

Whitney Oaks 2015 Drainage Improvements

Revised Oder of Priority, 1/6/2015

Priority	Area of Concern (from R. A. Holsinger Scope of Work.)
1 st	<p>Area 15 — The drainage channel that starts at the bridge over the footpath about 300 feet west of Fox Hill Drive and ends at the northeast end of Vivien Way.</p> <p>Area 15 is in Phase 1, Parcels 15 and 16: Both parcels are Open Space.</p> <p>Approximately 130 feet of this channel should be repaired following the Standard Conceptual Design drawing. Based upon current estimates of channel flow volumes and erosion this past rainy season, the depth of excavation should be about 2½ feet. The newly placed rock should be slurry-grouted in place.</p>
2 nd	<p>Area 14 — The drainage channel that starts at the footpath about 200 feet west of the south end of Fox Hill Drive and ends at the east end of.</p> <p>Area 14 is in Phase 1, Parcels 15, 16, and 17: All three parcels are Open Space.</p> <p>Approximately 200 feet of this channel should be repaired following the Standard Conceptual Design drawing. Based upon current estimates of channel flow volumes and erosion the past three rainy seasons, the depth of excavation should be about 2 feet. The newly placed rock should be slurry-grouted in place.</p>
3 rd	<p>Area 6 — Below Black Oak Drive opposite Abby Road (starting in Lot L of Phase 2).</p> <p>Area 6 is in Phase 2 and 3, Parcels "L", 81, and 58: Drainage Lot "L" with Fire Access Easement plus Open Space lot 81, both in Phase 3; extending then into Open Space Parcel 58 of Phase 2.</p> <p>The repair area is limited to the drainage channel upslope of the pedestrian trail. Approximately 50 feet of this channel should be repaired following the Standard Conceptual Design drawing. The lowermost part of this channel has been repaired with grouted rock. This repair may be taken as the model for the repair of the upslope channel. Based upon current estimates of channel flow volumes and erosion the past three rainy seasons, the depth of excavation should be about 1½ feet. Grouting of the rock is not required.</p> <p>The drain inlet at the trail should be freed of obstructions.</p> <p>For the eroded channel downslope of the trail, it is recommended that the area be examined at least once yearly for indicators of new or increased erosion. No remedial work is recommended at this time.</p>

Priority	Area of Concern (from R. A. Holsinger Scope of Work.)
4 th	<p data-bbox="323 196 1686 264">Area 3 — The v-ditch between Clubhouse Drive and Coldwater Drive; The lower part of the v-ditch is above 2388 Clubhouse Drive.</p> <p data-bbox="323 305 1633 370">Area 3 is in Phase 2, Parcels 55 and 56: Parcels 55 & 56 are Open Space. The area of concern crosses over these two parcels, both in Phase 2.</p> <p data-bbox="323 407 1671 573">The revised work is to abandon the use of the existing v-ditch as a water conveyor to the storm-drain facilities on Clubhouse Drive and to replace the existing water course with a new course starting at the uppermost end of the v-ditch down to the storm drain facilities on Clubhouse Drive. The approximate location of the new channel is shown in Photograph No. 1. The starting location is shown in Photograph No. 2. The new channel should follow the course of the existing drainage swale shown partially in Photographs No. 3 and No. 4.</p> <p data-bbox="323 610 1705 708">The new channel should be improved as recommended in this report. It might be necessary to make some changes in the storm drain system at Clubhouse Drive to accommodate the proposed new channel. The extent and nature of those possible changes must be addressed as part of the scope of repair work.</p> <p data-bbox="323 745 1705 810">Once the new channel is completed, the storm-drain water from the upper neighboring development should be directed into the new channel by constructing a concrete "dam" across the v-ditch at the top of the newly improved channel.</p> <p data-bbox="323 847 1705 1013">Approximately 410 feet of this channel should be repaired and improved following the Standard Conceptual Design drawing. Based upon current estimates of channel flow volumes and erosion this past rainy season, the depth of excavation should be about 3 feet and the newly placed rock should be slurry-grouted in place. In the lowermost 25 feet of the new channel, the surface of the grouted rock mix should be washed, shortly after grouting, to better expose the rock. A surface-applied retardant might be necessary to achieve this wash, depending upon air temperatures and other factors.</p>
5 th	<p data-bbox="323 1045 1644 1114">Area 5 — The drainage course southeast of the top of the small connector road (fire access road) between Stone Terrace Court and Coldwater Drive. It is south of Darlington Court.</p> <p data-bbox="323 1151 1705 1216">Area 5 is in Phase 2, Parcels 57 and 27: Parcel 57 is Open Space. The area of concern extends to Clubhouse Drive between residential Lots No. ??? And No. ??? in Unit 17 of Parcel 27, all in Phase 2.</p> <p data-bbox="323 1253 1705 1347">Approximately 300 feet of this channel should be repaired following the Standard Conceptual Design drawing. Based upon current estimates of channel flow volumes and erosion this past rainy season, the depth of excavation should be about 2½ feet and the newly placed rock should be slurry-grouted in place.</p>

