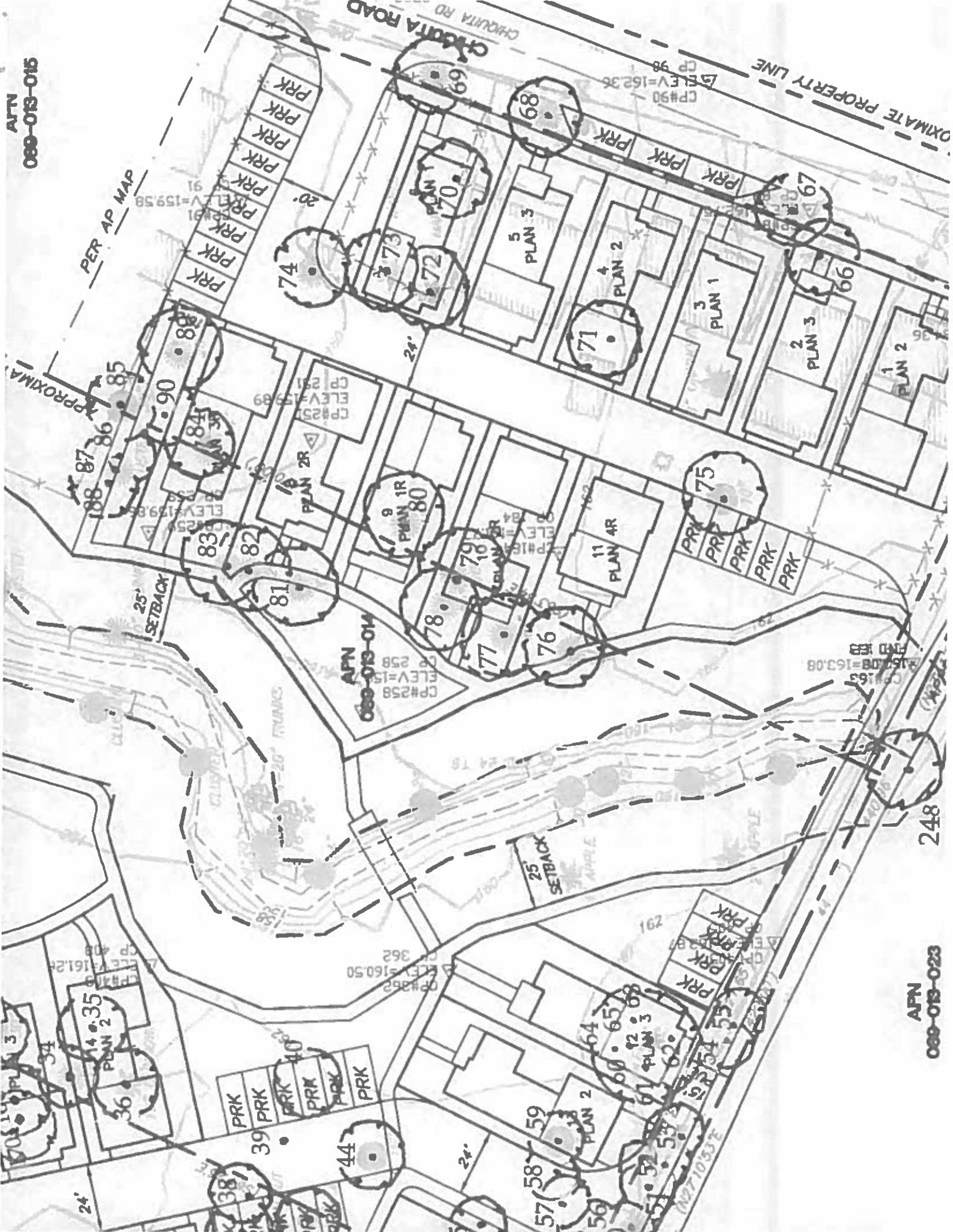
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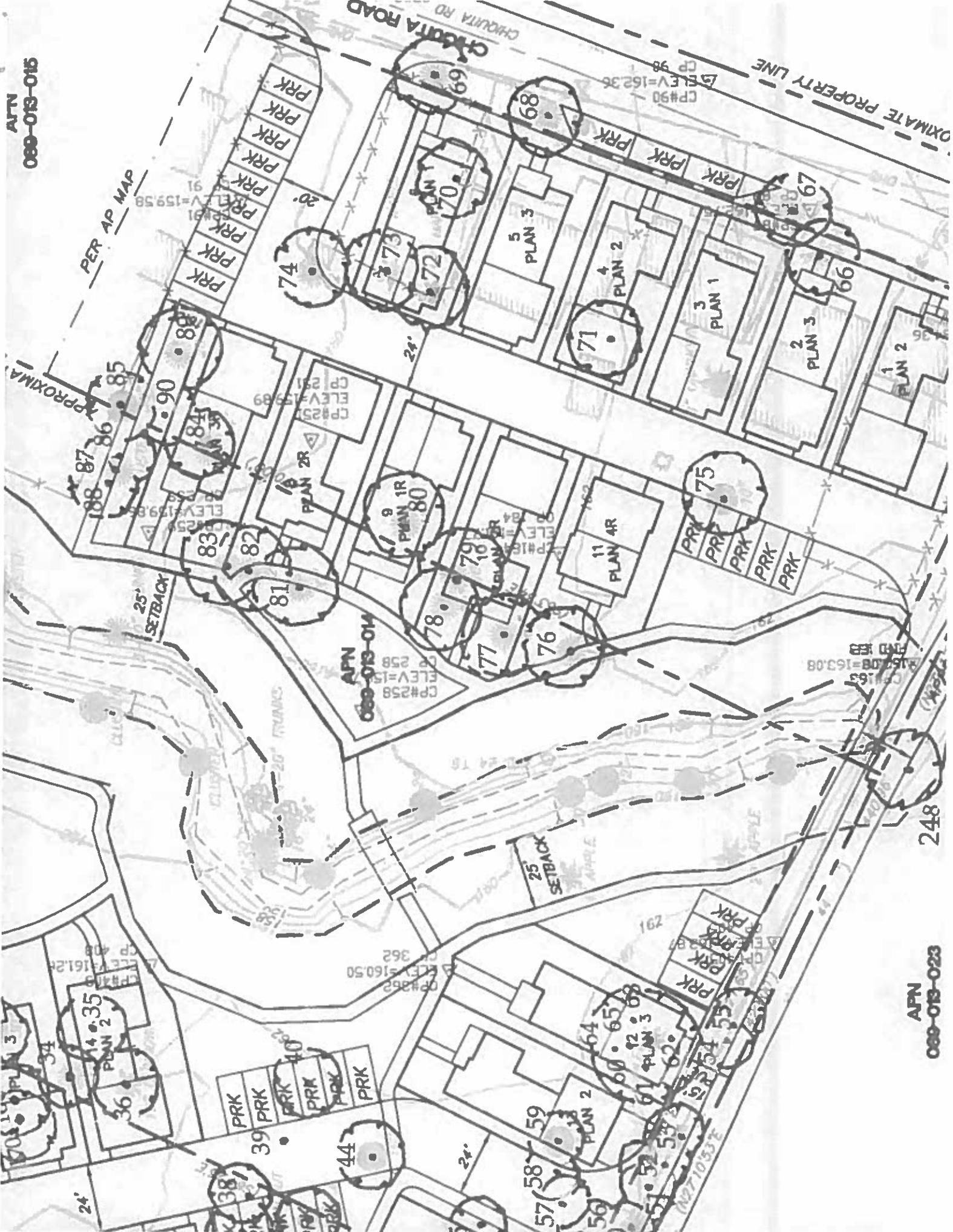
