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January 2, 2007

Red Rock Rural Community Association, LLC (RRRCA) &
Sierra Club
c/o Brian P. Myers
PMB 217
2370 West Highway 89A Suite #11
Sedona, Arizona 86336

RE: Bella Terra and Section 404 of the Clean Water Act

Dear Brian,

As you have requested I have looked into the situation at Bella Terra with respect to Section 404 of the Clean Water Act (CWA). In particular you were concerned about what may be the developer's violations of the CWA's requirements for general or individual 404 permits as a result of ongoing and planned construction activities within designated jurisdictional areas. My investigation included the following documents which are included as attachments to this letter:

1. Letters dated July 14, 2004 and August 26, 2004 from Shepard and Westnitzer (S&W) to Army Corps of Engineers (A.C.O.E.) outlining the areas on the Bella Terra site that may be delineated by the A.C.O.E. for designation as areas that fall within the jurisdiction of the Water of the United States and therefore Section 404 of the Clean Water Act process.
2. Letter dated Sept 27, 2004 from A.C.O.E. to S&W and the developer outlining the areas on the Bella Site that will be included as 404 Jurisdictional Delineation.
3. A.C.O.E. final Section 404 Jurisdictional Delineation Map
4. Subdivision plans submitted to Arizona Department of Environmental Quality and other regulatory jurisdictions regarding the subdivision.
5. Pictures taken by myself and Brian Myers of the Bella Terra site.
6. Aerial Photographs of the site as found in the Yavapai County GIS system.
7. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region by the U.S. Army Corps of Engineers. (only portions provided with this letter)

In addition I have personally visited the site 4 times with 2 of the 4 visits specifically focused on the 404 issues.

After reviewing parts of 40 Code of Federal Regulation (CFR), it is my professional opinion, that the developer has failed to conform to the CWA, specifically, the requirements of the Section 404 permitting process. This process was explicitly outlined in the letter from A.C.O.E. which accompanied the Jurisdiction Map. In particular the developer has already completed construction within portions of delineated area which

involved dredging or cutting, filling, construction and grading as defined within 40 CFR Part 122. In addition the plans submitted by S&W, if approved and implemented, would have additional impacts on the delineated area.

It appears that the delineation map and accompanying letter were provided to S&W and Michael A. Zito in late September of 2004. By not appealing the delineation within the allotted 60 days the developer has accepted the delineation. The subdivision maps produced by S&W in January of 2005 do not illustrate the delineation boundaries and in several cases the proposed development fails to avoid the delineated areas all together. In more than one case already completed construction has encroached in the delineated areas. As per 40 CFR, Parts 230-233, “Any discharge of dredged or fill material within the designated jurisdictional area requires a Section 404 permit from the Corps of Engineers. The Corps of Engineers emphasizes avoidance of the delineated jurisdictional area.” (Sept 27, 2004 letter from A.C.O.E.)

New construction in violation of Section 404 of CWA

Specifically, the following situations include land areas which were not avoided and have already experienced heavy construction impacts without the benefit of either a Nationwide Permit (general) or individual Section 404 permit for the construction planned within the delineated area:

1. Historic Drainage Ditch.

A Nationwide Permit– 02 (NW-02) for Structures in Artificial Canals is required for culvert extension into the Historic Irrigation Ditch. The A.C.O.E. delineation included all open channel portions of the historic irrigation ditch which crosses the Bella Terra site. The Jurisdictional Delineation Map and original aerial photograph upon which the map was based shows the irrigation ditch extending, as an open channel, to within 110 feet (measured along the ditch trajectory) of the Bella Terra property line (PL) which follows Carrol Canyon on the east side of the project. Project plans and field measurements show that 80 feet +/- portion of the irrigation ditch which was previously an open canal is now buried and enclosed in a corrugated metal pipe (cmp). Figure 1, Irrigation Ditch and Proposed Culvert Outlet show these described features. The outlet of the underground portion of the irrigation ditch is now approximately 190 feet (measured along the ditch trajectory) of the Bella Terra Property line (The outlet was previously 110 feet from the P.L.). No permits for this construction within the jurisdictional delineation were applied for despite the developer’s initial nomination and ACOE’s concurrence and ultimate establishment of the jurisdictional standing of the irrigation ditch. This construction eliminated approximately 80 feet of the open ditch and the surrounding vegetation. No plans which addressed the impacts of the construction on water quality during the construction process have been located or identified. Reportedly during the construction of the additional culvert lengths approximately 40 feet of the original buried culvert was excavated, replaced and reburied along the historic irrigation ditch.

