



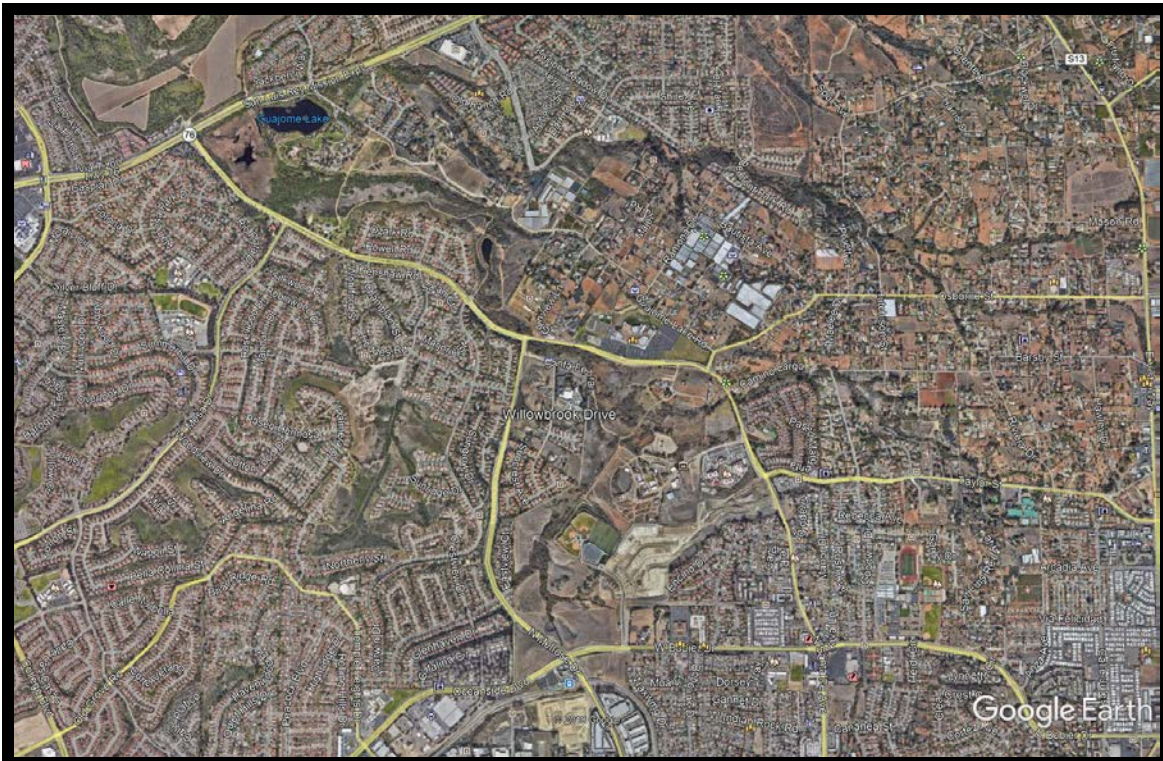
J.T. KRUEGER & COMPANY
Real Estate Development Services

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WILLOWBROOK DRIVE

OCEANSIDE, CA

SITE DEVELOPMENT BUDGET



Prepared For:

New Pointe Communities
16668 W. Bernardo Drive Ste. 230
San Diego, CA 92127

March 23, 2018

Limitations of Investigation

This report was developed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and opinions made in this report. The information provided and used for this report is believed to be representative of the project site. The findings and statements found in this report were developed from historical information and documents supplied by the Client, as well as our gross observations at the site during the time of our engagement by the Client. The findings of this report are valid as of the date this report was prepared. Changes in the condition of a property can occur with the passage of time, whether due to natural processes, the work of man, activity on this site or impacts from activities on adjacent properties.

Changes or modifications in local or regional construction standards may alter applicable or appropriate standards of practice. This would also include the evolution or broadening of knowledge as it relates to erosion control, geotechnical, engineering and construction means and methods or best management practices. Therefore, the statements or findings of this report may be invalidated wholly or in part by changes outside our control.

This report is issued with the understanding that it is the responsibility of the Client or of his representative, to ensure that the information, recommendations, qualifications and limitations contained herein are brought to the attention of all interested parties.

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1. LOCATION MAP

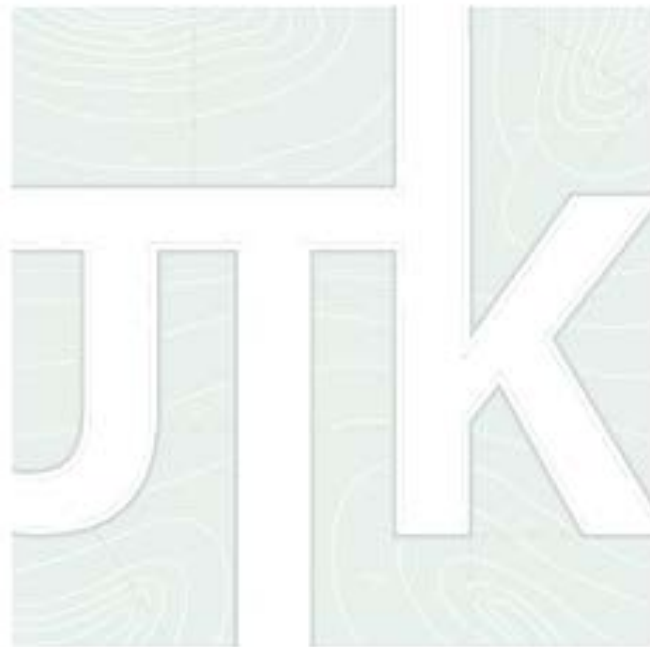


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Location Map



2. SITE DEVELOPMENT BUDGET ASSUMPTION



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March 23, 2018

New Pointe Communities

Attention: Mr. Scott Sandstrom

Project: Willowbrook Drive – City of Oceanside, California

Subject: Opinion of Cost – Site Development Budget

This preliminary report represents our analysis and opinion of the costs related to the site development of the subject property. The costs presented in this report have been extrapolated from the information, drawings and other documents provided by the Client, as well as our experience with projects of similar land use, design character, size and geologic setting.

If additional information relevant to the findings contained in this report are presented or developed subsequent to this report, J T Krueer & Co. shall reserve the right to amend this document based on our review of the additional information.

PROJECT DESCRIPTION

The property consists of approximately 2 acres located on the east side of Willowbrook Drive and north of Richard Court in the City of Oceanside, CA. Residential housing is to the south and an industrial area to the north. (see Location Map).

GEOLOGIC SETTING & EXCAVATION CHARACTERISTICS

The site is underlain by Santiago Formational material that is made up of sandstone and claystone-siltstone. Overlying the formational material is up to three feet of highly expansive topsoil. The excavation will be performed with conventional heavy equipment; such as bulldozers, loaders, excavators and articulated haul trucks.

SITE DEVELOPMENT BUDGET ASSUMPTIONS

The following is a list of qualifications and assumptions that were employed in the development of the budget:

- General
 1. The Budget is based on Documents, Resources and Exhibits received from the engineer. At the end of this section, we have included a list of the source documents we have used to development this report.
 2. The pricing used in this report is based on the current market prices for engineering construction in the general vicinity of the project. Fuel, labor and material costs have been checked with local suppliers.
 3. A standard 10% contingency was used for the purpose of this estimate.
 4. Cost impacts due to prevalling wage are not reflected in the pricing provided in this report.
 5. No fees or soft costs are included.

The following is a list of qualifications and assumptions specific to the referenced item of work:

- Earthwork & Demolition
 1. Based on the information provided, our findings and assumptions are as follows:

Based upon the current grading concept, our analysis shows that the site is long by approximately 6,049 CY (see Bulk & Shrink Analysis). This would equate to approximately 1.86 feet over the entire site. Please note that quantities of excavation may change from those used in this report due to topo variations or variations in the in-place density of the material.

The bulk and shrink analysis included in this report does not consider spoil material generated during utility installation or building construction. Bulk and shrink factors used in this report are representative of other projects of similar scope and geologic setting.

2. The purchase of construction water is broken out as a line item in the grading section of the budget. The amount of construction water per cubic yard of material does not account for variables related to factors of weather, temperature, time-of-year or the in-place moisture content of the soils. Pricing for the purchase of construction water is based on a quote received from the City of Oceanside Water Department, as of the date of this report.

3. The Geotek, Inc. soils report recommended that selective grading be utilized due to the shallow cut operations not supplying suitable material to provide adequate capping material. Per the direction of the client, no costs to mine suitable material is included and normal cut to fill operations are included. Foundation design will be used to compensate for the lack of capping on the pads. This does not however account for the capping required within the street right of way.
 4. The Remedial Excavation quantities were determined from information provided from the Geotek, Inc. Report, dated 10-26-2015.
 5. Transition grading quantities represent excavation to mitigate differential settlement where areas to receive structures are in both cut and fill. The transition grading should be determined once the pad grades are set.
 6. Mass excavation quantities include a 1.5' choked core section within the street right of way.
 7. Costs are included for demolition and disposal for the existing house in the center of the project.
- Erosion Control
 1. An Erosion Control Plan is was included in the reference documents.
 2. The cost of erosion control is subject to change based on the modification of local policy, ordinances and the interpretations of "Best Management Practices". The erosion control costs provided in this report should only be used as a guide and is not intended to provide "long-term" erosion control maintenance costs related to the proposed site development. Further cost evaluation should take place once the project SWPPP documents are prepared.
 3. Course of construction erosion control costs, related to the activities of the contractors are typically stipulated to be the responsibility of the contractor during the course of their construction activities.
 4. An application of Hydro-seed for the slopes and Tackifier for the pads is included in this report for temporary protection from erosion.
 5. Gravel bags are included for installation as chevron check dams within the street right-of-way and pad areas.
 6. Stabilized Construction Entrances are included to minimize tracking dirt offsite into the public right-of-way.
 7. The cost of preparing the Erosion Control SWPPP plan and maintenance and monitoring costs are not included in this report.
 8. A \$3,800.00 per acre Erosion Control Allowance is included for the implementation of BMP's (Best Management Practices) during site development.

- Storm Drain:
 1. The onsite storm drain consists of 18" and 6" HDPE and 4" PVC pipe. Quantities were generated using the grading plans provided.
 2. Video inspection of storm drain pipe 30" or smaller is included in the pricing.
 3. Inlet Filter baskets are not included for the project Inlets.
 4. Each lot is provided with individual bio-retention basins (Basins B1 through B6). The cost per square foot of basin includes the 18" of Engineered Soil, the 2' – 2" gravel layers, an impermeable membrane and the outflow pipe system. The layer of mulch and all planting is included in the landscape section of this report.
 5. On the north side of the intersection of Shea Court and Willowbrook Drive is the main Bio-retention basin for the project. There is a separate line item for this basin due to different specifications. The cost per square foot of basin includes the 24" of Engineered Soil, the 3' – 2" gravel layers, an impermeable membrane and the outflow pipe system. The layer of mulch and all planting is included in the landscape section of this report. The retaining walls that make up the sides of the basin are included in the wall section of this budget.
 6. There are curb inlets and cleanouts called out on the plan, however, it seems that some may be mislabeled. We have assumed that the units that are shown at the curb should be inlets and the units that are on the storm drain in the middle of the street are the cleanouts. We have confirmed this with the client.
 7. The tees that join the 6" HDPE and 18" HDPE pipe are included in the per lineal foot price of the storm drain pipe.
 8. There are differences between the grading plan and the improvement plan regarding the storm drain in Willowbrook Drive on the north side of the project. For the purposes of this report, the grading plans were used to quantify the Willowbrook storm drain.

- Gravity Sewer:
 1. Costs are included for standard 8" PVC SDR-35 gravity sewer, with the exception of the 113 LF from first onsite manhole to the connection at the existing sewer main. This section is over 16 feet deep and the budget unit price reflects the deep dig required.
 2. All sewer manholes are budgeted as 48" manholes.
 3. The onsite gravity connects to an existing sewer main in Willowbrook Drive. A new manhole will be installed on the exiting main. This manhole is over 16 feet deep and is priced accordingly.

4. Pricing includes adjusting all manholes two times to allow access to the junction structures at all times. One adjustment after the AC base course and one adjustment after the final AC cap are required.
 5. Each dwelling unit will receive one 4" sewer lateral. The sewer lateral to Lot 5 is much longer than the standard laterals. A separate line item is included to cover this cost.
 6. Per the demo plan costs are included to abandon the septic system that serviced the existing house on the property. The current grading and foundation requirements may require the septic system to be removed and this cost will increase.
- Water (Potable):
 1. The potable water main is budgeted as 8" PVC as shown on the Improvement Plans. Water appurtenance locations are not shown clearly on the plans and are included as an allowance.
 2. The water main connects to existing 10" water main in Willowbrook Drive.
 3. All bends, elbows, tees, thrust blocks, and end caps are included in the water line unit pricing. Chlorination and hydrostatic pressure testing are included in the water line unit pricing.
 4. Pricing includes adjusting all valves and appurtenances two times to allow access to the water valves. One adjustment after the AC base course and one adjustment after the final AC cap are required.
 5. One 1" inch potable water services are budgeted for each dwelling unit. Water meters or backflow preventers are not included. Lot five has a separate long lateral included.
 6. Fire hydrants are included as shown on the plans.
 7. Allowances are included for blow offs and air vacs based on the size of the associated water main.
 8. All pricing is based on "normal" operating pressures and additional costs related to high pressure systems are not included.
 9. No Recycled water is shown on the plans and none is included.
 10. Per the plans, 2.5" Irrigation sleeving is included in the budget. One irrigation service is assumed for the project.
 - Dry Utilities & Street Lighting
 1. Dry utility costs were extrapolated using street centerline quantities as there were no dry utility plans available. Energizing and contractor costs are not included.

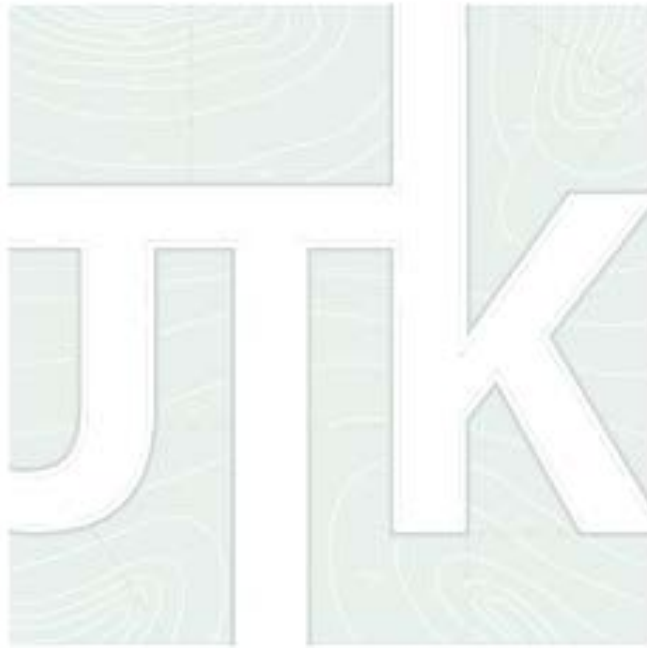
2. One street light is shown on the plans and is included in the budget. A note on the plans indicates the nearest existing street light to the property may be over 700 LF away. No costs are included for street light "bring up."
 3. An allowance is included for one meter pedestal to service the irrigation controller.
- Surface Improvements:
 1. The surface improvements for Willowbrook Drive and Shea Court have been separated into two separate sections.
 2. All roadway paving has been priced at preliminary structural section:
 - The soils report, plan legend and cross sections all have different paving recommendations. For the purposes of this report onsite Streets and Willowbrook Drive are included at 3.0" AC on 7" of Class 2 Base. Asphalt will be placed in two operations. A 1.5" AC base course with a 1.5" AC cap. While it is possible to lay the 3.0" AC in one lift it is not recommended for quality purposes.
 3. A final seal / sand / sweep seal coat is included for all paving areas.
 4. The pavement for the existing Willowbrook Drive cul – de – sac is budgeted for removal and will be replaced new AC in a standard straight road alignment. The existing barricades are budgeted to be removed and new barricades / demountable post to be installed at the new alignment
 5. The driveways for the individual homes are not included.
 6. Base is included under all curb and sidewalks per the soils report recommendations.
 7. Allowances are included for survey monuments, striping and regulatory street signage.
 8. All concrete improvements are based on standard grey concrete.
 - Walls and Fences
 1. Walls and fences were quantified from the retaining wall plans provided.
 2. CMU walls are budgeted with tan block color. Fencing on top of wall is included as a separate line item. The walls for the basin are included in the retaining wall quantity.
 3. Price per square foot retaining walls includes the wall, waterproofing, backfill and wall drainage as required.

4. The East side of the project has a non-combustible fire wall. This wall is budgeted as a painted slump block wall with cap. Pilasters are assumed at 50 foot intervals.
 5. No entry monuments are shown and none are included in the budget.
 6. Vinyl fences that are shown around the perimeter of the project are included in the budget. Any fences or gates shown on the building pads or yards are not included.
- Landscaping
 1. Landscaping has been quantified Landscape and Irrigation plan provided.
 2. Trees are included per plan, separate by onsite trees and trees included on the Carmel Valley Road frontage. The trees along Carmel Valley Road will require root barriers.
 3. A 90-day maintenance allowance is included.
 4. Groundcover is separated into two sections. All onsite ground cover is spaced 12" o.c. and is budgeted per square foot. The basin ground cover is separate and includes the required mulch later per the storm drain plan.
 5. A landscape exhibit is included the appendix at the end of this report.