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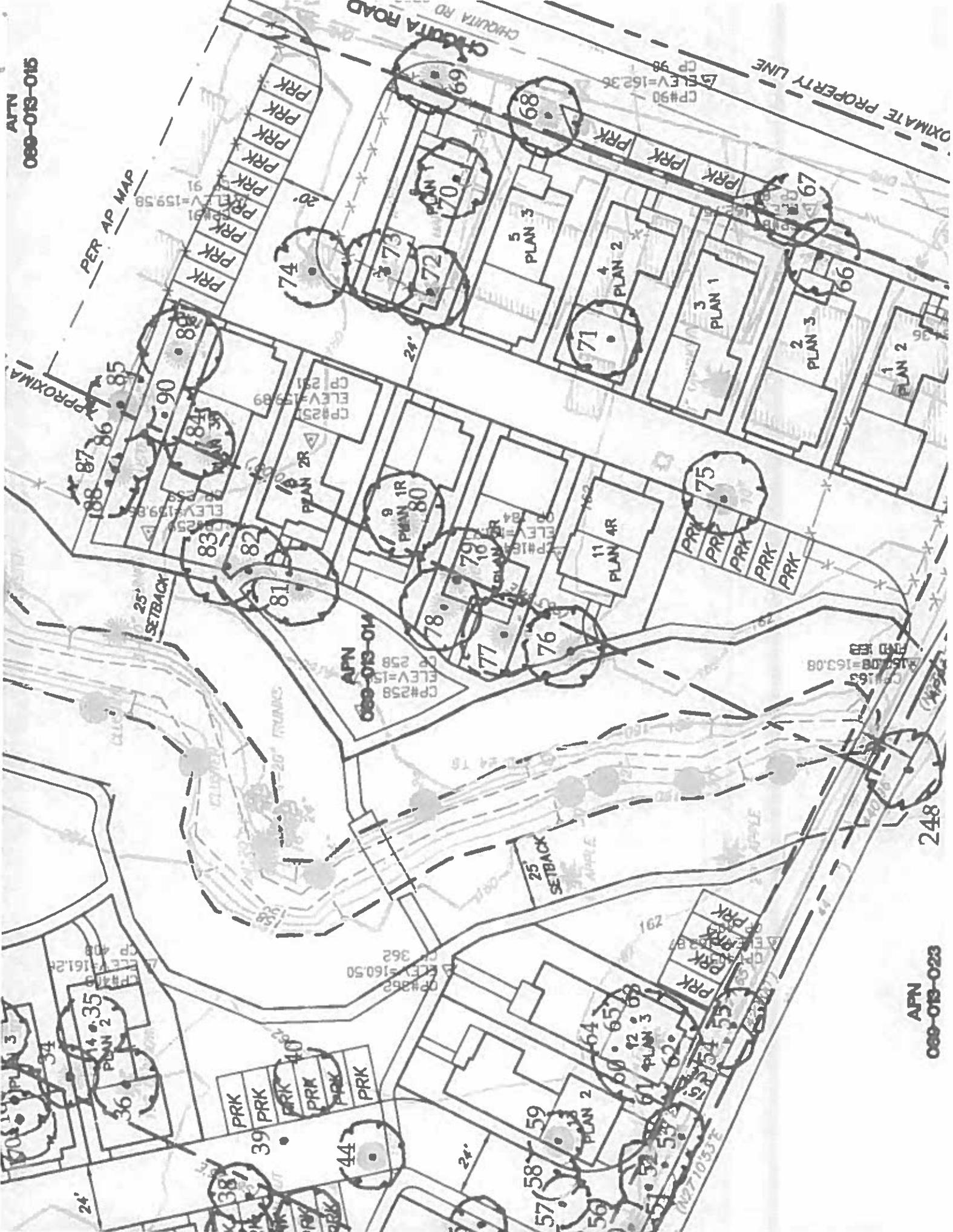