2. Constructed Drainage Structure.

A Nationwide Permit– 43 (NW-43) for Storm water Management Facilities is required for storm water facilities which impact on designated areas. Completed construction at Bella Terra, which follows the S&W subdivision plans, has resulted in a storm water drainage structure and outlet protection well within a designated area. This culvert exit is located near the upstream end of the segment of Carrol Canyon which borders the project site east of Lot 95 as shown in Figure 2 which includes a photograph of the newly constructed culvert exit. The jurisdictional delineation map includes a 30 feet wide delineated area along Carrol Canyon and explicitly shows the boundary of the jurisdictional area with highlighting. The delineated area encompasses the area disturbed by the construction of the culvert exit and associated erosion protection area. In addition, no storm water management plans which address the impacts of the construction itself on water quality during the construction process have been located or identified. This drainage structure has a significant amount of sediment in it already which likely entered from its upstream unprotected inlet which drains a highly erode-able low lying area proposed for development as a paved cul-de-sac in the project plans. It is likely that this drainage structure has already contributed silts and sediment to Carrol Canyon and Oak Creek during recent storms.

Planned Construction in Violation of Section 404 of CWA

Specifically, the following situation describes delineated land areas which are not being avoided and will experience heavy construction impacts if constructed without the benefit of either a Nationwide Permit (general) or individual Section 404 permit for the construction planned within the delineated area:

3. Planned Stormwater Features.

A Nationwide Permit– 43 (NW-43) for Stormwater Management Facilities is required for two additional storm drainage structures which are included in the plans for Bella Terra although they have not yet been built. The subdivision plans show a total of 3 cmp drainage structures which outlet or drain into Carrol Canyon along its western banks. One of these cmp pipes and its outlet structure has already been constructed in the delineated area of Carrol Canyon's banks as discussed above. The remaining two of the designed cmp storm drains also terminate within the delineated areas. Figure 1, Irrigation Ditch and Proposed Culvert Outlet, and Figure 3, Proposed Culvert and Outlet within Delineated Area, show these drainage structures as they are presented in the subdivision plans. Both of these drainage structures should be covered in a Section 404 permit application.

Undocumented New Construction in Violation of Section 404 of CWA

Specifically, the following situation includes land areas which were not avoided and have already experienced heavy construction impacts without the benefit of either a Nationwide Permit (general) or individual 404 permit for the construction planned within the delineated area:

4. Phantom Storm Drain.

Visits to the Bella Terra site show an additional large diameter drainage pipe that is not documented in the S&W plans. Figure 4 Phantom Storm Drain shows the approximate culvert location on the subdivision plans and includes a picture of the structure. This undocumented drainage structure crosses a low lying area which appears to be below the high water mark of Oak Creek in the area. While not complete at this time, it is apparently intended to drain to Oak Creek by traversing the delineated area along Oak Creek. The terminus of this drainage structure has not been accurately related to the subdivision map or the delineation map at this time. This drainage structure is also already silting up as can be seen in the picture.