DOCUMENTS, RESOURCES, & EXHIBITS UTILIZED

1. Precise Grading Plan – 2137 Willowbrook Drive – City of Oceanside, Sheet 1 through 4 of 4, scale: Various, prepared by BHA, Inc, dated September 22, 2016
2. Electronic CAD files of item #1.
3. Improvement Plans for 2137 Willowbrook Drive – City of Oceanside, Sheet 1 through 4 of 4, scale: 1" = 20', prepared by BHA, Inc., dated June 2, 2008
4. Demolition Plan for 2137 Willowbrook Drive – City of Oceanside, Sheet 1 of 1, scale: 1" = 30', prepared by BHA, Inc., no date
5. Erosion Control Plans for 2137 Willowbrook Drive, Sheet 1 through 2 of 2, scale 1" = 20', prepared by BHA, Inc., dated September 22, 2016
6. Landscape Architectural Construction Drawings for 2137 Willowbrook Drive – Oceanside, Sheet 1 through 9 of 9, prepared by Howard Associates, no date
7. Willowbrook Site Walls, sheets 1 through 3 of 3, scale: various, prepared by HTK structural engineers, dated September 7, 2016
8. Preliminary Geotechnical Evaluation (with updates), prepared by GeoTek Inc. dated May 20, 2004. Update letters dated: March 27, 2005 / October 26, 2015.
9. Review of Grading Plan, prepared by GeoTek, Inc. dated October 12, 2016.
10. Conditions of Approval City of Oceanside, dated June 13, 2006
11. Site reconnaissance

3. BUDGET



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3.1 BUDGET SUMMARY



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Willowbrook Drive

Summary

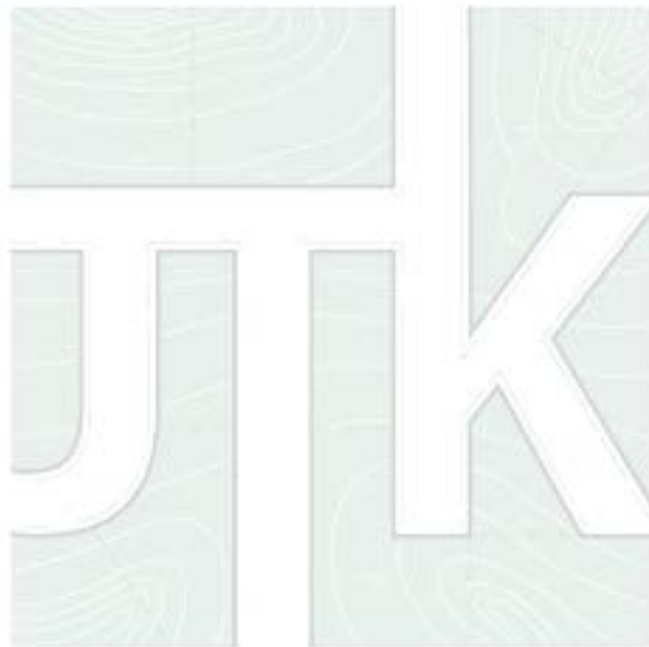
Opinion of Cost - Site Development Budget

J.T. Kruer & Company

3/22/2018 JTK / SC / JC

Earthwork	\$	217,804.43
Erosion Control	\$	19,358.72
Storm Drain	\$	239,242.90
Sewer - Gravity	\$	44,161.41
Water - Potable	\$	62,195.90
Dry Utilities	\$	23,330.00
Surface Improvements - Willowbrook Drive	\$	74,327.11
Surface Improvements - Shea Court	\$	110,266.38
Walls / Fencing	\$	206,102.00
Lanscaping	\$	128,290.22
Total without Contingencies	\$	1,125,079.07
Total with 10% Contingency	\$	1,237,586.97
Total Cost Per Dwelling Unit (6 ea.) with Contingencies	\$	206,264.50

3.2 PROJECT BUDGET



J.T. KRUEGER & COMPANY
Real Estate Development Services

Willowbrook Drive

Grading and Site Improvements

Opinion of Cost - Site Development Budget

J.T. Krueer & Company

3/22/2018

Earthwork				
Item	Quantity	Unit	Unit Price	Extension
Mobilization	1	LS	\$ 29,680.00	\$ 29,680.00
Site Prep., Clear & Grub	2	AC	\$ 1,688.00	\$ 3,376.00
Construction Water (1 Unit = 748 Gallons)	544	Unit	\$ 2.43	\$ 1,321.92
Orange Protection Fence	1,472	LF	\$ 2.25	\$ 3,312.00
Demo Existing House / Sheds	1	LS	\$ 34,346.00	\$ 34,346.00
Remedial Grading	4,650	CY	\$ 1.29	\$ 5,998.50
Mass Excavation (Cut to Fill)	2,175	CY	\$ 1.23	\$ 2,675.25
Over Ex for Transition	622	CY	\$ 1.36	\$ 845.92
Export Remaining Mass Excavation Material (Top Load Trucks) (Based on 1 Hour Round Trip)	6,049	CY	\$ 18.54	\$ 112,148.46
Finish Grade Pads / Contour Areas	55,265	SF	\$ 0.10	\$ 5,526.50
Finish Grade Slopes	10,790	SF	\$ 0.14	\$ 1,510.60
Finish Grade Streets	22,819	SF	\$ 0.12	\$ 2,738.28
Brow Ditch - Type B	573	LF	\$ 25.00	\$ 14,325.00
Total w/out Contingency:				\$ 217,804.43

Erosion Control				
Item	Quantity	Unit	Unit Price	Extension
Tackifier (Pads)	55,265	SF	\$ 0.04	\$ 2,210.60
Stabilized Fiber Matrix on Slopes	10,789	SF	\$ 0.08	\$ 863.12
BMP Allocation	2	AC	\$ 3,800.00	\$ 7,600.00
Silt Fence	905	LF	\$ 2.00	\$ 1,810.00
Gravel Bags	150	EA	\$ 2.50	\$ 375.00
Stabilized Construction Entrance	1	EA	\$ 6,500.00	\$ 6,500.00
Total w/out Contingency:				\$ 19,358.72

Willowbrook Drive Grading and Site Improvements Opinion of Cost - Site Development Budget

J.T. Krueer & Company

3/22/2018

Storm Drain				
Item	Quantity	Unit	Unit Price	Extension
6" HDPE	833	LF	\$ 31.00	\$ 25,823.00
18" HDPE - Willowbrook Drive	66	LF	\$ 68.00	\$ 4,488.00
18" HDPE	435	LF	\$ 55.00	\$ 23,925.00
4" PVC SDR 35 - Yard Drains	347	LF	\$ 27.00	\$ 9,369.00
Type B Curb Inlet - Willowbrook	1	EA	\$ 5,300.00	\$ 5,300.00
Type G-1 Catch Basin	7	EA	\$ 2,500.00	\$ 17,500.00
6" NDS Catch Basin	13	EA	\$ 550.00	\$ 7,150.00
Type F Catch Basin	1	EA	\$ 3,650.00	\$ 3,650.00
New A-4 Cleanout on Existing Storm Drain	1	EA	\$ 5,500.00	\$ 5,500.00
Type A-4 Cleanout	2	EA	\$ 4,100.00	\$ 8,200.00
Connect 18" HDPE to Ex. Type A-4 CO	1	EA	\$ 1,500.00	\$ 1,500.00
Rectangular Riprap Spillway in Basins B1-B6	5	EA	\$ 1,100.00	\$ 5,500.00
Riprap Outlet Pad in Basins B1 - B6	7	EA	\$ 500.00	\$ 3,500.00
Rip Rap Pad for Brow Ditch - 5' x 5' No. 3 Backing	1	EA	\$ 1,500.00	\$ 1,500.00
Concrete Spillway	71	SF	\$ 12.50	\$ 887.50
Adjust Cleanout to Grade	3	EA	\$ 940.00	\$ 2,820.00
Adjust Existing Cleanout to Grade	1	EA	\$ 940.00	\$ 940.00
Bio Retention Basins B1-B6 Including Engineered Soil, Gravel Layers, Impermeable Membrane, Outflow pipe	6,181	SF	\$ 14.15	\$ 87,461.15
Bio Retention Basin B7 Including Engineered Soil, Gravel Layers, Impermeable Membrane, Outflow pipe	1,507	SF	\$ 14.75	\$ 22,228.25
Video Inspection 30" or Smaller	1,334	LF	\$ 1.50	\$ 2,001.00
Total w/out Contingency:				\$ 239,242.90

Willowbrook Drive Grading and Site Improvements Opinion of Cost - Site Development Budget

J.T. Krueer & Company

3/22/2018

Sewer - Gravity				
Item	Quantity	Unit	Unit Price	Extension
Abandon Ex Septic System - Allowance	1	LS	\$ 900.00	\$ 900.00
8" PVC Gravity Sewer	406	LF	\$ 35.00	\$ 14,208.95
8" PVC Gravity Sewer in Willowbrook Drive - Deep Dig	25	LF	\$ 75.00	\$ 1,843.50
Sewer Laterals	5	EA	\$ 1,200.00	\$ 6,000.00
Long Sewer Lateral in Cul de Sac	1	EA	\$ 1,500.00	\$ 1,500.00
Sewer Manhole	2	EA	\$ 4,900.00	\$ 9,800.00
New Deep Manhole on Existing - Connect to Existing (Willowbrook)	1	EA	\$ 6,600.00	\$ 6,600.00
Adjust Manholes to Grade - 2 Times	3	EA	\$ 900.00	\$ 2,700.00
Video Inspection	406	LF	\$ 1.50	\$ 608.96
Total w/out Contingency:				\$ 44,161.41

Water - Potable				
Item	Quantity	Unit	Unit Price	Extension
8" PVC - Potable Water	411	LF	\$ 34.00	\$ 13,974.00
8" PVC in Ex. Street	15	LF	\$ 55.00	\$ 801.90
8" Gate Valves	1	EA	\$ 1,975.00	\$ 1,975.00
10" Gate Valves	2	EA	\$ 3,050.00	\$ 6,100.00
1" Potable Water Service	5	EA	\$ 1,200.00	\$ 6,000.00
1" Long Water Service in Cul-de-sac	1	EA	\$ 1,500.00	\$ 1,500.00
2" Irrigation Service	1	EA	\$ 3,250.00	\$ 3,250.00
2.5" Irrigation Sleeves per Plan	245	LF	\$ 6.00	\$ 1,470.00
8" End Cap	1	EA	\$ 350.00	\$ 350.00
2" AV / AR	1	EA	\$ 3,900.00	\$ 3,900.00
2" Blow Offs	1	EA	\$ 2,100.00	\$ 2,100.00
Connect to Ex. 10" PVC Water - Wet Tap	1	EA	\$ 4,525.00	\$ 4,525.00
Fire Hydrants	2	EA	\$ 6,500.00	\$ 13,000.00
Adjust Gate Valves and Hydrants- 2 Times	5	EA	\$ 650.00	\$ 3,250.00
Total w/out Contingency:				\$ 62,195.90

Willowbrook Drive

Grading and Site Improvements

Opinion of Cost - Site Development Budget

J.T. Krueer & Company

3/22/2018

Dry Utilities				
Item	Quantity	Unit	Unit Price	Extension
Joint Trench	197	LF	\$ 75.00	\$ 14,760.00
Street Lights	1	EA	\$ 5,320.00	\$ 5,320.00
Irrigation Meter Pedestal	1	EA	\$ 3,250.00	\$ 3,250.00
Total w/out Contingency:				\$ 23,330.00

Surface Improvements - Willowbrook Drive				
Item	Quantity	Unit	Unit Price	Extension
Sawcut Existing AC Pavement	31	LF	\$ 2.50	\$ 77.50
Remove Existing Barricade and Gate	1	LS	\$ 1,500.00	\$ 1,500.00
Demolish Ex. 6" AC Berm	149	LF	\$ 3.00	\$ 447.00
Demolish Existing AC Pavement	4,415	SF	\$ 2.15	\$ 9,492.25
Balance Streets & Utility Easement Area	6,836	SF	\$ 0.42	\$ 2,871.12
Fine Grade & Compact Incl. Curb Grade	6,005	SF	\$ 0.28	\$ 1,681.40
Backfill Curbs	154	LF	\$ 2.25	\$ 346.50
Type G-2 Curb & Gutter	154	LF	\$ 13.50	\$ 2,079.00
7" Thick Cross Gutter	674	SF	\$ 6.25	\$ 4,212.50
Base under Sidewalk per Soils Report	831	SF	\$ 2.25	\$ 1,869.75
Base under Cross Gutter	674	SF	\$ 2.00	\$ 1,348.00
Class 2 Base Beneath Curb & Gutter	154	LF	\$ 4.15	\$ 639.10
7" Class 2 Base per Plan	4,811	SF	\$ 2.33	\$ 11,209.63
1.5" AC Base Course	4,811	SF	\$ 2.28	\$ 10,969.08
1.5" AC Cap Course	4,811	SF	\$ 2.28	\$ 10,969.08
1.5" Conform Grind & Overlay	212	SF	\$ 2.50	\$ 530.00
Seal/ Sand/ Sweep	5,023	SF	\$ 0.10	\$ 502.30
6" Type A AC Berm including Transition	190	LF	\$ 11.85	\$ 2,251.50
Prep Sidewalk to Grade	831	SF	\$ 0.65	\$ 540.15
Type A Pedestrian Ramp - Finish Only	2	EA	\$ 650.00	\$ 1,300.00
4" PCC Sidewalk	831	SF	\$ 3.75	\$ 3,116.25
New Barricade / Demountable Posts	1	LS	\$ 4,800.00	\$ 4,800.00
Survey Monument	1	EA	\$ 475.00	\$ 475.00
Striping and Signage Allowance	1	LS	\$ 1,100.00	\$ 1,100.00
Total w/out Contingency:				\$ 74,327.11

Willowbrook Drive

Grading and Site Improvements

Opinion of Cost - Site Development Budget

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Surface Improvements - Shea Court				
Item	Quantity	Unit	Unit Price	Extension
Balance Streets	20,549	SF	\$ 0.36	\$ 7,397.64
Fine Grade & Compact Incl. Curb Grade	17,018	SF	\$ 0.24	\$ 4,084.32
Curb Backfill	887	LF	\$ 2.50	\$ 2,217.50
6" Curb & Gutter Type G-2	887	LF	\$ 13.50	\$ 11,974.50
6" Base under Sidewalk per Soils Report	1,883	SF	\$ 2.25	\$ 4,236.75
6" Class 2 Base Beneath Curb & Gutter	887	LF	\$ 4.25	\$ 3,769.75
7" Class 2 Base per Plan	15,244	SF	\$ 1.21	\$ 18,445.24
1.5" AC Base Course	15,244	SF	\$ 1.53	\$ 23,323.32
1.5" AC Cap Course	15,244	SF	\$ 1.53	\$ 23,323.32
Seal / Sand / Sweep	15,244	SF	\$ 0.11	\$ 1,676.84
Prep. Sidewalk / Drive Approach to Grade	1,883	SF	\$ 0.65	\$ 1,223.95
4" PCC Sidewalk	1,348	SF	\$ 3.75	\$ 5,055.00
Drive Approach	535	SF	\$ 3.95	\$ 2,113.25
Survey Monument	1	EA	\$ 475.00	\$ 475.00
Striping & Signage - Allowance	1	LS	\$ 950.00	\$ 950.00
Total w/out Contingency:				\$ 110,266.38

Walls / Fencing				
Item	Quantity	Unit	Unit Price	Extension
Remove Ex. 6' Chain-link Fence	1	LS	\$ 2,500.00	\$ 2,500.00
Masonry Retaining Wall	3,743	SF	\$ 42.00	\$ 157,206.00
Tubular Steel Fence on top of Retaining Wall	448	LF	\$ 28.75	\$ 12,880.00
Masonry Non Combustible Fire Wall	170	LF	\$ 92.00	\$ 15,640.00
Pilasters for Masonry Fire Wall - 50 foot Spacing	4	EA	\$ 650.00	\$ 2,600.00
6' Vinyl Fence on Property Line	804	LF	\$ 19.00	\$ 15,276.00
Total w/out Contingency:				\$ 206,102.00

Willowbrook Drive Grading and Site Improvements Opinion of Cost - Site Development Budget

J.T. Krueer & Company

3/22/2018

Landscaping				
Item	Quantity	Unit	Unit Price	Extension
Site Irrigation	28,037	SF	\$ 1.85	\$ 51,868.73
Slope Planting - Non specific	1,648	SF	\$ 1.95	\$ 3,213.60
15 Gal Trees	5	EA	\$ 155.00	\$ 775.00
24 Gal Trees	15	EA	\$ 298.50	\$ 4,477.50
Ground Cover 12" O.C. - Including Parkway	18,701	SF	\$ 1.94	\$ 36,279.94
Groundcover in All Basins including Mulch Layer	7,688	SF	\$ 2.55	\$ 19,604.78
1 Gal Vine	45	EA	\$ 7.50	\$ 337.50
5 Gal Vine	11	EA	\$ 18.00	\$ 198.00
1 Gal Shrubs Assorted	118	EA	\$ 7.50	\$ 885.00
5 Gal Shrub	249	EA	\$ 18.00	\$ 4,482.00
90 day Maintenance	28,037	SF	\$ 0.22	\$ 6,168.17
Total w/out Contingency:				\$ 128,290.22

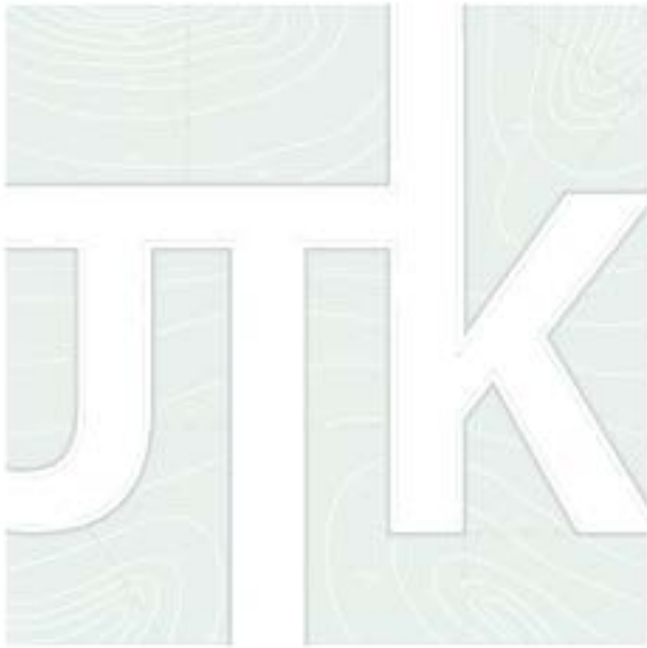
Grading & Improvements Hard Cost Total	
Hard Cost Total :	\$ 1,125,079.07

4. APPENDIX A



J.T. KRUEGER & COMPANY
Real Estate Development Services

4.1 EXHIBITS



J.T. KRUEGER & COMPANY
Real Estate Development Services

Willowbrook Drive
Earthwork Analysis & Bulk / Shrink Study
J. T. Kruer & Co.