Priority	Area of Concern (from R. A. Holsinger Scope of Work.)
6 th	<p data-bbox="317 196 1646 266">Area 1 — The drainage channel starting about 400 feet south-southwest of the intersection of Hillcrest Road and Vivien Lane, ending at Hillcrest Road.</p> <p data-bbox="317 305 1499 334">Area 1 is in Phase 1, Parcel 18: Private Park/Open Space between Parcel 3 (Unit 3) and Parcel 4 (Unit 4).</p> <p data-bbox="317 371 1703 505">Approximately 80 feet of this channel should be repaired following the “Standard Conceptual Detail” (Standard Conceptual Design drawing). The repair area starts at the end of the grouted rock at the upper pipe outfall. Based upon current estimates of channel flow volumes and erosion this past rainy season, the depth of the channel should be about 2½ feet and the newly placed rock should be slurry-grouted in place.</p>
7 th	<p data-bbox="317 537 1010 573">Area 13 — Spring upslope of 2849-2851 Hillcrest Drive.</p> <p data-bbox="317 610 1688 675">Area 13 is in Phase 1, Parcels 13 and 15?: Parcels 13 and 15 are Open Space. The unstable slope might extend onto Parcel 15.</p> <p data-bbox="317 712 1703 1008">New subsurface drainage in this area should consist of drainage lines that collect water from a depth of at least 4 feet or to sound bedrock, whichever is less, and carry it to suitable discharge locations. It is recommended that a series of new subsurface drain lines (subdrains) be installed that run directly upslope from the lower v-ditch to the highest elevation of presently observed surface seepage. Six parallel subdrains, each about 180 feet long, should be installed in the area now covered with “tule vegetation”. The separation between the six subdrains will be determined in the field. Subdrains should consist of permeable sandy gravel surrounding a 3-inch-diameter perforated pipe. The gravel should be wrapped in filter fabric. All subdrains should discharge at the bottom of the slope into the storm drain system at a location that is protected against a backup of water into the subdrains, such as a large catch basin or drop inlet. It is acceptable to discharge subdrains into the top of the v-ditch at the bottom of the slope.</p>
8 th	<p data-bbox="317 1040 1661 1146">Area 2 — The drainage channel below the intersection of Coldwater Drive at Lariat Court. The channel runs downslope northwest toward Clubhouse Drive. This area is identified as Coldwater Storm Water Outlet Drainage Channel 1 in the Todd Engineers report of January 28, 2009.</p> <p data-bbox="317 1183 1696 1281">Area 2 is in Phase 2, Parcels 52, 53, and 36: Parcels 52 & 53 are Open Space below an unidentified non-residential lot that is part of Parcel 36 (Unit 25) called “Emergency Fire Access”. The area of concern crosses over these three lots, all in Phase 2.</p> <p data-bbox="317 1318 1703 1451">Approximately 200 feet of this channel should be repaired following the Standard Conceptual Design drawing. The repair is in the central part of this 500-foot channel. The uppermost and lowermost lengths of the channel do not require repair at this time. Based upon current estimates of channel flow volumes and erosion this past rainy season, the depth of excavation should be about 3 feet and the newly placed rock should be slurry-grouted in place.</p>

Priority	Area of Concern (from R. A. Holsinger Scope of Work.)
9 th	<p>Area 4 — The drainage channel from a culvert discharge below Coldwater Drive, northeast of the Clubhouse Drive “hairpin” down to the northernmost “hairpin” turn of Clubhouse Drive.</p> <p>Area 4 is in Phase 2, Parcels “G”, 55, and 56: Parcel “G” (Private Park) plus Open Space Parcels 55 and 56, all in Phase 2.</p> <p>Approximately 70 feet of this channel should be repaired following the Standard Conceptual Design drawing. The repair is near the lowermost section of this channel. The uppermost part of the channel does not require repair. Based upon current estimates of channel flow volumes and erosion this past rainy season, the depth of excavation should be about 3 feet. Grouting of the rock is not required.</p>
10 th	<p>Area 7 — Below Black Oak Drive opposite Red Hawk Court (starting in Lot M of Phase 2).</p> <p>Area 7 is in Phase 3, Parcels “M” and 81: Drainage Lot “M” plus Open Space Parcel 81, both in Phase 3.</p> <p>Approximately 110 feet of this channel should be repaired following the Standard Conceptual Design drawing. The work is in two separate sections. About 60 feet is near the top and about 50 feet is near the bottom. Based upon current estimates of channel flow volumes and erosion this past rainy season, the depth of excavation should be about 2 feet. Grouting of the rock is not required.</p>
All Areas	Total without mobilization
All Areas	Mobilization (per occurrence)
Not Included	Areas 8 - 12 These five areas of concern are not part of the current Scope of Work.