Mandated Regulatory Consequences of Bella Terra Unauthorized Activities

It is my understanding of the Section 404 permitting process that the developer is generally free from the need of applying for and being granted a general or specific 404 permit if the developer completely avoids any construction activity or other impacts within the delineated area. It is apparent that the developer has failed to conform to these requirements in either the plans for the project or the actual construction of the project. It is therefore incumbent upon the A.C.O.E. to recognize these violations of trust with respect to the delineated avoidance areas and require the Bella Terra developers to now formally submit their plans for a full review under either multiple Nationwide Permits or an Individual Permit. Under A.C.O.E. discretion, these permits may include mitigation requirements caused by unauthorized activities. It is also my understanding that the criteria for WETLANDS delineations and resulting permit requirements in Arizona (when triggered by actual or planned incursions into delineated areas) have (as of January 21, 2007) been significantly revised by the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region . The revisions include the requirement that the delineation process more fully investigate riparian areas to discern from wetland areas through more extensive site evaluations. The following is an excerpt from the introduction of this supplementary document:

“This document is one of a series of Regional Supplements to the Corps of Engineers Wetland Delineation Manual (hereafter called the Corps Manual). The Corps Manual provides technical guidance and procedures, from a national perspective, for identifying and delineating wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act (33 U.S.C. 1344). According to the Corps Manual, identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. This Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region.

This Regional Supplement is part of a nationwide effort to address regional wetland characteristics and improve the accuracy and efficiency of wetland-delineation procedures. Regional differences in climate, geology, soils, hydrology, plant and animal communities, and other factors are important to the identification and functioning of wetlands. These differences cannot be considered adequately in a single national manual.”

The additional site investigations now mandated have not yet been completed and should be required by the Corps if and when 404 permits with mitigation are submitted by the developer. In portions of the property the natural RIPARIAN areas are now buried under several feet of imported fill and extensive efforts will be required to adequately evaluate the original soil conditions in order to determine the WETLAND conditions as per the new manual.

If you have any questions about these findings please don't hesitate to contact me at your convenience.

Sincerely,



Paul D. Trotta, P.E., Ph.D

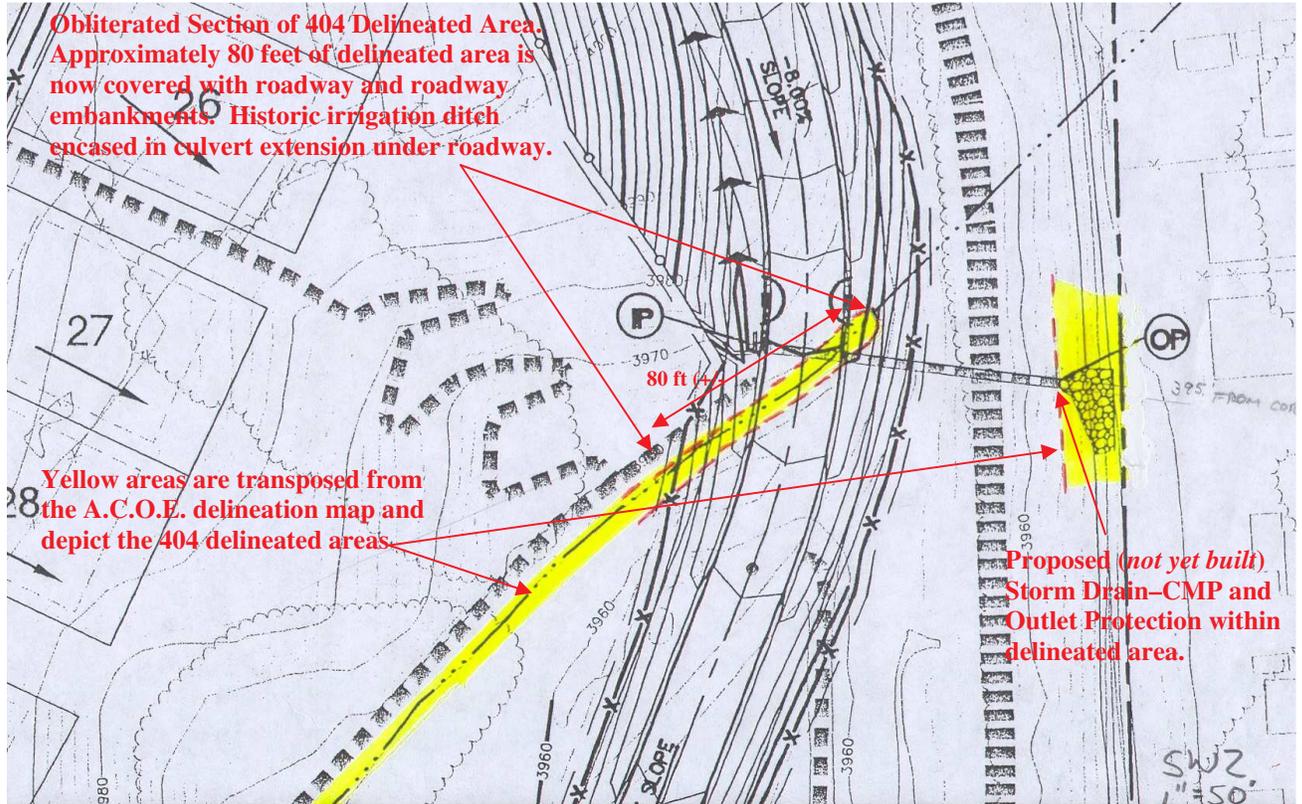
Attachments:

- FIGURE # 1 IRRIGATION DITCH AND PROPOSED CULVERT OUTLET
- FIGURE # 2 CONSTRUCTED CULVERT & OUTLET
- FIGURE # 3 PROPOSED CULVERT & OUTLET WITHIN DELINEATED AREA
- FIGURE # 4 PHANTOM STORM DRAIN & OUTLET



FIGURE # 1 IRRIGATION DITCH AND PROPOSED CULVERT OUTLET

Field inspections, as well as comparison of the delineation map and subdivision maps, show that about 80 ft of a historic irrigation ditch **within the delineation area** has already been encased in a corrugated metal pipe (CMP). The yellow areas within this figure have been transposed to scale and reflect the limits of the 404 delineation areas as shown on the A.C.O.E. delineation map. (The blue portions of this figure are from the subdivision plans for Bella Terra by Shepard and Westnitzer. The)

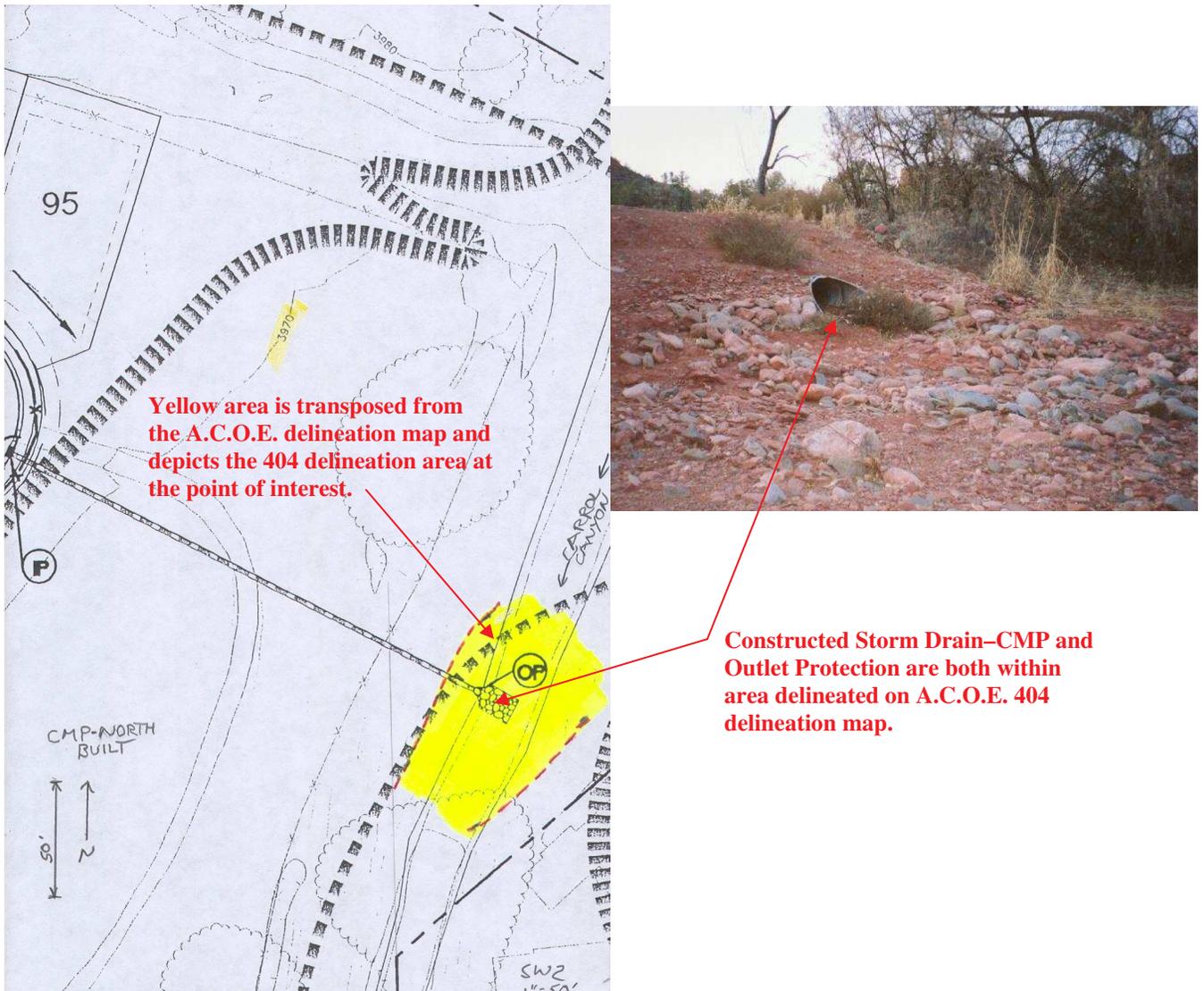


- Legend:**
 Blue = Shepard and Westnitzer plans for Bella Terra.
 Yellow = Delineated Area Transposed to scale from ACOE map by P. Trotta, P.E.
 Red = Labeling and notes added by P. Trotta, P.E.

The subdivision plans show a storm drainage structure starting at point P (see figure above) and extending to OP (see figure above). This structure has not yet been built. The outlet and outlet protection are, however, within the delineated area of Carrol Canyon and will require a 404 permit.

FIGURE # 2 CONSTRUCTED CULVERT & OUTLET

Field inspection, show an already constructed storm drain culvert which corresponds to a storm drain shown on the subdivision maps. The outlet and outlet protection of the storm drain is within the yellow highlighted delineated area (transposed from the A.C.O.E. 404 delineation map) The yellow areas within this figure have been transposed to scale and reflect the limits of the 404 delineation areas as shown on the A.C.O.E. delineation map.