Total Excavation

Description	Raw Volume	Unit	Bulk	Shrink	Adjusted Volume	Unit
Remedial Excavation - Fill Area and Shallow Cuts	4,650	CY	N / A	12.5%	4,069	CY
Mass Excavation	8,227	CY	N / A	12.5%	7,199	CY
Over Ex for Transition	622	CY	N / A	12.5	544	CY
Total	13,499	CY	N / A	N / A	11,812	CY

Total Fill

Description	Raw Volume	Unit	Bulk	Shrink	Adjusted Volume	Unit
Fill per Plan	491	CY	N / A	N / A	491	CY
Fill in Over - Ex Area	622	CY	N / A	N / A	622	CY
Fill for Remedial Excavation	4,650	CY	N / A	N / A	4,650	CY
Total	5,763	CY	N / A	N / A	5,763	CY

Summary

Description	Cut	Unit	Fill	Unit	Surplus / (Shortfall)	Unit
Raw Quantities	13,499	CY	5,763	CY	7,736	CY
Adjusted Quantities	11,812	CY	5,763	CY	6,049	CY

Willowbrook Drive Mass Ex. Exhibit J.T. Krueer & Co

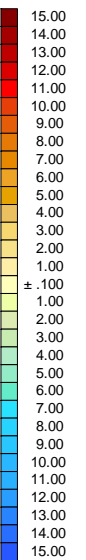
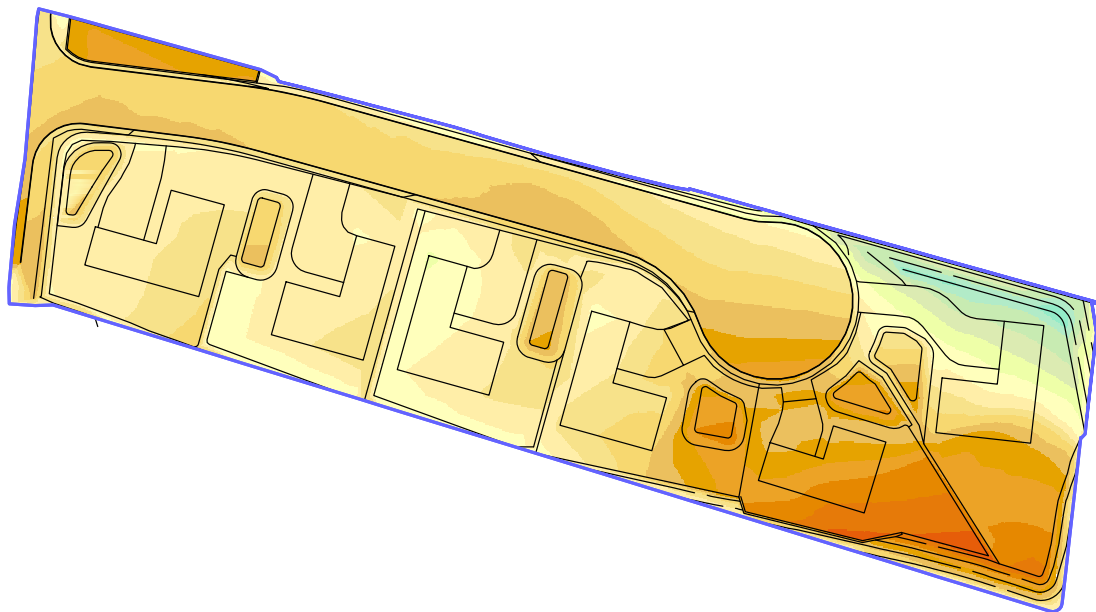


J.T. KRUEER & COMPANY
License No. 777345

Job: Shea
Units: Ft-CY
Thu Mar 15, 2018 10:59:23 Page 1

Volume Report Design vs. Existing

	Total	Cut	Area		Volume		Comp/Ratio		Compact		Export Change	
			Fill	OnGrade	Cut	Fill	Cut	Fill	Cut	Fill	-Import	Per .1 Ft
<u>Job Site</u>	<u>87,735</u>	<u>78,577</u>	<u>7,157</u>	<u>2,001</u>	<u>8,227</u>	<u>491</u>	<u>1.00</u>	<u>1.00</u>	<u>8,227</u>	<u>491</u>	<u>7,736</u>	<u>325</u>



Willowbrook Drive Remedial Exhibit J.T. Krueer & Co.

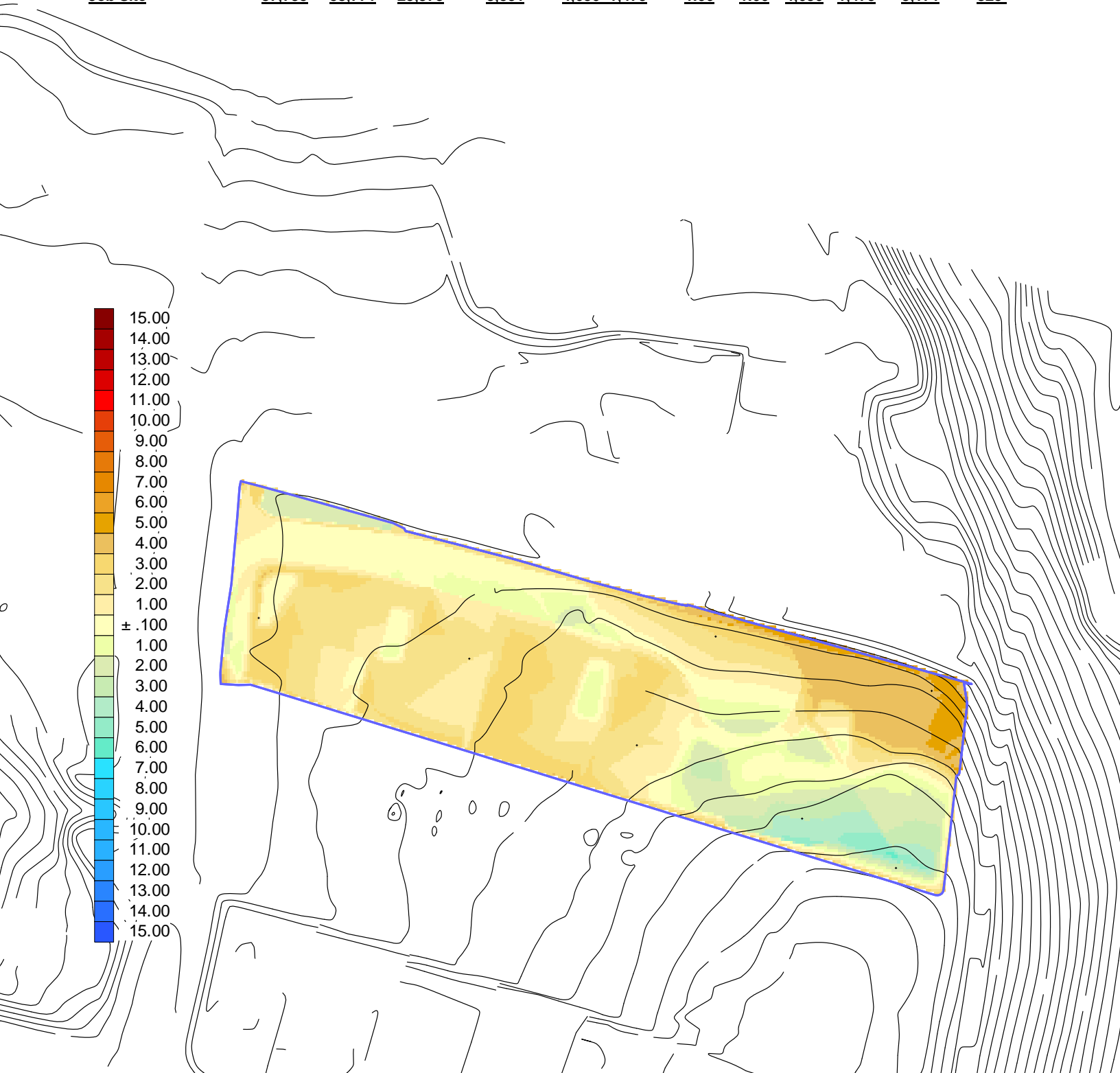


J.T. KRUEER & COMPANY
License No. 777345

Job: Shea RR
Units: Ft-CY
Tue Mar 20, 2018 14:07:43 Page 1

Volume Report Design vs. Existing

Job Site	Total	Cut	Area	OnGrade	Volume	Comp/Ratio		Compact		Export Change	
	87,735	58,771	Fill 25,373		Cut 4,650	Cut	Fill	Cut	Fill	-Import	Per .1 Ft
				3,591	1,479	1.00	1.00	4,650	1,479	3,171	325



GRADING PLAN DESIGN NOTES

- ALL GRADING AND DRAINAGE IMPROVEMENTS SHALL BE COMPLETED IN ACCORDANCE WITH THE CITY'S CURRENT GRADING ORDINANCE, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION WITH SUPPLEMENTS (A.P.W.A. SPECIFICATIONS) AND THE "SAN DIEGO AREA REGIONAL STANDARD DRAWINGS", AS AMENDED BY THE CITY SUPPLEMENTS, AND THE EARTHWORK SPECIFICATIONS ATTACHED TO THE "PRELIMINARY SOILS REPORTS".
- THE OWNER SHALL BE RESPONSIBLE FOR LANDSCAPING, FOR SLOPE STABILIZATION OF ALL EMBANKMENTS OVER 3 FEET IN HEIGHT, WITHIN 45 DAYS OF COMPLETION OF PRELIMINARY GRADING. PERMANENT IRRIGATION SYSTEMS SHALL BE INSTALLED FOR ALL EMBANKMENTS OVER 5 FEET IN HEIGHT (AND FOR ALL SLOPES ALONG MAJOR STREETS). LANDSCAPING SPECIFICATIONS, AND PLANS AS REQUIRED, SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO ISSUANCE OF THE GRADING PERMIT. THE OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE OF SLOPE STABILIZATION LANDSCAPING UNTIL RELEASE OF THE GRADING BOND OR UNTIL INDIVIDUAL LOTS (OR LIVING UNITS) CLOSE ESCROW, WHICHEVER OCCURS LATER.
- ALL GRADING SHALL BE DONE UNDER THE OBSERVATION OF A QUALIFIED SOILS ENGINEER.
- CUT AND FILL SLOPES SHALL BE TRIMMED TO THE FINISH GRADE TO PRODUCE A SMOOTH AND UNIFORM SURFACE OF CROSS-SECTION. THE SLOPES OF EXCAVATIONS OR EMBANKMENTS SHALL BE SHAPED AND TRIMMED AS DIRECTED BY THE ENGINEER OF WORK AND AS APPROVED BY THE CITY ENGINEER. FINISH SLOPES SHALL BE LEFT IN A NEAT AND ORDERLY CONDITION. ALL STONES, ROOTS OR OTHER WASTE MATERIAL SHALL BE PROPERLY DISPOSED OFF SITE.
- COMPACTION TESTS SHALL BE SUPPLIED FOR TRENCHES.
- ALL EXISTING ABANDONED PIPELINES SHALL BE REMOVED AND REPLACED WITH PROPERLY COMPACTED SOILS UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER.
- THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT EXISTING UTILITIES.
- NEITHER THE OWNER NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF WORK AND PUBLIC WORKS INSPECTOR PRIOR TO PERFORMING ROCK-REMOVAL OPERATIONS.
- APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL A VALID GRADING PERMIT HAS BEEN ISSUED, AND ALL AFFECTED PROPERTY OWNER'S PERMISSION HAS BEEN OBTAINED.
- THESE PLANS ARE SUBJECT TO A SIGNED AND APPROVED SET OF IMPROVEMENT PLANS.
- AN ENCROACHMENT PERMIT FROM THE CITY ENGINEER SHALL BE REQUIRED BY THE CONTRACTOR FOR ANY WORK WITHIN THE EXISTING CITY RIGHT OF WAY.
- ALL ROCK-SLOPE PROTECTION SHALL BE RIP RAP UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- ALL LOT PADS SHALL BE DESIGNED TO DRAIN TO AN ACCEPTABLE LOCATION AT A MINIMUM GRADIENT OF 1%.
- ALL RETAINING WALLS SHALL HAVE A PERMIT FROM THE BUILDING DEPARTMENT PER THE UNIFORM BUILDING CODE.
- MAXIMUM SLOPE RATIO SHALL BE 2:1.
- A 12-INCH HIGH BY 4-FOOT WIDE BERM (90% COMPACTED) SHALL BE CONSTRUCTED ALONG THE TOP OF THE SLOPE. NO RUNOFF SHALL FLOW OVER THE TOP OF THE SLOPE. DOWNDRAINS SHALL BE USED PER D-75.
- FOR THIS PLAN TO BECOME EFFECTIVE, AN APPROVED HAUL ROUTE PLAN THAT HAS BEEN APPROVED BY THE CITY ENGINEER SHALL BE INCLUDED (FOR HAULING OF MATERIAL ON A PUBLIC STREET).
- LOT GRADING IS TO BE IN ACCORDANCE WITH CITY SUPPLEMENT DRAWING M-12 ("TYPICAL LOT GRADING"). ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE, OR RUNNING OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT, AND ANY OTHER ASSOCIATED EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 7:00 A.M. AND 6:00 P.M. EACH DAY, MONDAY THROUGH FRIDAY, AND NO EARTHMOVING OR GRADING OPERATIONS SHALL BE CONDUCTED ON THE PREMISES ON SATURDAYS, SUNDAYS OR LEGAL HOLIDAYS, UNLESS WAIVED BY THE CITY ENGINEER. ALL DISTURBED AREAS MUST BE REVEGETATED, SUBSTANTIALLY GERMINATED, AND ESTABLISHED WITHIN 45 DAYS OF COMPLETION OF GRADING AND PRIOR TO REQUESTING FINAL INSPECTION. IMPORT MATERIAL SHALL BE OBTAINED FROM, AND WASTE MATERIAL SHALL BE DEPOSITED AT A SITE APPROVED BY THE CITY ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEBRIS OR DAMAGE OCCURRING ALONG THE HAUL ROUTES OR ADJACENT STREETS AS DIRECT RESULT OF THE OPERATION.
- THE CONTRACTOR / DEVELOPER SHALL BE RESPONSIBLE FOR IMPLEMENTING, ADMINISTERING AND MAINTAINING A CONFINED SPACE ENTRY PROGRAM IN ACCORDANCE WITH SECTIONS 5156, 5157 AND 5157 TITLE 8, CALIFORNIA CODE OF REGULATIONS (CCR).

"DECLARATION OF ENGINEER OF WORK"

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF OCEANSIDE IS A REVIEW FOR THIS LIMITED PURPOSE OF ENSURING THE PLANS COMPLY WITH CITY PROCEDURES AND OTHER APPLICABLE POLICIES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS.

AS ENGINEER OF WORK, I AGREE TO INDEMNIFY AND SAVE THE CITY OF OCEANSIDE, ITS OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENCE, ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF WORK, MY EMPLOYEES, AGENTS OR CONSULTANTS.

Ronald L. Holloway
RONALD L. HOLLOWAY RCE 29271 EXP. 03-31-17 DATE 9-23-16



CIVIL ENGINEER CERTIFICATION (AS-BUILT)

I HEREBY CERTIFY THAT AS THE ENGINEER IN RESPONSIBLE CHARGE OF WORK FOR THIS PROJECT, I HAVE SUPERVISED THE CONSTRUCTION OF THE ENGINEERING WORK, AS SHOWN ON THESE PLANS INCLUDING THE PERIODIC OBSERVATION OF MATERIALS AND COMPLETED WORK TO DETERMINE GENERAL COMPLIANCE WITH PLANS AND SPECIFICATIONS, AND THAT THE COMPLETED CONSTRUCTION IS IN CONFORMANCE WITH THESE PLANS.

I ALSO CERTIFY THAT ALL CHANGES AND/OR ADDITIONS MADE DURING CONSTRUCTION, ALL INFORMATION AS REQUIRED BY THE CITY OF OCEANSIDE GRADING ORDINANCE, AND ALL RECOMMENDATIONS FROM THE SOILS ENGINEERING AND ENGINEERING GEOLOGY REPORTS PREPARED FOR THIS PROJECT HAVE BEEN INCORPORATED IN THESE PLANS.