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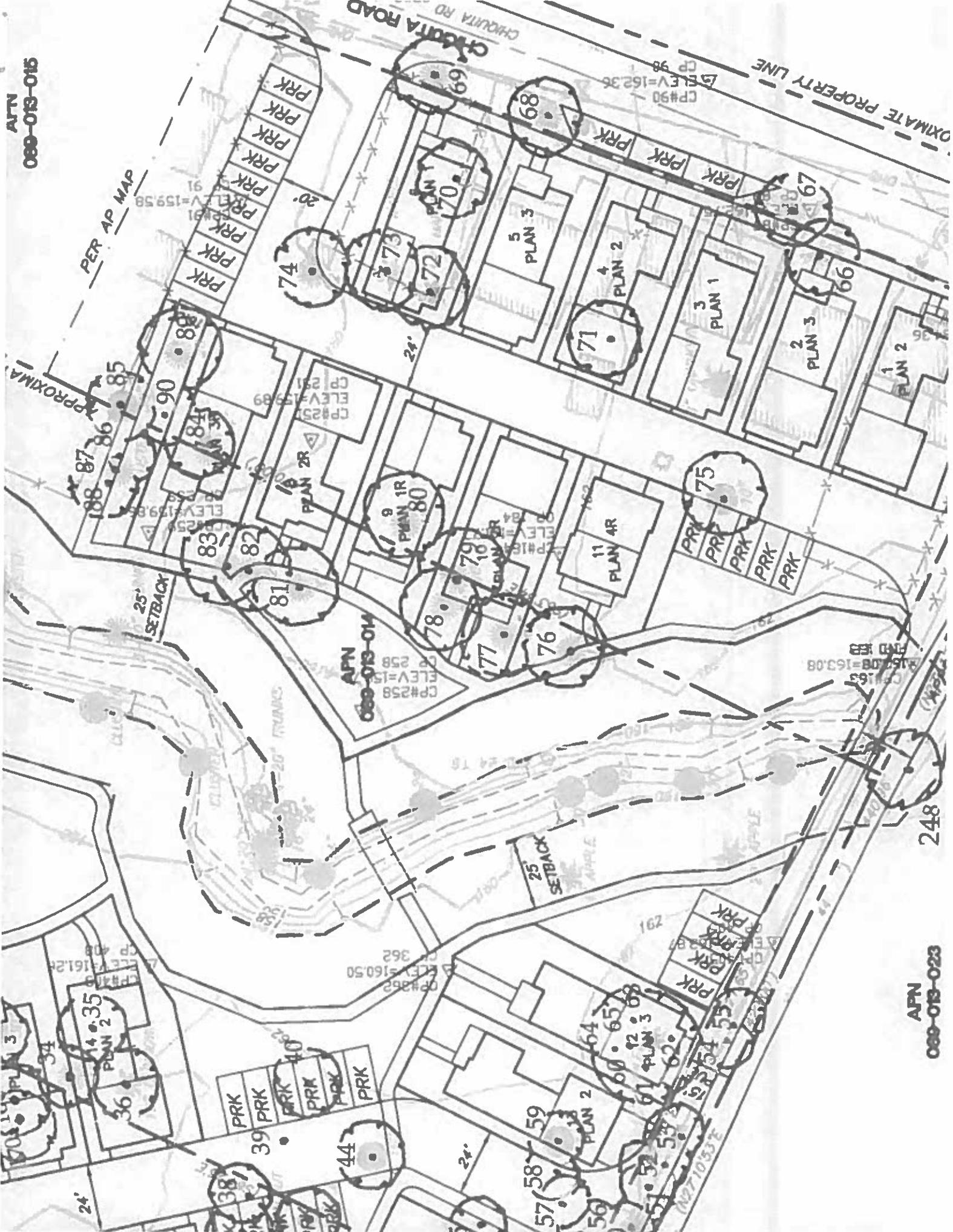