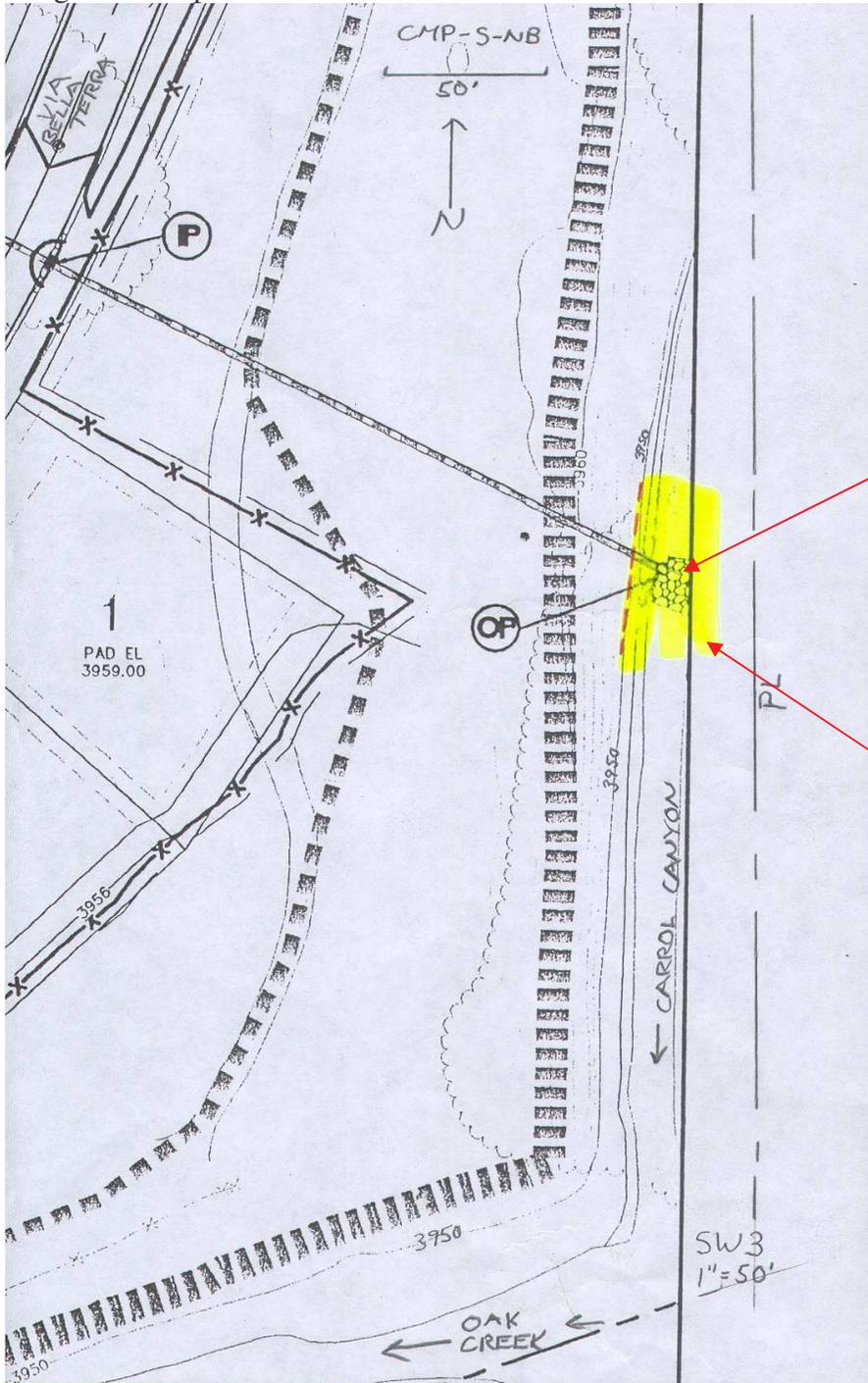
Yellow area is transposed from the A.C.O.E. delineation map and depicts the 404 delineation area at the point of interest.

Constructed Storm Drain–CMP and Outlet Protection are both within area delineated on A.C.O.E. 404 delineation map.

Legend:
Blue = Shepard and Westnitzer plans for Bella Terra.
Yellow = Delineated Area Transposed to scale from ACOE map by P. Trotta, P.E.
Red = Labeling and notes added by P. Trotta, P.E.

FIGURE # 3 PROPOSED CULVERT & OUTLET WITHIN DELINEATED AREA

The subdivision plans show another proposed storm drain culvert to be located east of Lot 1 near the lower end of Carrol Canyon on the south east portion of the project site. The outlet and outlet protection of this proposed storm drain is within the yellow highlighted delineated area. The yellow areas within this figure have been transposed to scale and reflect the limits of the 404 delineation areas as shown on the A.C.O.E. designation map.