CIVIL ENGINEER OF RECORD:

RONALD L. HOLLOWAY RCE 29271 DATE



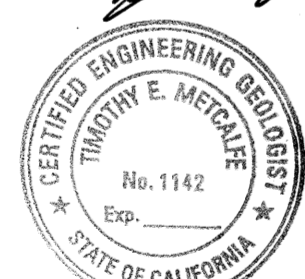
GRADING PLAN DESIGN CERTIFICATES

1. ALL GRADING SHALL BE DONE UNDER THE OBSERVATION OF A QUALIFIED SOILS ENGINEER AND ENGINEERING GEOLOGIST AND IN ACCORDANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS SET FORTH IN THE APPROVED SOILS AND GEOLOGICAL REPORTS PREPARED BY: GEOTEK, INC DATED: 5-20-2004 & UPDATED 3-27-2005

2. THESE GRADING PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED AND ARE FOUND TO BE IN CONFORMANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS OUTLINED IN THE SOILS AND GEOLOGICAL REPORT PREPARED FOR THIS DEVELOPMENT.

BY: *[Signature]* No. 35007 DATE: 10/3/16

BY: *[Signature]* No. 1172 DATE: 10/2/16



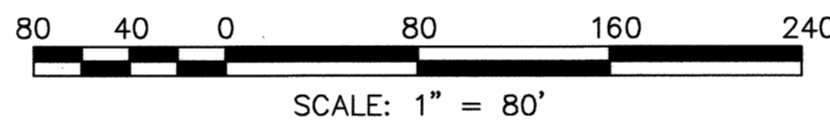
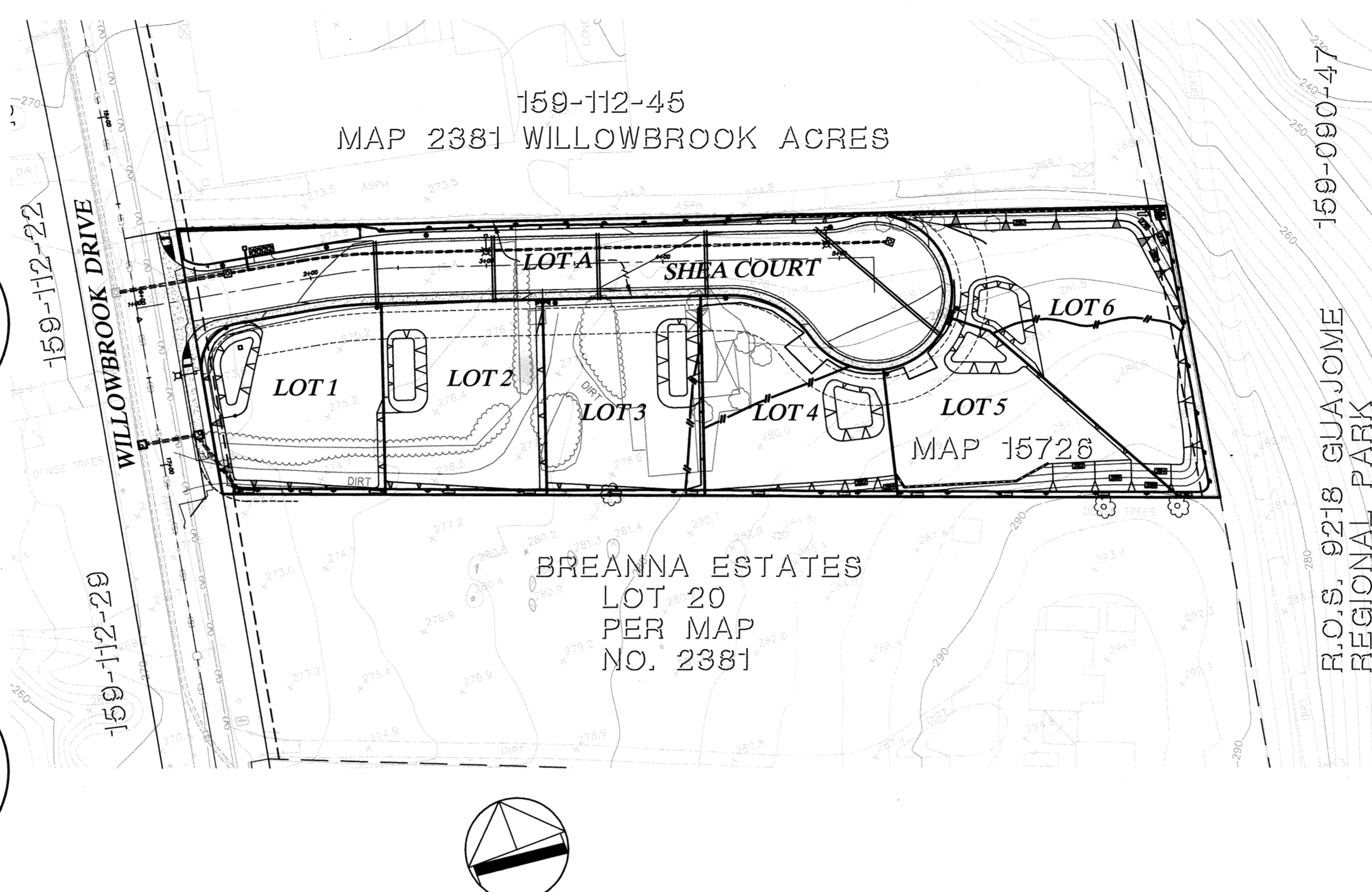
SOILS ENGINEER CERTIFICATION (AS-BUILT)

WE HEREBY CERTIFY THAT WE HAVE PROVIDED PROFESSIONAL INSPECTION AND APPROVAL CONCERNING THE PREPARATION OF GROUND TO RECEIVE FILLS, TESTING FOR REQUIRED COMPACTION, STABILITY OF ALL FINISH SLOPES, DESIGN OF BUTTRESS FILLS WHERE REQUIRED, THE ADEQUACY OF THE NATURAL GROUND FOR RECEIVING FILL, THE STABILITY OF CUT SLOPES WITH RESPECT TO GEOLOGICAL MATTERS AND THE NEED FOR SUBDRAINS AND OTHER GROUNDWATER DRAINAGE DEVICES, AND THAT THESE GRADING PLANS ACCURATELY REFLECT ALL CONDITIONS AND CONSTRUCTION RECOMMENDATIONS PREPARED FOR THIS PROJECT AS DATED:

SOILS ENGINEER OF RECORD: _____ NAME SEAL

ENGINEERING GEOLOGIST OF RECORD: _____ NAME SEAL

**PRECISE GRADING PLANS FOR:
2137 WILLOWBROOK DRIVE
CITY OF OCEANSIDE**



KEY MAP LEGEND

- 29 LOT NUMBER
- LOT LINE
- SUBDIVISION BOUNDARY

SHEET INDEX

- SHEET 1 KEY MAP/NOTES
- SHEET 2 GRADING PLAN
- SHEET 3 BMP DETAILS & POST CONST. BMP MAP
- SHEET 4 BMP SITE MAP

LEGAL DESCRIPTION:

LOTS 1-6 & A OF TRACT-5-04 IN THE CITY OF OCEANSIDE, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 15726, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, OCTOBER 29, 2008. PLANNING COMMISSION RESOLUTION NO. 2006-P37 APPROVING TM NO. T-5-04 DATED JUNE 26, 2006. SUBDIVISION GUARANTEE ISSUED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY, ORDER NO. 03687488, DATED AUGUST 25, 2008. 7 LOTS, 2.04 ACRES GROSS.

STORM WATER MANAGEMENT PLAN NOTES:

ALL POST-CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE APPROVED STORM WATER MITIGATION PLAN (SWMP).

PROVIDE STENCILING OR LABELING OF ALL STORM DRAIN INLETS AND CATCH BASINS WITHIN THE PROJECT AREA WITH PROHIBITIVE LANGUAGE (SUCH AS: "NO DUMPING- I LIVE DOWNSTREAM") AND/OR GRAPHICAL ICONS TO DISCOURAGE ILLEGAL DUMPING, SATISFACTORY TO THE CITY ENGINEER. STENCILING OR LABELING MAY ALSO BE REQUIRED IN SPANISH.

ABBREVIATIONS:

AB	AGGREGATE CONCRETE BASE	MH	MANHOLE
AC	ASPHALT CONCRETE	MVC	MIDDLE VERTICAL CURVE
BC	BEGIN CURVE	NTS	NOT TO SCALE
BVC	BEGIN VERTICAL CURVE	OSD	CITY OF OCEANSIDE STANDARD DRAWINGS
BW	BOTTOM OF WALL	P	PAVEMENT
C&G	CURB AND GUTTER	PCC	POINT OF COMPOUND CURVE
CL	CENTERLINE	PCR	POINT OF CURB RETURN
CO	CLEANOUT	PE	PAD ELEVATION
DC	DEPRESSED CURB	PRC	POINT OF REVERSE CURVE
E	ELECTRIC	RPC	REINFORCED CONCRETE PIPE
EB	EASTBOUND	RT	RIGHT
EC	END CURVE	RW	RIGHT-OF-WAY
EOR	END CURVE RETURN	S	SEWER
EP	EDGE OF PAVEMENT	SD	STORM DRAIN
EVC	END VERTICAL CURVE	SDRS	SAN DIEGO AREA REGIONAL STANDARD DRAWING
FC	FACE OF CURB	SW	SIDEWALK
FF	FINISH FLOOR	TB	TOP OF BERM/DIKE
FL	FLOWLINE	TC	TOP OF CURB
FS	FINISHED SURFACE	TF	TOP OF FOOTING
G	GAS	TC	TOP OF CURB
GB	GRADE BREAK	TF	TOP OF FOOTING
HP	HIGH POINT	TC	TOP OF CURB
IE	INVERT ELEVATION	TW	TOP OF WALL
IOD	IRREVOCABLE OFFER OF DEDICATION	W	WATER
LT	LEFT		

UNDERGROUND SERVICE ALERT

SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT ID NUMBER, CALL UNDERGROUND SERVICE ALERT TOLL FREE: 1 (800) 227-2600 TWO (2) WORKING DAYS BEFORE YOU DIG.



APPROVED CHANGES		
NO.	DESCRIPTION	APPVD DATE

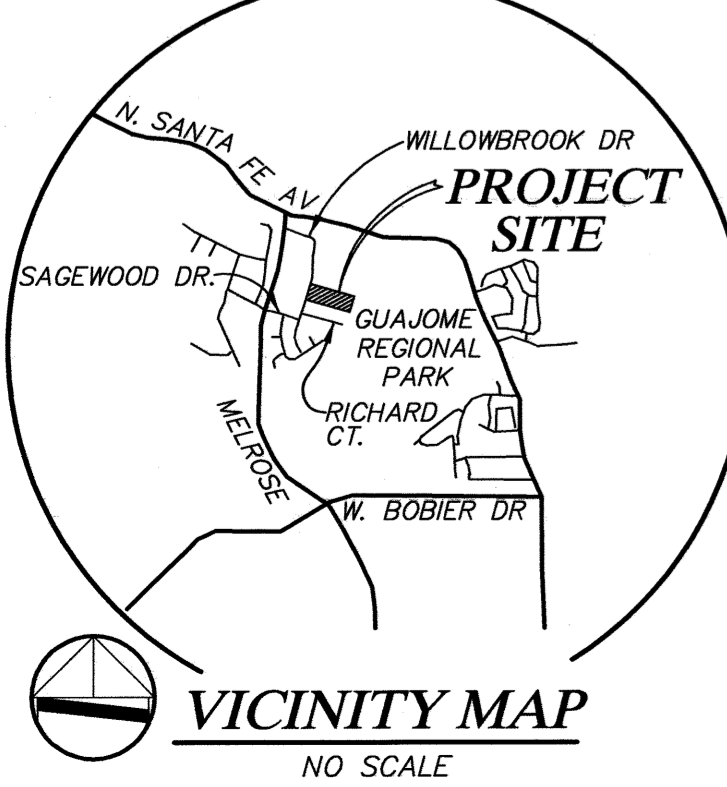
BENCH MARK # D-23
DESCRIPTION: FD, CHISELED TOP OF CURB, N.P.C. NORTHEAST, CURB RETURN OCEANSIDE BLVD. & PEACOCK.
LOCATION:
RECORD FROM: CITY OF OCEANSIDE LEVEL BOOK 65 PAGE 21
ELEVATION: 338.175 DATUM: NGVD 29

WDID# 9 37C377530 T-5-04 D-20-04

SHEET 1	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	4 SHEETS
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GRADING PLANS FOR:
**2137 WILLOWBROOK DRIVE
CITY OF OCEANSIDE**

APPROVED BY:
Marty Eslamolchi R.C.E. 55525 ACTING CITY ENGINEER
ENGINEER OF WORK:
Ronald L. Holloway R.C.E. 29271
Checked By: _____ PLAN NUMBER: G15-00032
Approval Date: _____



NOTICE TO CONTRACTORS:

THIS CONSTRUCTION SITE IS SUBJECT TO COMPLIANCE WITH THE STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD STORM WATER PERMIT: ORDER NO. 2001-01 AND SWRCB ORDER WQ 2001-15.
AS REQUIRED A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS TO BE KEPT UP TO DATE AND ON-SITE DURING CONSTRUCTION. SEE SWPPP PREPARED BY: BHA, INC. DATED: 8-19-16

CITY OF OCEANSIDE GEOTECHNICAL REVIEW	REFERENCE DRAWINGS
PLANS ARE CHECKED AND FOUND TO COMPLY WITH CITY OF OCEANSIDE REQUIREMENTS.	2381 R12923 THRU R12931 R12738 THRU R12743A
GEOTECHNICAL CONSULTANT _____ DATE _____	

bha, inc.
land planning, civil engineering, surveying
5115 AVENIDA ENCINAS
SUITE "L"
CARLSBAD, CA. 92008-4387
(760) 931-8700

GENERAL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY THE SAN DIEGO GAS AND ELECTRIC COMPANY, SBC TELEPHONE COMPANY, AND THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND SHALL COORDINATE THEIR WORK WITH COMPANY REPRESENTATIVES. ALL TELEPHONE SERVICES WITHIN THIS SUBDIVISION ARE UNDERGROUND INSTALLATION. FOR LOCATION OF ELECTRIC CABLE, GAS PIPING AND TELEPHONE CABLES AND APPURTENANCES, CONTACT UNDERGROUND SERVICE ALERT: 1-800-227-2600. ALSO REFER TO CITY STANDARD.
- 2. A PERMIT SHALL BE OBTAINED FROM THE CITY ENGINEERING DEPARTMENT FOR WORK WITHIN EXISTING CITY RIGHTS-OF-WAYS.
- 3. THE CONTRACTOR SHALL NOTIFY THE CITY OF OCEANSIDE ENGINEERING DEPARTMENT 48 HOURS PRIOR TO STARTING WORK SO THAT INSPECTION MAY BE PROVIDED. (TELEPHONE NUMBER: 760-435-5081).
- 4. ALL WORK SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITIONS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, WITH SUPPLEMENTS (APWA SPECIFICATIONS); THE SAN DIEGO COUNTY REGIONAL STANDARD DRAWINGS (SDRS); CITY OF OCEANSIDE WATER, SEWER, AND RECLAIMED DESIGN & CONSTRUCTION MANUAL; AND CITY OF OCEANSIDE ENGINEERS DESIGN AND PROCESSING MANUAL (OCEANSIDE ENGINEERS MANUAL).
- 5. PAVEMENT SECTIONS SHOWN, ARE TO BE VERIFIED BY "R" VALUE TESTS (TEST METHOD NO. CALIFORNIA 301) AND PAVEMENT DESIGN REPORT, TO BE SUBMITTED BY SOILS ENGINEER AFTER UNDERGROUND UTILITIES CONSTRUCTION IS COMPLETE, FOR CITY ENGINEER'S APPROVAL.
- 6. ALL METALS PLACED IN THE GROUND SHALL BE ENCASED IN 6" OF NEUTRAL SAND.
- 7. CONSTRUCTION EXPANSION JOINTS IN CURB AND GUTTER AT RETURNS AND AT DRIVEWAY INTERSECTIONS IS REQUIRED PER SDRSD G-9 AND G-10.
- 8. ALL UNDERGROUND UTILITIES LATERALS SHALL BE INSTALLED BEFORE CONSTRUCTION OF CURBS, CROSS GUTTERS, OR SURFACING OF THE STREETS AND SHALL BE MARKED FOR EASY LOCATION. THE ENGINEER OF WORK SHALL CERTIFY ALL IMPROVEMENTS TO WITHIN .1' OF THE DESIGN.
- 9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AN EXCAVATION PERMIT FROM THE DIVISION OF INDUSTRIAL SAFETY AND ADHERE TO ALL PROVISIONS OF THE STATE CONSTRUCTION SAFETY ORDERS.
- 10. SOILS REPORTS ON ALL TRENCHES SHALL BE SUBMITTED TO THE ENGINEER OF WORK AND THE CITY ENGINEER BY THE SOILS ENGINEER OF RECORD, WHICH CERTIFIES THAT TRENCH BACKFILL WAS COMPACTED AS DIRECTED BY THE SOILS ENGINEER IN ACCORDANCE WITH EARTH WORK SPECIFICATIONS AND CITY OF OCEANSIDE SPECIFICATIONS AND GRADING ORDINANCE.
- 11. BLUE FIRE HYDRANT MARKERS SHALL BE PLACED ON THE PAVEMENT PER CITY OF OCEANSIDE STANDARD DRAWING M-13.
- 12. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT STATE OF CALIFORNIA MANUAL OF TRAFFIC CONTROLS.
- 13. CENTERLINE MONUMENTS SHALL BE INSTALLED AT THE EC AND BC OF ALL CURVES, AT THE CENTERLINE INTERSECTION OF ALL STREETS WHERE MANHOLES ALLOW, AT THE RADIUS POINT OF CONCENTRIC CUL-DE-SACS, AND AT THE ANGLE POINT OF OFFSET CUL-DE-SACS, PER SDRSD M-10 AND M-11.
- 14. ALL EXISTING IMPROVEMENTS INCLUDING CURB AND GUTTERS, SIDEWALKS, ASPHALT CONCRETE OR P.C.C. PAVING, WHICH ARE BEING JOINED OR MATCHED IN CONNECTION WITH THIS PROJECT, SHALL BE JOINED OR MATCHED IN A MANNER SATISFACTORY TO THE CITY ENGINEER, INCLUDING NECESSARY SAWCUTTING, REMOVAL, REPLACEMENT, AND CAPPING.
- 15. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE, OR RUNNING OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT, AND ANY OTHER ASSOCIATED EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 7:00 A.M. AND 6:00 P.M. EACH DAY, MONDAY THROUGH FRIDAY, AND NO EARTHMOVING OR GRADING OPERATIONS SHALL BE CONDUCTED ON THE PREMISES ON SATURDAYS OR SUNDAYS OR LEGAL HOLIDAYS, UNLESS WAIVED BY THE CITY ENGINEER.
- 16. STRIPING SHALL BE DONE BY THE CONTRACTOR AT DEVELOPER'S EXPENSE UNLESS OTHERWISE DIRECTED.
- 17. TRAFFIC STRIPES AND PAVEMENT MARKINGS SHALL NOT BE APPLIED OVER EXISTING STRIPES THAT ARE TO BE REMOVED. EXISTING STRIPES SHALL BE FIRST REMOVED BY SANDBLASTING BEFORE ANY NEW APPLICATION.
- 18. REFLECTIVE PAVEMENT MARKERS TO BE INSTALLED BY CONTRACTOR ON PERMANENT STRIPING. ALL STREET SIGNS SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. SIGN SPECIFICATIONS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF OCEANSIDE STANDARD DRAWING T-3 AND THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION SPECIFICATION FOR REGULATORY, WARNING AND GUIDE SIGNS.
- 19. PATCHING OF SIDEWALK IS NOT PERMITTED.
- 20. DAMAGED, GOUGED, BROKEN, OR GRAFFITI-MARKED SECTIONS OF CURB, GUTTER, OR SIDEWALK SHALL BE REMOVED AND REPLACED.
- 21. A MINIMUM REPLACEMENT SECTION TO BE AT LEAST EQUAL TO SCORE MARK TO SCORE MARK (TYPICALLY 5' X 5'). FOR SIDEWALKS EXCEEDING 5' WIDTH, REPLACEMENT IS TO BE FULL WIDTH SQUARED TO THE NEXT SCORE MARK.