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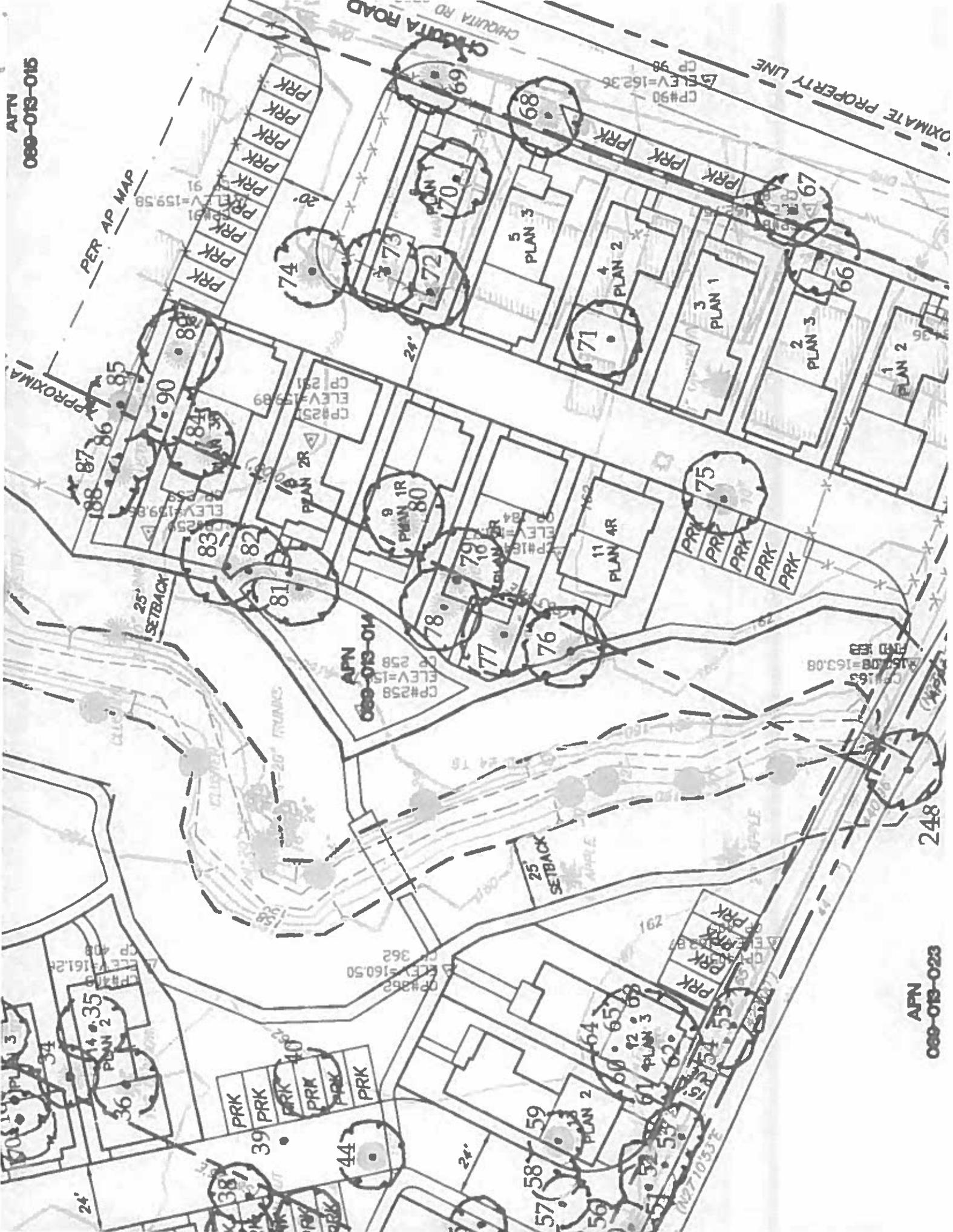
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