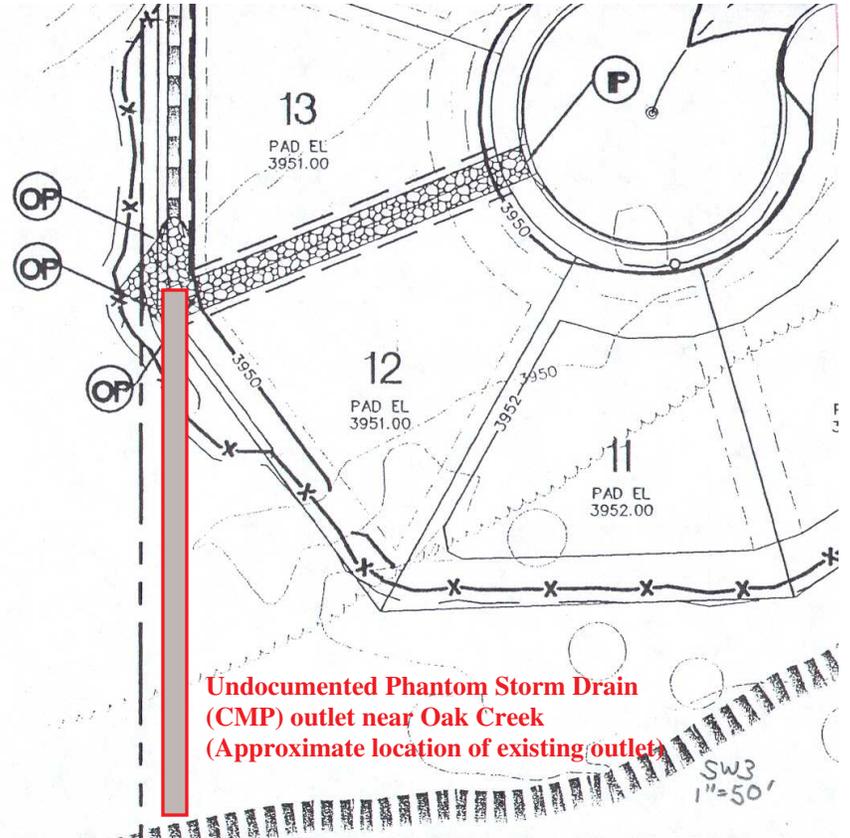
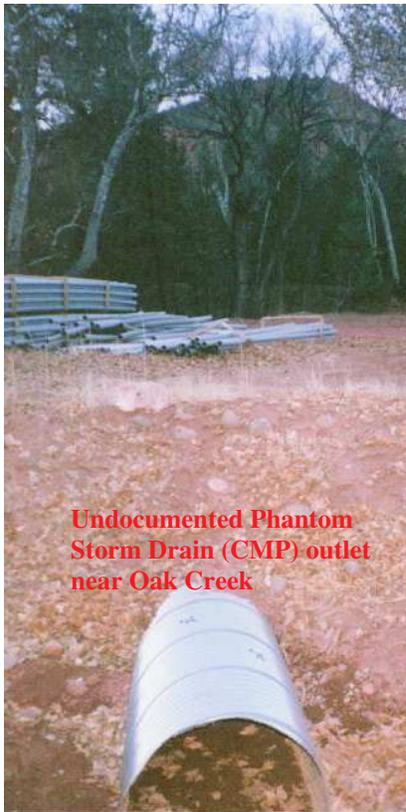
Proposed Storm Drain–CMP and Outlet Protection are both within area delineated on A.C.O.E. 404 delineation map.

Yellow area is transposed from the A.C.O.E. delineation map and depicts the 404 delineated areas at the point of interest.

Legend:
Blue = Shepard and Westnitzer plans for Bella Terra.
Yellow = Delineated Area Transposed to scale from ACOE map by P. Trotta, P.E.
Red = Labeling and notes added by P. Trotta, P.E.

FIGURE # 4 PHANTOM STORM DRAIN & OUTLET

Field inspection shows that an additional storm drain built with corrugated metal pipe (CMP), has been constructed down to near the edge of Oak Creek. This CMP does not show on the subdivision plans at all. The outlet of this phantom CMP appears to discharge close to the delineated area of Oak Creek but without a careful survey the exact relationship of the CMP's outlet and the delineation boundary can not be accurately determined. This CMP as well as the delineation boundary should be included in the Storm Water plans as part of the Subdivision Plans available for review.



↑
Approx Photo View

Legend:
Blue = Shepard and Westnitzer plans for Bella Terra.
Yellow = Delineated Area Transposed to scale from ACOE map by P. Trotta, P.E.
Red = Labeling and notes added by P. Trotta, P.E.