"DECLARATION OF ENGINEER OF WORK"

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF OCEANSIDE IS A REVIEW FOR THIS LIMITED PURPOSE OF ENSURING THE PLANS COMPLY WITH CITY PROCEDURES AND OTHER APPLICABLE POLICIES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS.

AS ENGINEER OF WORK, I AGREE TO INDEMNIFY AND SAVE THE CITY OF OCEANSIDE, ITS OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF WORK, MY EMPLOYEES, AGENTS OR CONSULTANTS.

R. Holloway ENGINEER RCE 29271 6-17-08 DATE
LICENSE NO. DATE

AS BUILT CERTIFICATION

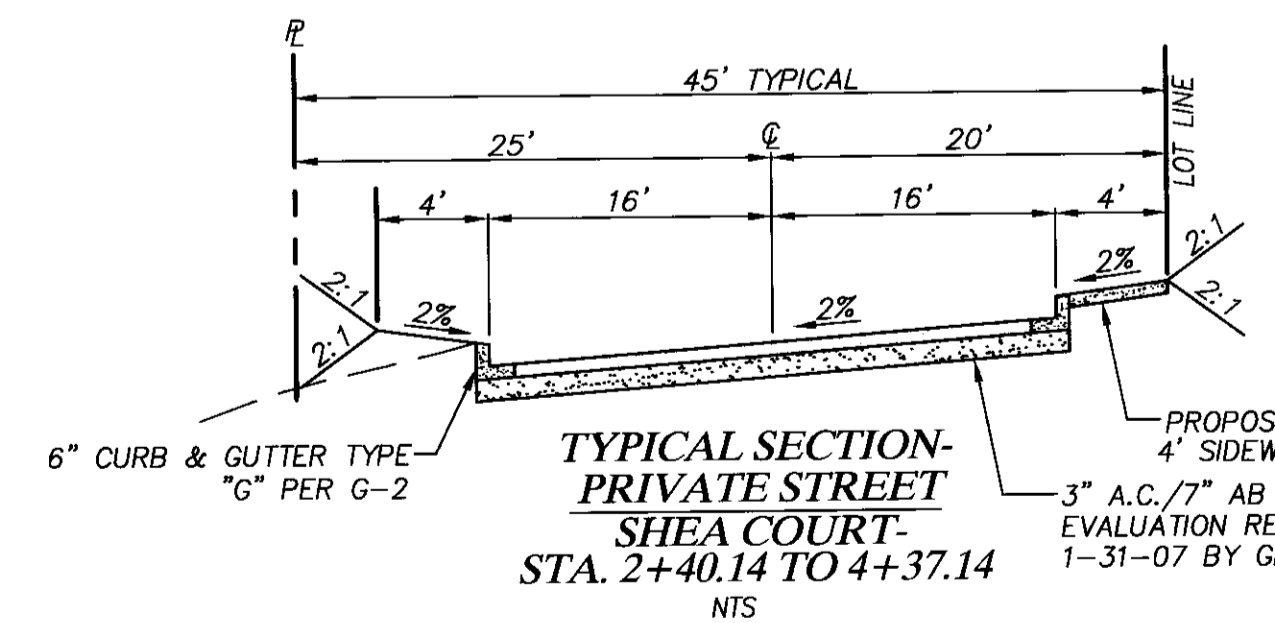
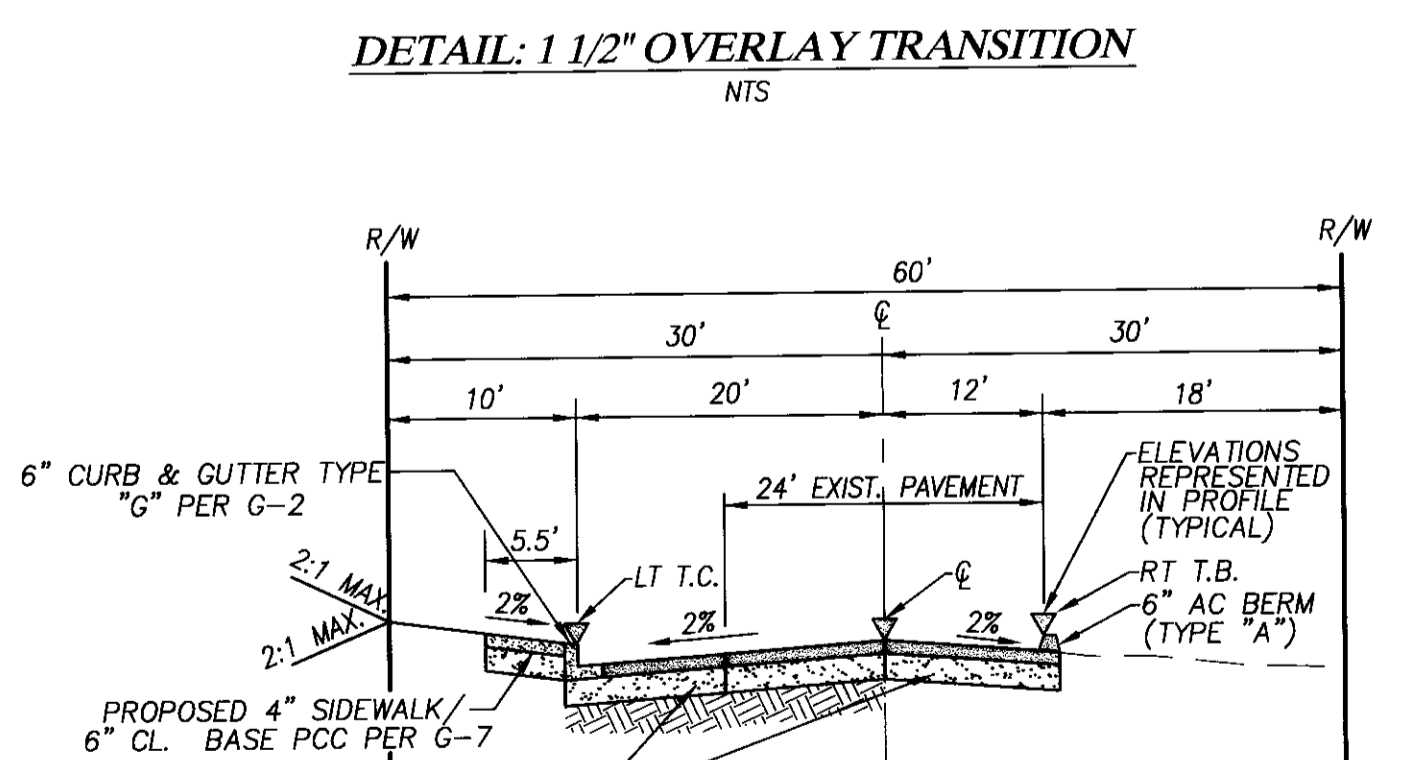
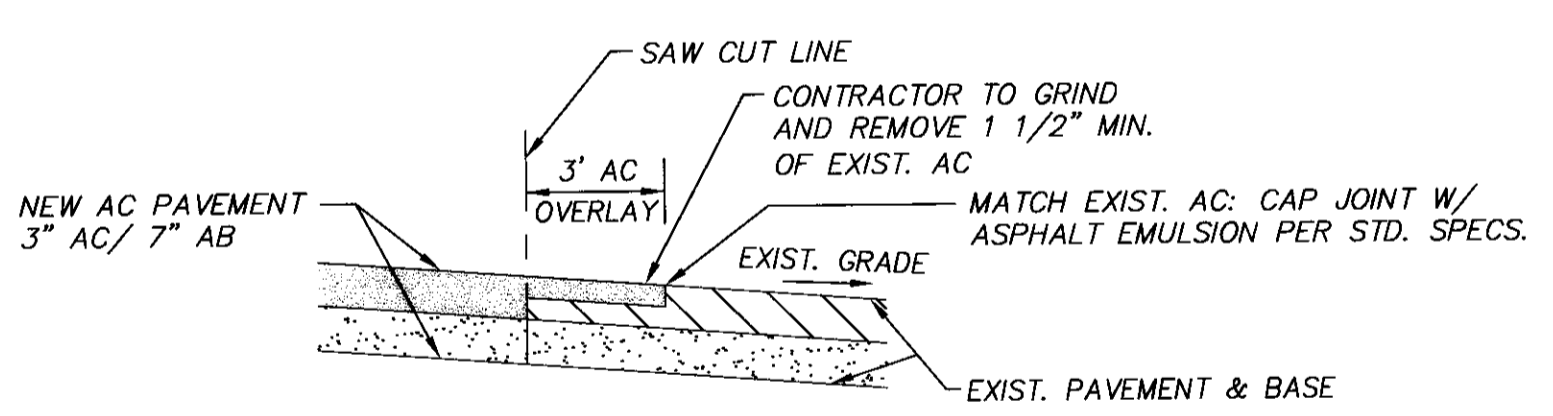
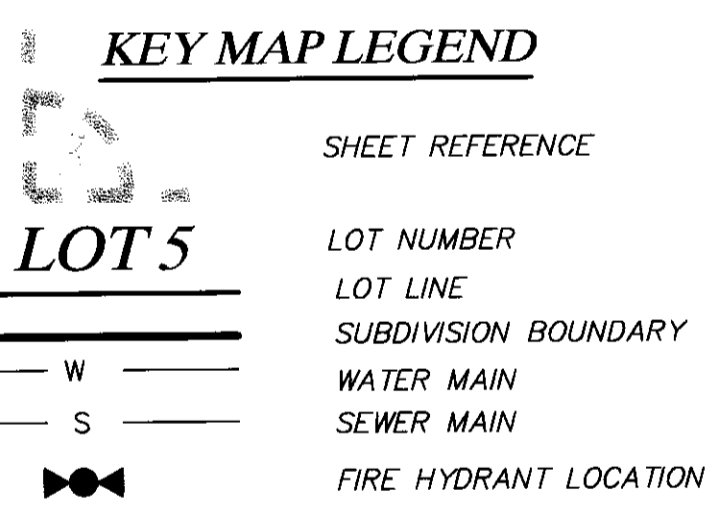
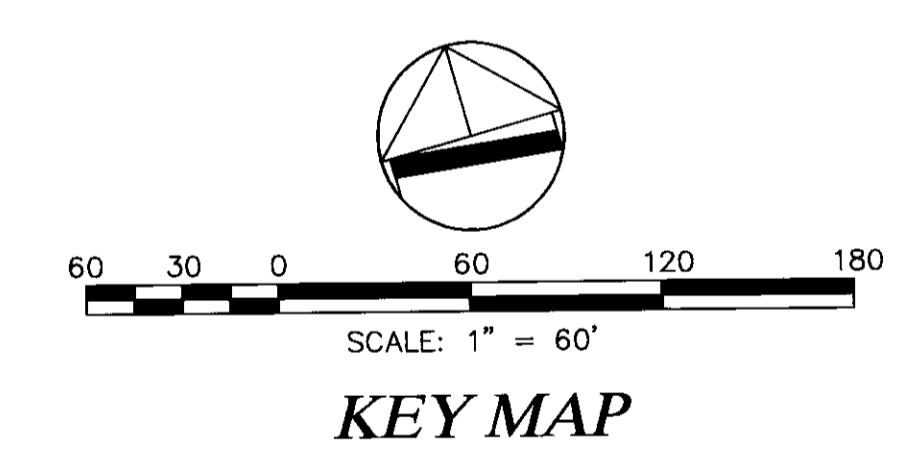
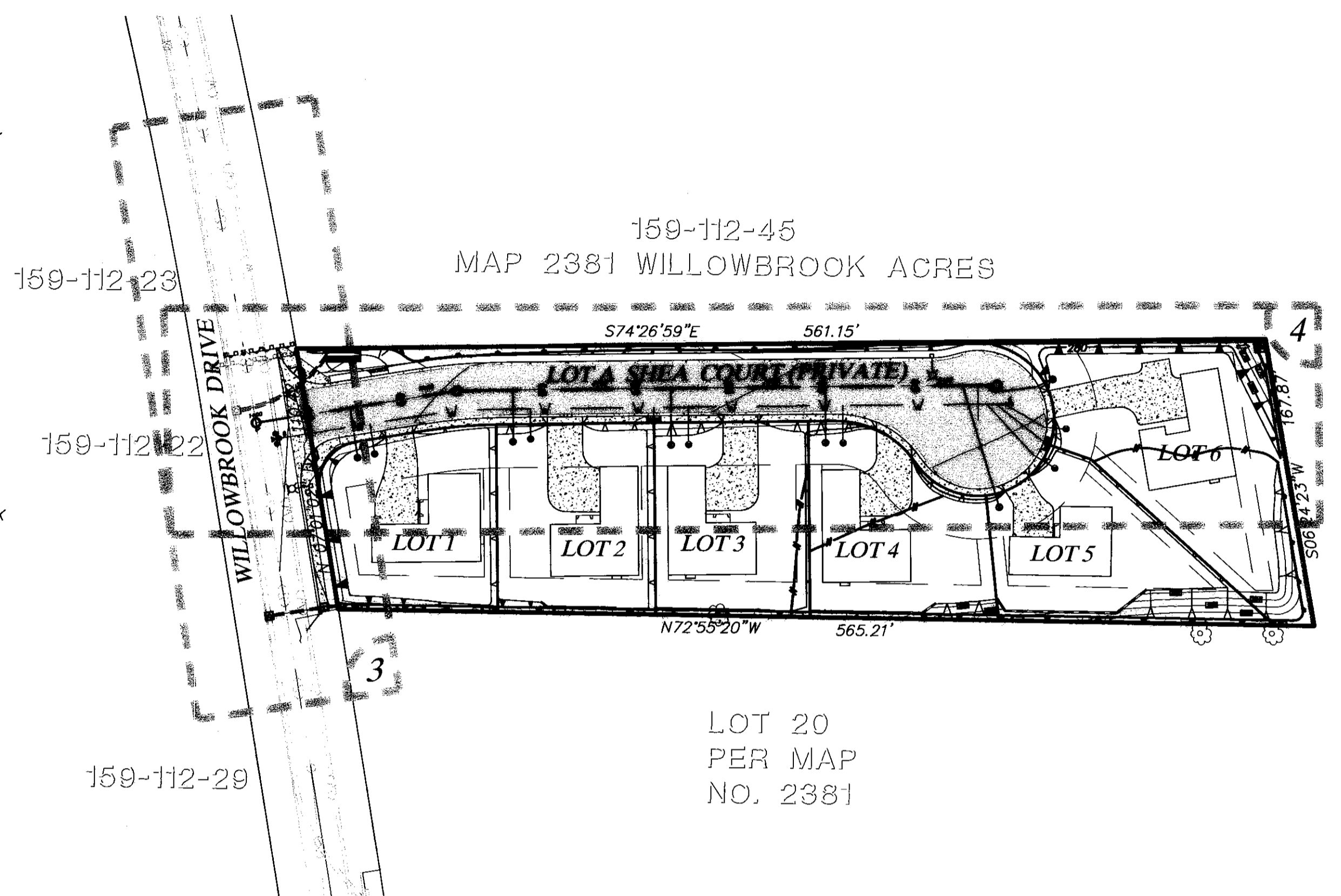
I HEREBY CERTIFY THAT AS THE ENGINEER IN RESPONSIBLE CHARGE OF WORK FOR THIS PROJECT, I HAVE SUPERVISED THE CONSTRUCTION OF THE ENGINEERING WORK AS SHOWN ON THESE PLANS INCLUDING THE PERIODIC OBSERVATION OF MATERIALS AND COMPLETED WORK TO DETERMINE GENERAL COMPLIANCE WITH PLANS AND SPECIFICATIONS, AND THAT THE COMPLETED CONSTRUCTION IS IN CONFORMANCE WITH THESE PLANS.