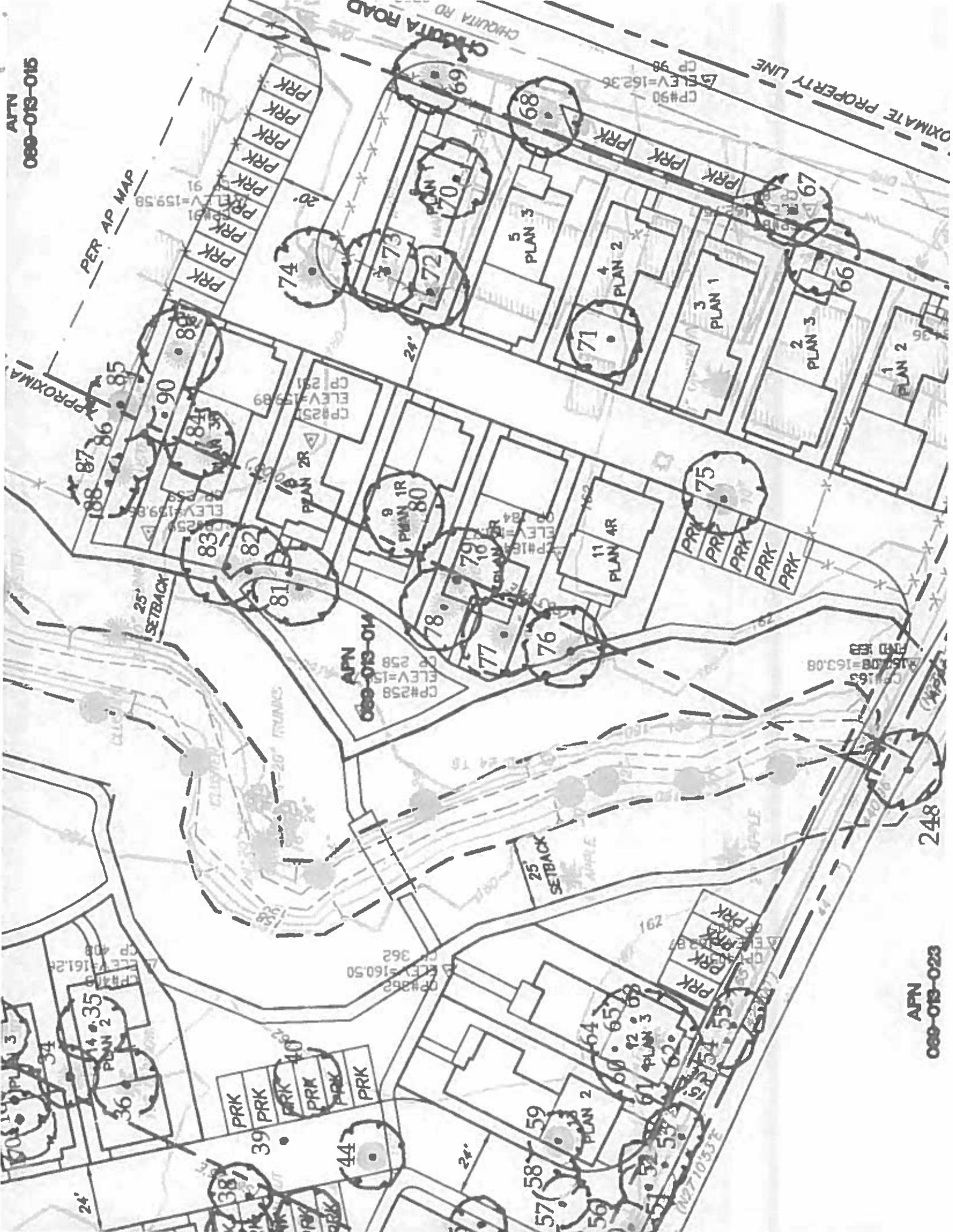
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