CIVIL ENGINEER OF RECORD: NAME SEAL

LEGAL DESCRIPTION

A PORTION OF LOT 20 OF WILLOWBROOK ACRES, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 2381, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, FEBRUARY 21, 1947.

IMPROVEMENT PLANS FOR: 2137 WILLOWBROOK DRIVE CITY OF OCEANSIDE COUNTY OF SAN DIEGO, CALIFORNIA



UNDERGROUND SERVICE ALERT

SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT TOLL FREE: 1 (800) 227-2600 TWO (2) WORKING DAYS BEFORE YOU DIG.

REFERENCE DRAWINGS

CITY OF OCEANSIDE DWG. NO.
2381
R12923 THRU R12931
R12738 THRU R12743A

WORK TO BE DONE

ITEM	STD DWG.	LEGEND
PROJECT BOUNDARY		
EXISTING & PROJECT LOT LINES		
EXISTING RIGHT-OF-WAY		
EXISTING WATER LINE		
EXISTING SEWER LINE		
EXISTING CENTER LINE		
EXISTING CURB & GUTTER		
EX. CONTOUR MAJOR		
EX. CONTOUR MINOR		
EXISTING CURB INLET		
EXISTING CURB INLET		
EXISTING STORM DRAIN CLEAN OUT TYPE "A"		
PROPOSED 18" STORM DRAIN	RCP 1350-D	
EXISTING FIRE HYDRANT		
EXISTING STREET LIGHT		
PROPOSED SPOT ELEVATION		
6" CURB & GUTTER TYPE G-2	SDRSD G-2	
STREET LIGHT		
3" AC OVER 7" AB (PER PAVEMENT EVAL.)		
CONCRETE CROSS GUTTER	SDRSD G-12	
PEDESTRIAN RAMP	SDRSD G-27 TYPE "A"	
5' P.C.C. SIDEWALK (OVER 6" CL II BASE)	SDRSD G-7	
3/4" WATER SERVICE	W-4	
8" G.V.	W-23	
FIRE HYDRANT ASSEMBLY	W-1	
8" WATER MAIN (CL 150, PVC C-900) (PUBLIC)	W	
2" AIR RELEASE VALVE	W-3	
CONCRETE THRUST BLOCK	W-27	
8" PVC SEWER MAIN (PUBLIC)	S	
SEWER LATERAL (PVC SDR 35)	S-3	
SEWER MANHOLE	S-5	
SURVEY MONUMENT	M-10	
STORM DRAIN (TYPE F) SATCH BASIN	SDRSD D-7	
STORM DRAIN INLET (TYPE B)	SDRSD D-2	
STORM DRAIN CLEANOUT	SDRSD D-9	
STORM WATER FILTER (DELAWARE SAND FILTER)		

ASSESSORS PARCEL NUMBERS

159-112-13

OWNER/DEVELOPER:

SUEO SONODA BFI DEVELOPMENT
2137 WILLOWBROOK DRIVE 2706 ORMSBY WAY
OCEANSIDE, CA 92056 VISTA CA. 92084

SOILS ENGINEER:

GEO TEK, INC.
1384 POINSETTIA AVE., SUITE A
VISTA, CA 92081-8505
(760)599-0509

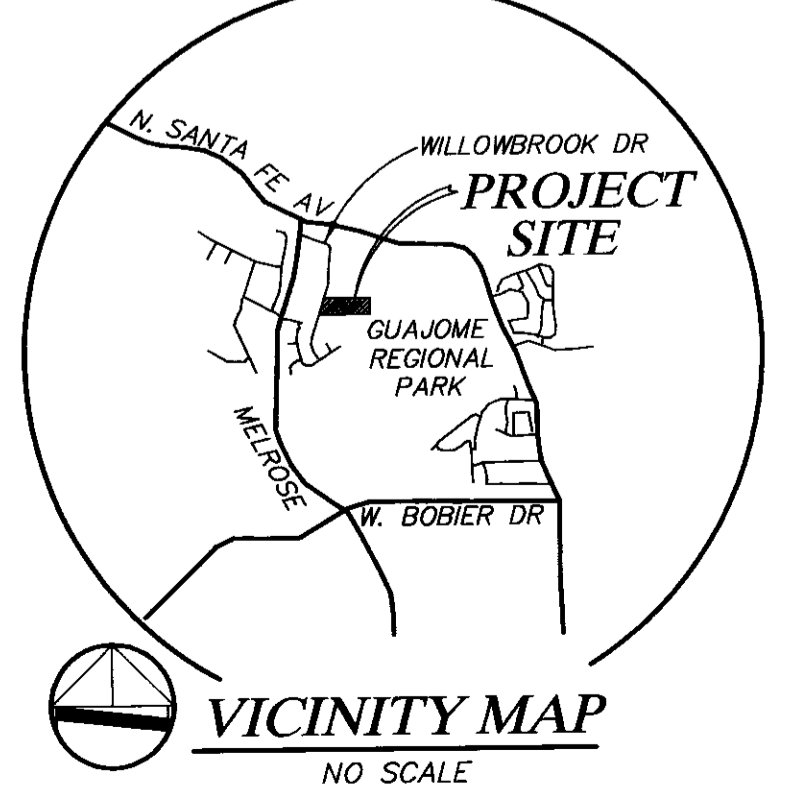
TOPOGRAPHY

AERIAL SURVEY BY: TOWILL
FLIGHT DATE: 4-13-2004

SHEET INDEX

SHEET 1 TITLE SHEET
SHEET 2 NOTES AND DETAILS
SHEET 3 PLAN & PROFILE- WILLOWBROOK
SHEET 4 PLAN & PROFILE- STREET "A"

T-5-04 D-20-04 WDD# 937C347490



PLANS APPROVED BY TRAFFIC

APPROVED BY WATER UTILITIES DEPT.

PLANS APPROVED BY FIRE DEPT.

TRAFFIC: 6/23/08 DATE

WATER UTILITIES: 6/23/08 DATE

FIRE: 6-23-08 DATE

AS-BUILT PLANS		APPROVED CHANGES	
NO.	DESCRIPTION	APPVD	DATE
RONALD L. HOLLOWAY DATE RCE 29271 EXP 3-31-08			
BENCH MARK # D-23			
DESCRIPTION: FD, CHISELED TOP OF CURB, N.P.C. NORTHEAST CURB RETURN OCEANSIDE BLVD. & PEACOCK.			
RECORD FROM:	CITY OF OCEANSIDE LEVEL BOOK 65 PAGE 21		
ELEVATION:	338.175	DATE:	NAVD 29

SHEET 1	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	4 SHEETS
IMPROVEMENT PLANS FOR: 2137 WILLOWBROOK DRIVE TITLE SHEET OCEANSIDE, CALIFORNIA		
<u>Scott D. Smith</u> R.C.E. 58853		6/24/08
ENGINEER OF WORK <u>R. Holloway</u> RONALD L. HOLLOWAY R.C.E. 29271	Checked By: <u>SS</u> Approval Date: <u>6/24/08</u>	PLAN NUMBER R-13889

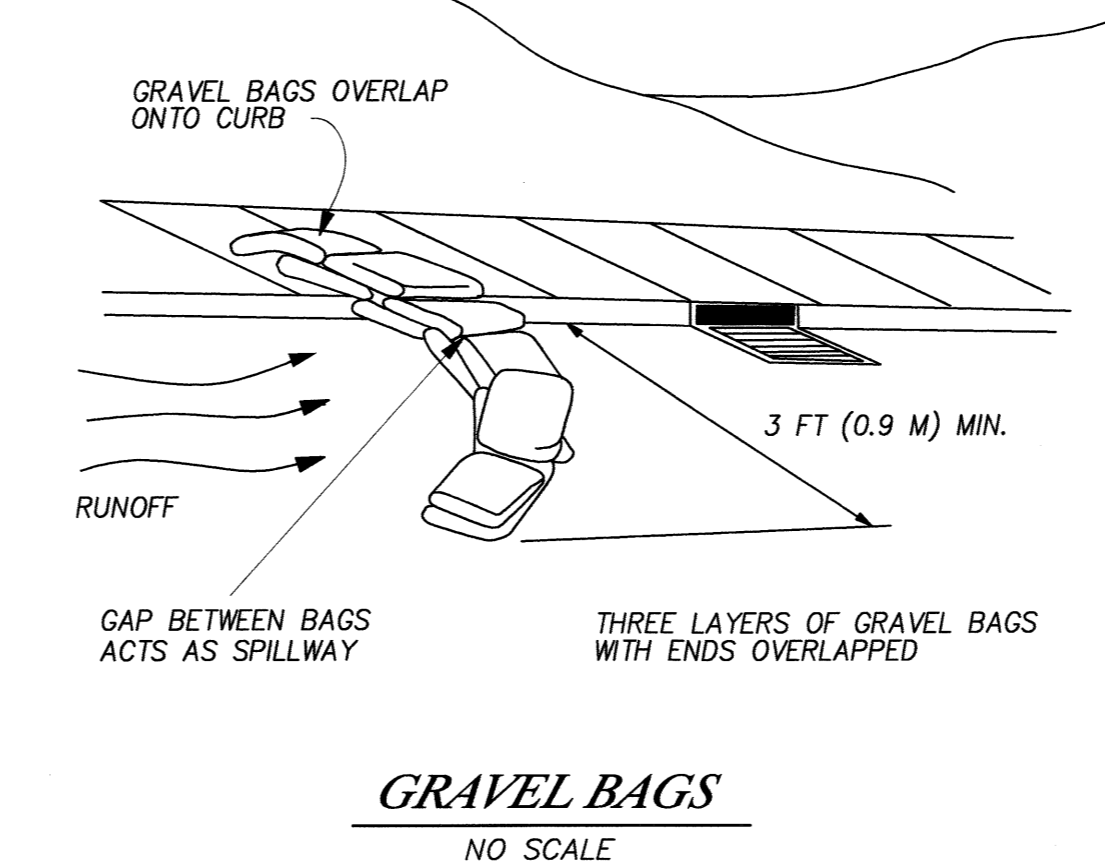
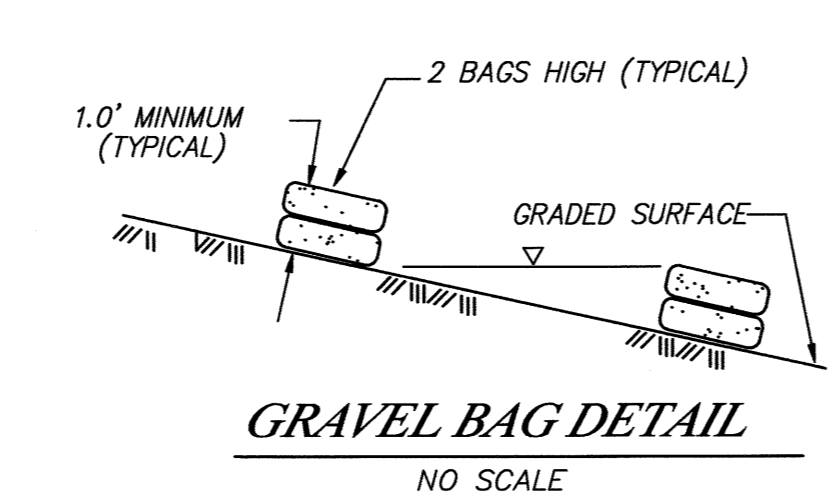
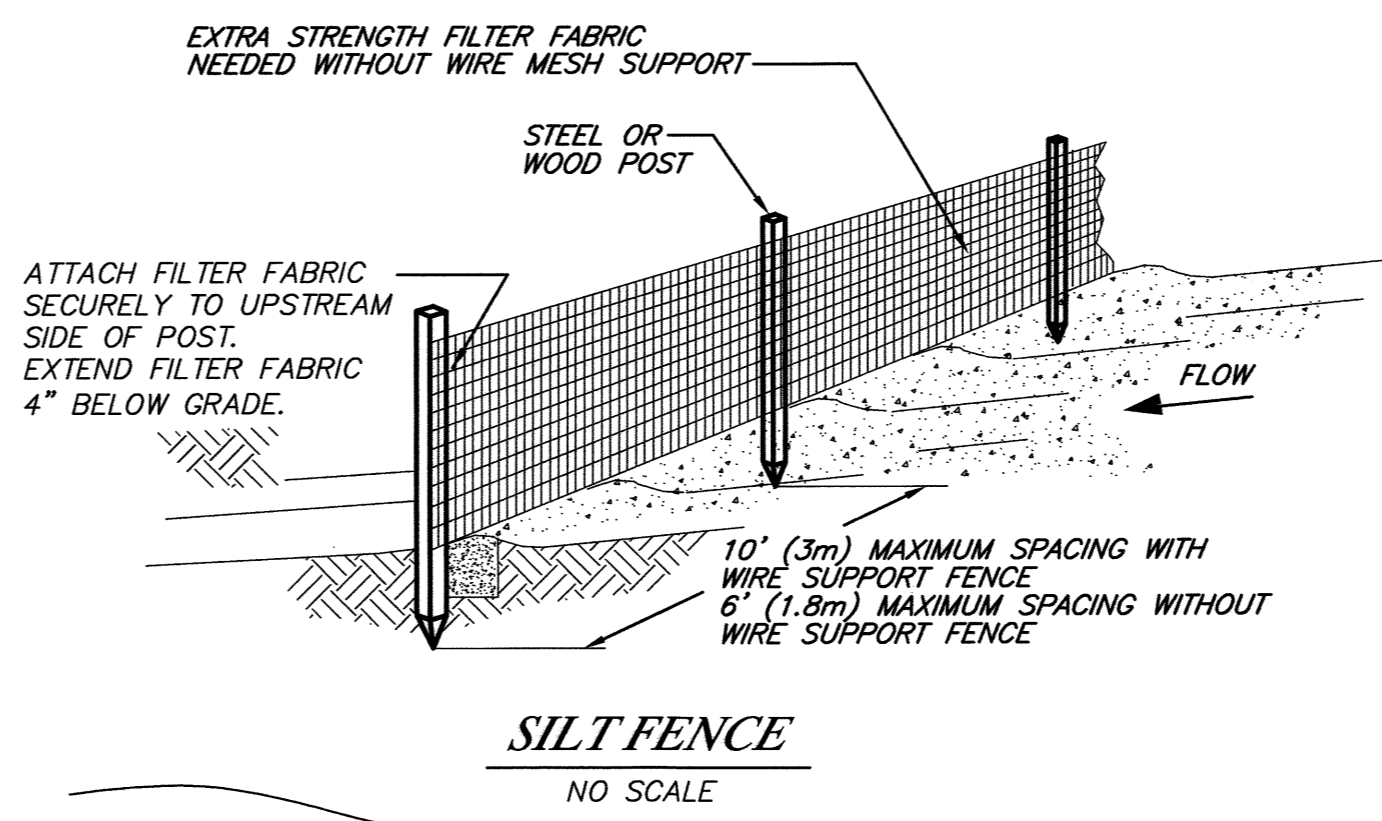
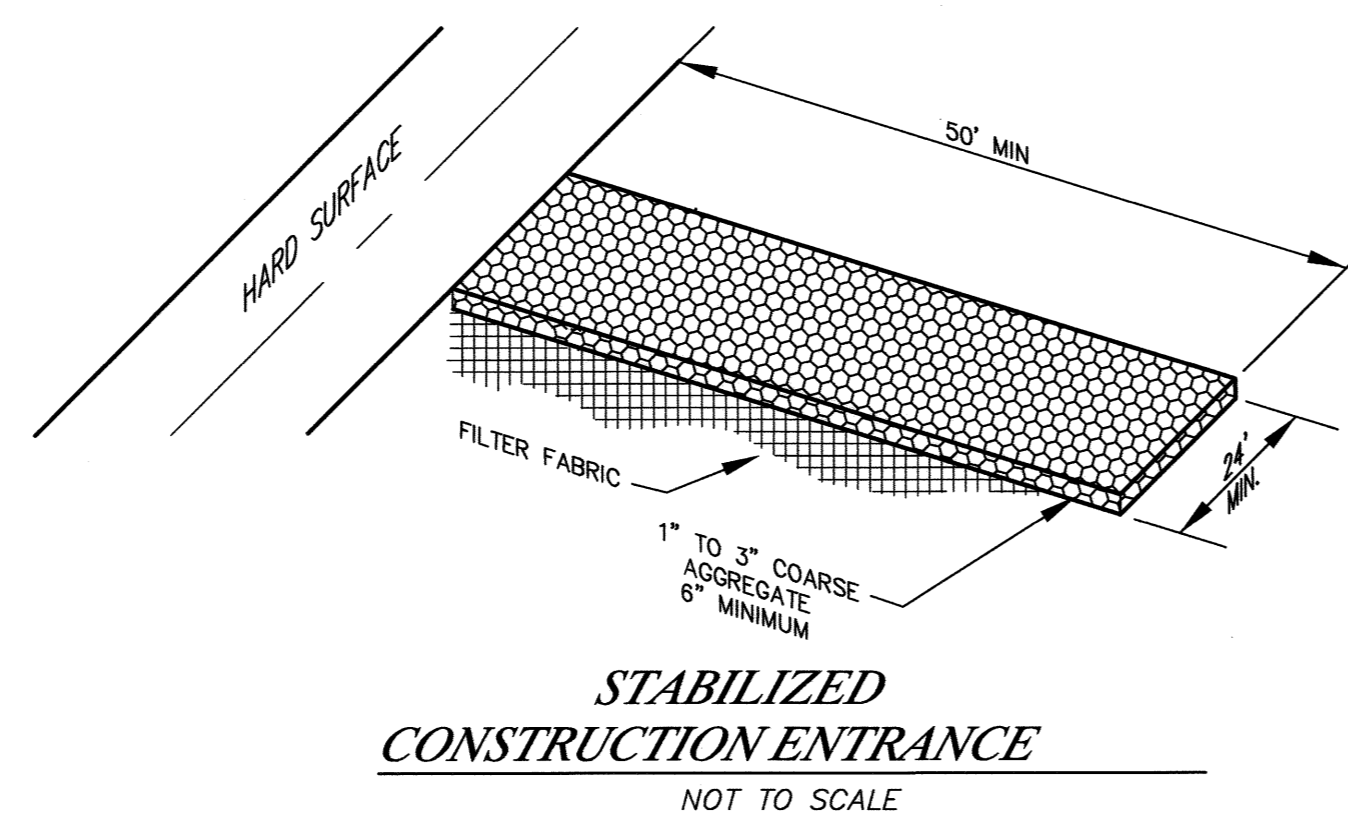
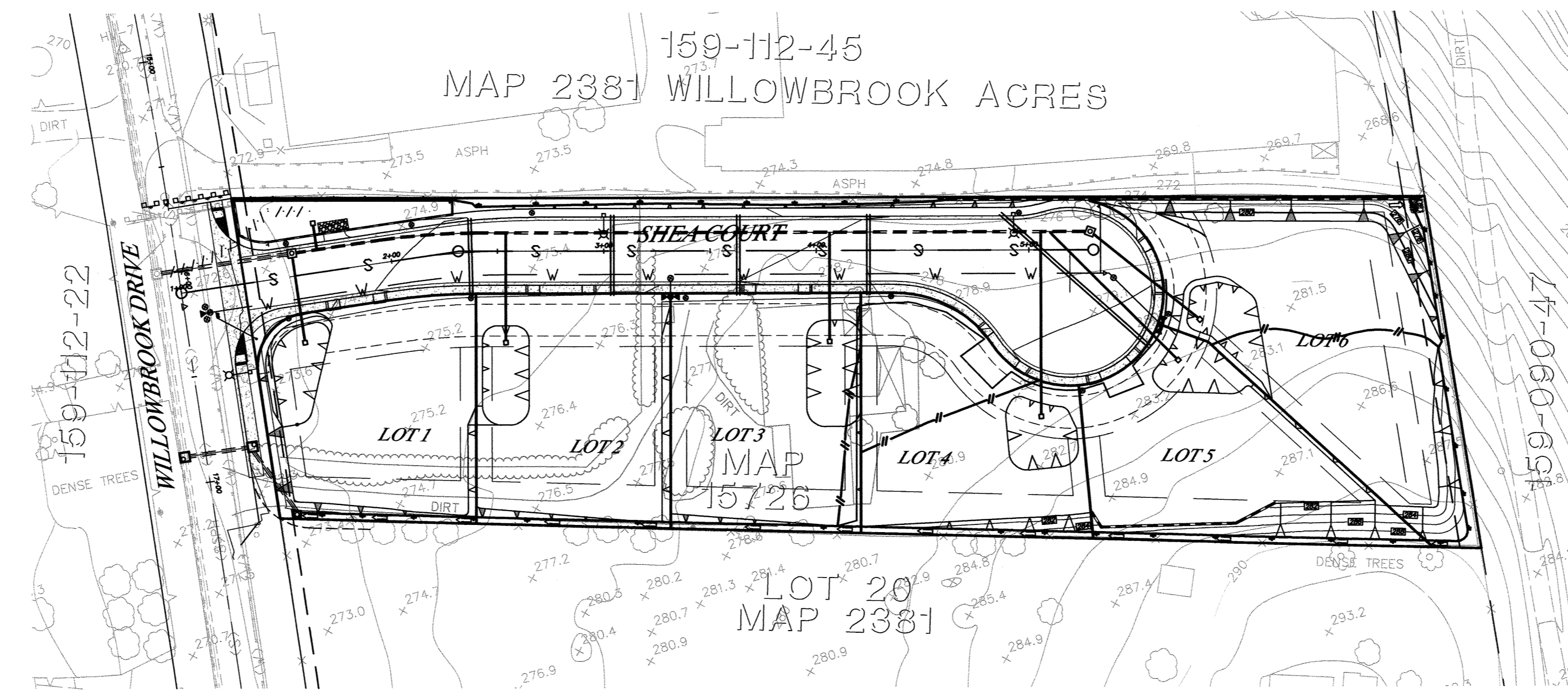
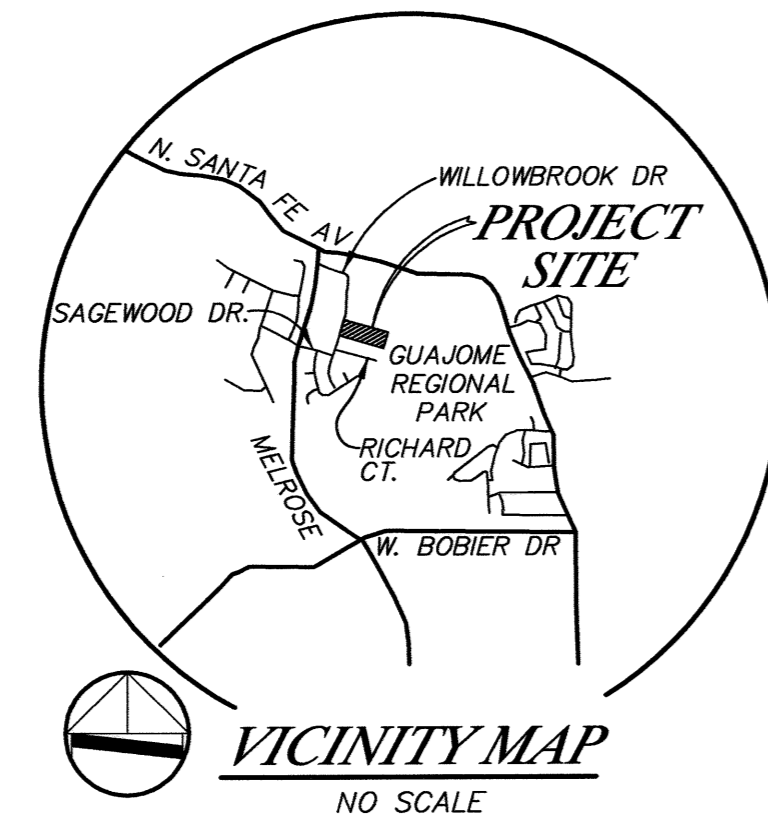
EROSION CONTROL NOTES

EROSION CONTROL PLAN FOR: 2137 WILLOWBROOK DRIVE

1. THE EROSION CONTROL SYSTEMS REQUIRE CERTIFICATION BY THE ENGINEER OF RECORD. SUCH CERTIFIED SYSTEMS SHALL BE COMPLETE, INSPECTED, AND IN PLACE NO LATER THAN OCTOBER 15. ALL EROSION CONTROL SYSTEMS SHALL REMAIN IN PLACE AT ALL TIMES FOR ALL AREAS IN WHICH CONSTRUCTION IS NOT SCHEDULED TO COMMENCE WITHIN THE NEXT SEVEN (7) DAYS. ALL EROSION CONTROL SHALL REMAIN IN PLACE ALL YEAR ROUND.
2. THE CONTRACTOR, PERMITTEE OR OWNER SHALL BE RESPONSIBLE FOR THE INSPECTION, MODIFICATION AND PROPER MAINTENANCE OF THE EROSION CONTROL DEVICES AS NECESSARY. IN THE EVENT OF FAILURE OR REFUSAL TO PROPERLY MAINTAIN SAID DEVICES, THE CITY ENGINEER MAY CAUSE EMERGENCY MAINTENANCE WORK TO BE DONE TO PROTECT ADJACENT PRIVATE AND PUBLIC PROPERTY, THE COST (INCLUDING AN INITIAL MOBILIZATION AMOUNT) OF WHICH SHALL BE CHARGED TO THE OWNER.
3. ALL EROSION CONTROL MEASURES REQUIRED TO RETAIN SEDIMENT ON-SITE AND TO SAFELY DISCHARGE ANY ACCELERATED RUNOFF GENERATED BY THE PROJECT SHALL BE INSTALLED DURING THE INITIAL CONSTRUCTION PHASE OF THE PROJECT.
4. THE CONSTRUCTION AND MAINTENANCE OF ALL EROSION CONTROL SYSTEMS SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED EROSION CONTROL PLAN.
5. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS THE WORK PROGRESSES AS RECOMMENDED BY THE ENGINEER OF WORK AND AS APPROVED BY THE CITY ENGINEER.
6. ALL REMOVABLE PROTECTION DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5-DAY RAIN PROBABILITY FORECAST EXCEEDS 40 PERCENT.
7. EROSION CONTROL SYSTEMS SHALL BE SERVICED AND MAINTAINED TO PROVIDE CONTINUOUS CAPACITY AND ADEQUACY TO FUNCTION AS DESIGNED. AFTER PRECIPITATION EXCEEDING ONE QUARTER (1/4) INCH IN ANY 12 HOUR PERIOD, OR UPON DIRECTION OF THE CITY ENGINEER, SILT AND DEBRIS SHALL BE REMOVED FROM CHECK DAMS AND DESILTING BASINS AND THE BASINS PUMPED DRY AND OTHERWISE RESTORED TO THE ORIGINAL DESIGN CONDITION.
8. DESILTING BASINS CONSTRUCTED OF COMPACTED EARTH SHALL BE COMPACTED TO A RELATIVE COMPACTION OF 90 PERCENT OF MAXIMUM DENSITY. A SOIL ENGINEERING REPORT INCLUDING THE TYPE OF FIELD TESTING PERFORMED, LOCATION, AND RESULTS OF TESTING SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL UPON COMPLETING THE DESILTING BASIN.
9. EROSION CONTROL PROVISIONS SHALL INCLUDE AND COMPLIMENT DRAINAGE PATTERNS DURING THE CURRENT AND FUTURE PHASES OF GRADING THROUGHOUT THE RAINY SEASON.
10. THE CONTRACTOR, PERMITTEE OR PROJECT OWNER SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION. NECESSARY PRECAUTIONS MAY INCLUDE, BUT NOT BE LIMITED TO, APPROPRIATE PERIMETER FENCING OR A 24 HOUR GUARD PREVENTING UNAUTHORIZED PERSONS FROM ENTERING THE BASINS.
11. GRADED AREAS AROUND THE TRACT PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY.
12. PAVED STREETS, SIDEWALKS, AND OTHER IMPROVEMENTS SHALL BE MAINTAINED IN A NEAT AND CLEAN CONDITION, FREE OF LOOSE SOIL, CONSTRUCTION DEBRIS, AND TRASH. STREET SWEEPING OR OTHER EQUALLY EFFECTIVE MEANS SHALL BE USED ON A REGULAR BASIS TO CONTROL EROSION. WATERING SHALL NOT BE USED TO CLEAN STREETS EXCEPT FOR THE REMOVAL OF FINE MATERIAL NOT OTHERWISE REMOVED BY SWEEPING OR OTHER MECHANICAL MEANS.
13. STAND-BY CREWS SHALL BE ALERTED BY THE CONTRACTOR, PERMITTEE OR OWNER FOR EMERGENCY WORK DURING RAINSTORMS.
14. GRAVEL BAGS AND NECESSARY MATERIALS IN ACCORDANCE WITH THE APPROVED PLANS, SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES WHEN NEEDED. A STAND-BY CREW SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
15. ALL UTILITY TRENCHES SHALL BE BACKFILLED WITHIN 24 HOURS AND MUST BE BACKFILLED BEFORE THE END OF THE WORK DAY IF A 40 PERCENT CHANCE OF RAIN IS PREDICTED.
16. A GRAVEL BAG SILT BASIN OR TRAP SHALL BE PROVIDED AT EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
17. A 12 INCH HIGH BY 4 FOOT WIDE BERM SHALL BE MAINTAINED ALONG THE TOP OF THE SLOPE OF THOSE FILLS ON WHICH GRADING IS NOT IN PROGRESS. CONCENTRATED WATER SHALL BE CARRIED NOT CLOSER THAN 10 FEET FROM THE TOP OF SLOPES.
18. ALL BUILDING PADS SHALL BE SLOPED TOWARDS THE DRIVEWAY AND VELOCITY CHECK DAMS PROVIDED AT THE BASE OF ALL DRIVEWAYS DRAINING INTO THE STREET. VELOCITY CHECK DAMS SHALL BE PROVIDED ACROSS THE OUTLETS OF ALL LOTS DRAINING INTO THE STREET.
19. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED STREET AREAS AT THE INTERVALS INDICATED BELOW. VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF GRAVEL BAGS, TIMBER OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE CITY ENGINEER, AND SHALL EXTEND COMPLETELY ACROSS THE STREET AT RIGHT ANGLES TO THE CENTERLINE. EARTH DIKES MAY NOT BE USED AS VELOCITY CHECK DAMS. CHECK DAM INSTALLATION SHALL PROVIDE FOR THE PREVENTION OF EROSION AROUND THE ENDS OF THE DAM.

GRADE OF THE STREET	INTERVAL
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET

CONTACT: FRANK FANELLI PHONE: 760-271-8466



LEGEND

CONSTRUCTION BMPS	[CASQA]*	
GRAVEL BAGS BERM	(SE-6)	
INLET PROTECTION WITH GRAVEL BAGS	(SE-10 TYPE 3)	
SILT FENCES	(SE-1)	
HYDROSEEDING	(EC-4)	
STABILIZED CONSTRUCTION ENTRANCE	(TC-1)	
MATERIAL DELIVERY AND STORAGE	(WM-1)	
SOLID WASTE MANAGEMENT	(WM-5)	
CONTAMINATED SOIL MANAGEMENT	(WM-7)	
CONCRETE WASTE MANAGEMENT CONCRETE WASHOUT	(WM-8)	
SANITARY/ SEPTIC WASTE MANAGEMENT	(WM-9)	

* CASQA- CALIFORNIA STORM WATER QUALITY ASSOCIATION

LEGAL DESCRIPTION:

LOTS 1-6 & A OF TRACT-5-04 IN THE CITY OF OCEANSIDE, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 15726, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, OCTOBER 29, 2008. PLANNING COMMISSION RESOLUTION NO. 2006-P37 APPROVING TM NO. T-5-04 DATED JUNE 26, 2006. SUBDIVISION GUARANTEE ISSUED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY, ORDER NO. 03687488, DATED AUGUST 25, 2008. 7 LOTS, 2.04 ACRES GROSS.

ASSESSORS PARCEL NUMBERS

159-410-18 THRU 24

OWNER/DEVELOPER:

BFI DEVELOPMENT
5946 PRIESTLY DR. STE. 103
CARLSBAD, CA 92008

"DECLARATION OF ENGINEER OF WORK"

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF OCEANSIDE IS A REVIEW FOR THIS LIMITED PURPOSE OF ENSURING THE PLANS COMPLY WITH CITY PROCEDURES AND OTHER APPLICABLE POLICIES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS.

AS ENGINEER OF WORK, I AGREE TO INDEMNIFY AND SAVE THE CITY OF OCEANSIDE, ITS OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF WORK, MY EMPLOYEES, AGENTS OR CONSULTANTS.