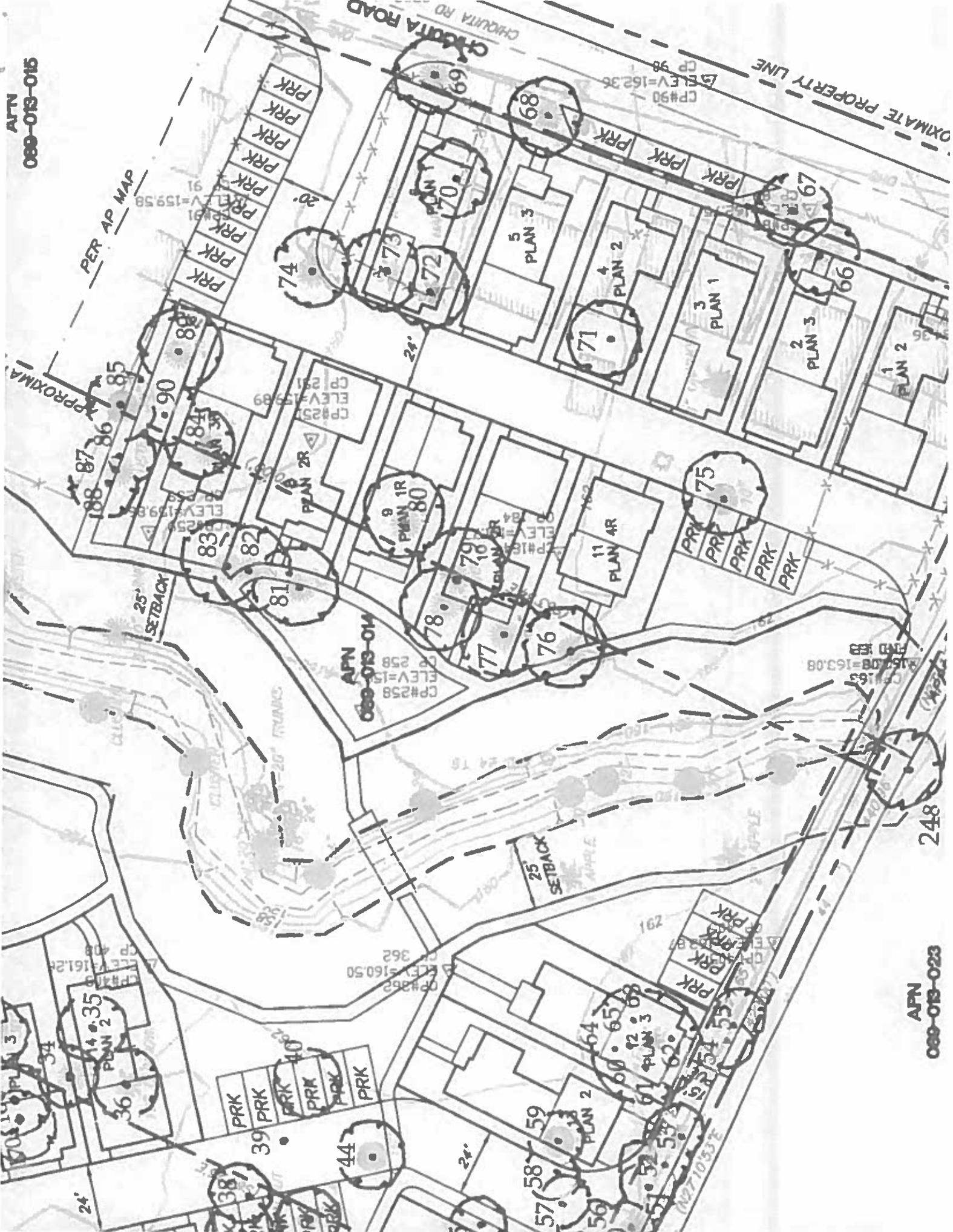
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APN
089-013-009



APPROXIMATE PROPERTY LINE
162

CP 461137
ELEV 210
SP 5113



APN
089-013-020

APN
089-013-022

APPROXIMATE PROPERTY LINE
373.7