Ronald L. Holloway 9-23-16
RONALD L. HOLLOWAY RCE 29271 EXP. 3-31-17 DATE



T-5-04 D-20-04 WDID NO. 937C377530

APPROVED CHANGES		
NO.	DESCRIPTION	APP'VD DATE

SHEET 1	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	2 SHEETS
EROSION CONTROL PLAN FOR: 2137 WILLOWBROOK DRIVE		
APPROVED MARTY ESLAMBOLCHI R.C.E. 5525 ACTING CITY ENGINEER		
ENGINEER OF WORK RONALD L. HOLLOWAY R.C.E. 29271	Checked By: <i>Ronald L. Holloway</i>	PLAN NUMBER ER015-00032
RECORD FROM: CITY OF OCEANSIDE BENCHMARK	Approval Date: _____	
ELEVATION: _____	DATUM: _____	

DESIGNED BY: MS DRAWN BY: CH CHECKED BY: _____

bha, Inc.
land planning, civil engineering, surveying
5115 AVENIDA ENCINAS
SUITE "L"
CARLSBAD, CA. 92008-4387
(760) 931-8700

UNDERGROUND SERVICE ALERT

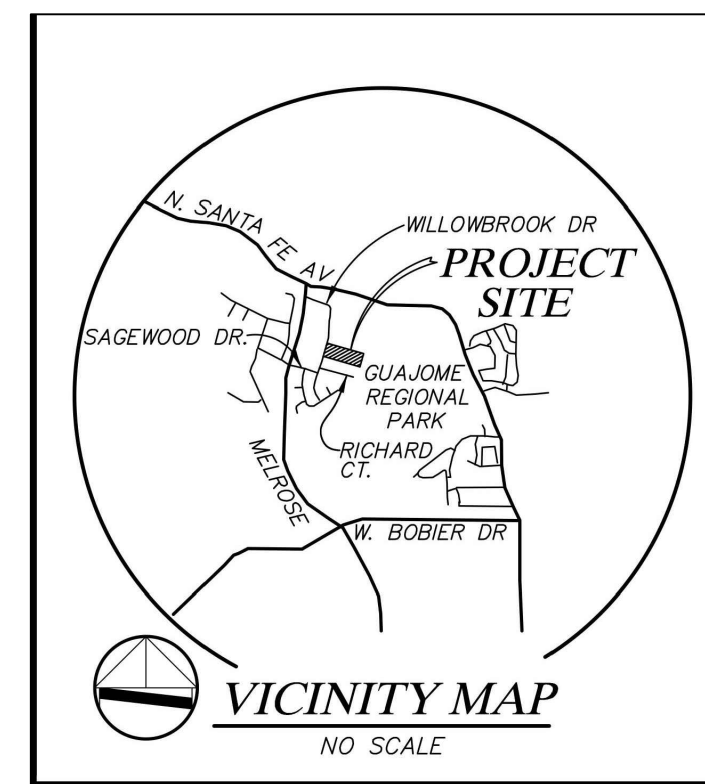
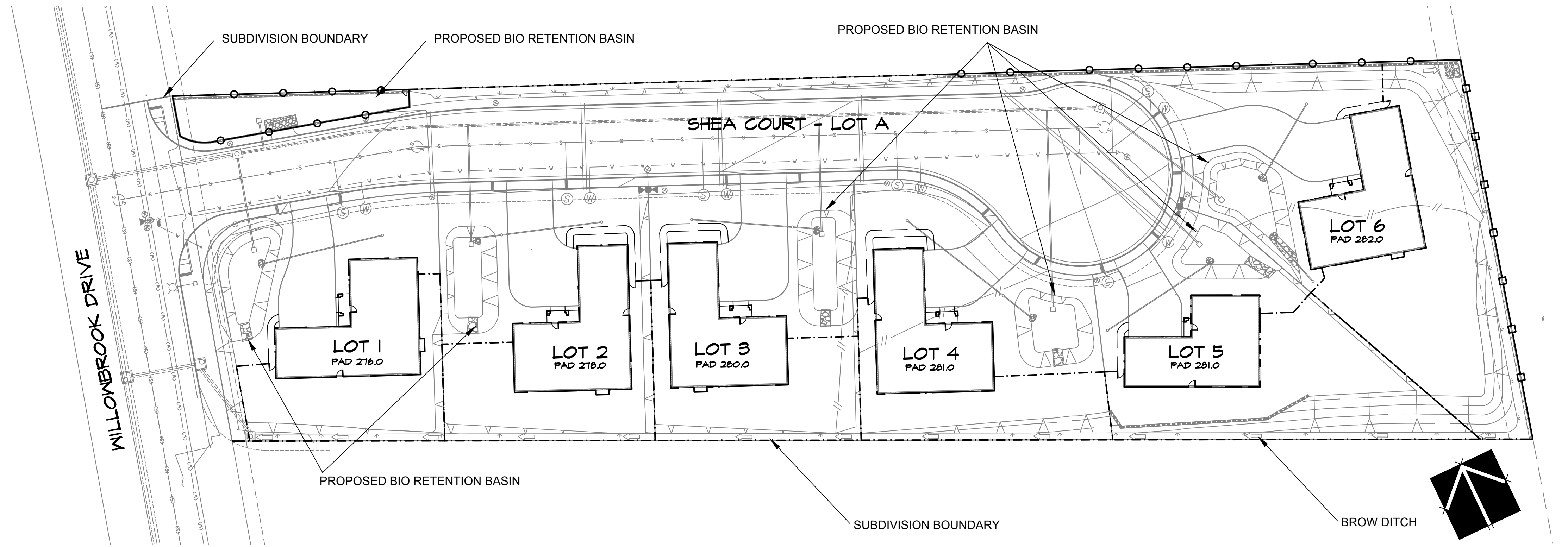
SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID FOR YOUR DIG ALERT I.D. NUMBER. CALL UNDERGROUND SERVICE ALERT TOLL FREE: 1 (800) 227-2600 TWO (2) WORKING DAYS BEFORE YOU DIG.



LANDSCAPE ARCHITECTURAL CONSTRUCTION DRAWINGS FOR 2137 WILLOWBROOK DRIVE Oceanside, California

CITY OF OCEANSIDE GENERAL NOTES

- ALL CONSTRUCTION AND INSTALLATION OF LANDSCAPE ITEMS ARE SUBJECT TO THE CITY OF OCEANSIDE GUIDELINES AND SPECIFICATIONS FOR LANDSCAPE DEVELOPMENT (1985, ADDENDA 1997) AND THE MOST CURRENT CITY OF OCEANSIDE APPROVED STREET TREE LIST.
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR INSTALLATION PRIOR TO BEGINNING WORK. THIS INCLUDES ALL BUILDING AND PLUMBING PERMITS PRIOR TO COMMENCING WALL CONSTRUCTION AND IRRIGATION INSTALLATION, RESPECTIVELY.
- THE CONTRACTOR IS RESPONSIBLE FOR KNOWING ALL SITE CONDITIONS AND ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES, AND SHALL TAKE SOLE RESPONSIBILITY FOR REPLACEMENT COSTS INCURRED DUE TO DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL CALL FOR ALL UNDERGROUND UTILITIES TO BE MARKED OUT IN FIELD PRIOR TO EXCAVATION. BEFORE EXCAVATION, VERIFY THE LOCATION OF UNDERGROUND UTILITIES. CALL DIG ALERT (UNDERGROUND SERVICE ALERT) 1(800)422-4133 OR 1(800)227-2600.
- THE LANDSCAPE OR IRRIGATION CONTRACTOR IS TO VERIFY EXISTING PSI AT THE JOB SITE PRIOR TO INSTALLING THE LANDSCAPE IRRIGATION SYSTEM. VERIFICATION SHALL BE MADE WITH THE CITY OF OCEANSIDE WATER UTILITIES DEPARTMENT (760-435-5800). DISCREPANCIES BETWEEN THE DESIGN PRESSURES SHOWN ON THE PLAN AND THE EXISTING STATIC PRESSURE SHALL BE REPORTED TO THE PROJECT LANDSCAPE ARCHITECT (619-718-9660).
- THE CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION WHEN IT IS OBVIOUS THAT DISCREPANCIES EXIST BETWEEN THIS PLAN AND ACTUAL SITE CONDITIONS, AND ASSUMES RESPONSIBILITY THAT ANY DISCREPANCIES ARE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BEAR THE COST OF NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION, AND NO CHANGE IN CONTRACT PRICE WILL BE ALLOWED FOR ACTUAL OR CLAIMED DISCREPANCY BETWEEN EXISTING CONDITIONS AND THOSE SHOWN ON PLAN.
- THE CONTRACTOR MUST NOTIFY THE CITY PUBLIC WORKS INSPECTOR (760-435-5098 OR 760-435-5081) 48 HOURS (TWO WORKING DAYS) PRIOR TO STARTING CONSTRUCTION, WITH THIN THE 48 HOURS (2 WORKING DAYS) NOTICE, PRIOR TO BEGINNING LANDSCAPE CONSTRUCTION, THE JOB SUPERINTENDENT, LANDSCAPE CONTRACTOR, LANDSCAPE ARCHITECT OF WORK, AND THE CITY PUBLIC WORKS INSPECTOR SHALL MEET FOR A PRE-CONSTRUCTION SITE MEETING. ANY WORK NOT MEETING THE APPROVAL OF THE OWNER, OWNER'S REPRESENTATIVE OR THE APPROVED LANDSCAPE PLAN SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- ALL PROPERTY AND LOT LINES SHALL BE VERIFIED AND MARKED IN AN OBVIOUS MANNER PRIOR TO CONSTRUCTION.
- A SOILS REPORT SHALL BE PREPARED BY PLANT AND SOILS LAB IN ANAHEIM, CA. SOILS TESTING FOR AGRICULTURAL SUITABILITY SHALL BE ACCOMPLISHED AT THE CONCLUSION OF ROUGH GRADING AND SUBMITTED TO THE PUBLIC WORKS LANDSCAPE INSPECTOR PRIOR TO SOIL PREPARATION. CONTACT THE LANDSCAPE ARCHITECT (619-718-9660) FOR A COPY OF THE SOILS ANALYSIS, PRIOR TO BEGINNING WORK.
- ALL REDUCED PRESSURE BACK-FLOW PREVENTER AND PRESSURE VACUUM BREAKER ASSEMBLIES SHALL BE TESTED BY A CITY APPROVED CERTIFIED TESTER AFTER INSTALLATION, RELOCATION OR REPAIRS. NOTIFY THE OCEANSIDE WATER UTILITIES DEPARTMENT FOR A CURRENT LIST (760-435-5800). THE ORIGINAL BACK-FLOW CERTIFICATION SHALL BE SUBMITTED TO THE WATER UTILITIES DEPARTMENT. THE DEVELOPER/OWNER IS RESPONSIBLE FOR SUPPLYING A COPY OF THE TEST RESULTS TO THE CITY PUBLIC WORKS LANDSCAPE INSPECTOR.
- APPROVED LANDSCAPE PLANS AND SPECIFICATIONS, AND THE CITY OF OCEANSIDE GUIDELINES AND SPECIFICATIONS FOR LANDSCAPE DEVELOPMENT (1985, ADDENDA 1997) SHALL BE AT THE JOB SITE LOCATION AT ALL TIMES.
- THE CONTRACTOR OR DEVELOPER IS REQUIRED TO FULLY MAINTAIN ALL LANDSCAPING FOR 1 (ONE) YEAR PRIOR TO CITY ACCEPTANCE OF ALL IMPROVEMENTS. THE 1 (ONE) YEAR MAINTENANCE PERIOD SHALL BEGIN WHEN THE 'AS-BUILT' PLANS HAVE BEEN COMPLETED AND APPROVED BY THE CITY ENGINEER.
- TURFED AREAS SHALL HAVE A MAXIMUM DESIGN SLOPE OF 4:1 AND GROUND COVER 2:1.
- ALL GRAFFITI SHALL BE REMOVED WITHIN 24 HOURS OF OCCURRENCE.
- WALL LOCATIONS ARE SHOWN FOR GENERAL PLACEMENT ONLY. REFER TO PRECISE GRADING PLAN FOR FINAL LOCATION OF ALL TOPS OF SLOPE, TOES OF SLOPE, PROPERTY LINES AND EASEMENTS. (FINAL LOCATION OF WALLS AND FENCES SHALL BE APPROVED IN WRITING BY THE PROJECT LANDSCAPE ARCHITECT AND CIVIL ENGINEER PRIOR TO INSTALLATION.) NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE PLAN AND ACTUAL SITE CONDITIONS PRIOR TO COMMENCING WORK.
- FOR DETAILS NOT REFERENCED OR SHOWN ON THESE PLANS, PLEASE REFER TO MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION.
- THE LANDSCAPE ARCHITECT IS AWARE OF THE CITY OF OCEANSIDE POLICY WHICH PROHIBITS TREES AND PERMANENT STRUCTURES IN UTILITY EASEMENTS AND HAS DESIGNED THE PROJECT LANDSCAPE PLANS IN ACCORDANCE WITH WITH THIS REQUIREMENT, BASED ON THE EASEMENT INFORMATION I HAVE RECEIVED FROM THE PROJECT ENGINEER OF WORK. I HAVE VERIFIED THAT THESE PLANS MEET THE REQUIREMENTS OF SAID POLICY.
- THE PROJECT CONTRACTOR SHALL BE AWARE OF THE CITY OF OCEANSIDE POLICY WHICH PROHIBITS TREES AND STRUCTURES IN UTILITY EASEMENTS AND SHALL INSTALL THE PROJECT IN ACCORDANCE WITH THIS REQUIREMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EASEMENTS, PROPERLY MARK OR STAKE ALL EASEMENTS AND VERIFY THE SCOPE OF WORK WITHIN THE EASEMENTS PRIOR TO INSTALLING IMPROVEMENTS WITHIN ANY EASEMENT.
- LANDSCAPE CONTRACTOR SHALL PROVIDE CONTROLLER AND/OR FLOW SENSOR CERTIFICATION PRIOR TO TERMINATION OF CONTRACTOR'S MAINTENANCE PERIOD.



GUARANTEE FOR CONTRACTUAL LANDSCAPE SERVICES

I have contracted with the Landscape Architect of record to perform field observations and construction inspections to assure that the project will be constructed in accordance with the approved landscape plans, and all applicable City requirements and standard construction practices.

Developer/Owner _____ Date _____

DECLARATION OF RESPONSIBLE CHARGE

I hereby declare that I am the Landscape Architect of work for this project, that I have exercised responsible charges over the design of this project as defined in section 6703 of the Business and Professions Code and the design is consistent with current standards. I understand that the check of project drawings and specifications by the City of Oceanside and the County of San Diego Department of Environmental Health is confined to a review only and does not relieve me, as the Landscape Architect of Work, of my responsibilities for project design. As the Landscape Architect of Work I indemnify the City of Oceanside, it's officer's, agents and employees to be held harmless from any and all liability, claims, negligent acts, errors or omissions of the Landscape Architect of Work, my employees, agents or consultants.

JULIE HOWARD _____ RLA 2681

LANDSCAPE PLANS AS-BUILT CERTIFICATION

I hereby certify that all landscaping and irrigation have been constructed under the observation of a qualified Landscape Architect and in accordance with recommendations and specification set forth in the project agricultural report, the City Water Conservation Ordinance, the City Of Oceanside Guidelines & Specifications for Landscape Development, & any other applicable ordinances & requirements. I hereby certify that these landscape plans reflect an accurate & correct representation of the As-Built conditions.

HOLD HARMLESS AND INDEMNIFICATION CLAUSE

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS & PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS & THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY & HOLD THE LANDSCAPE ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER, THE CITY/COUNTY OF LOCAL JURISDICTION, OR THE LANDSCAPE ARCHITECT.

ALL DRAWINGS AND MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL & UNPUBLISHED WORK OF THE LANDSCAPE ARCHITECT & THE SAME MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF HOWARD ASSOCIATES, INC. ALL RIGHTS RESERVED BY HOWARD ASSOCIATES, INC.

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APPROVED CHANGES			
NO.	DESCRIPTION	APP'VD	DATE

BENCH MARK # D-23

DESCRIPTION: FD, CHISELED TOP OF CURB, N.P.C. NORTHEAST CURB RETURN OCEANSIDE BLVD. & PEACOCK.

LOCATION: _____

RECORD FROM: CITY OF OCEANSIDE LEVEL BOOK 65 PAGE 21

ELEVATION: 338.175 DATUM: NGVD 29

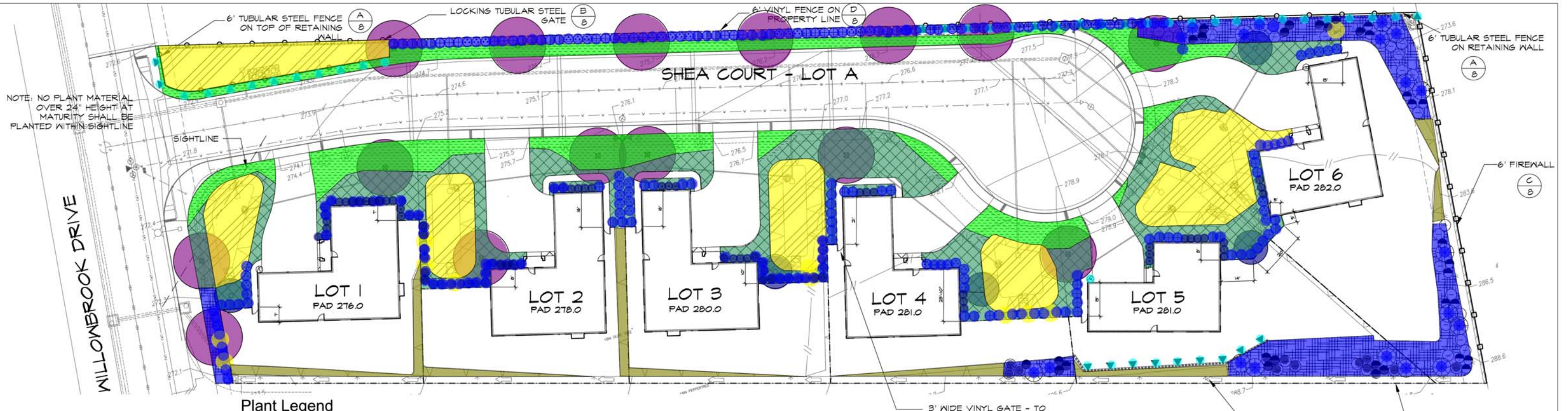
SHEET 1	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	9 SHEETS
TITLE SHEET FOR: 2137 WILLOWBROOK DRIVE		
APPROVED BY: MARTY ESLAMBOLGHI R.C.E. 55525 ACTING CITY ENGINEER		
LANDSCAPE ARCHITECT OF WORK JULIE HOWARD R.L.A. 2681	Checked By: Approval Date:	PLAN NUMBER G15-00032

rla 2681

HOWARD ASSOCIATES

landscape architecture

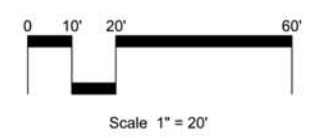
2442 second avenue
san diego ca 92101 619 718 9660



NOTE: NO PLANT MATERIAL OVER 24" HEIGHT AT MATURITY SHALL BE PLANTED WITHIN SIGHTLINE

Plant Legend

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE UNLESS SHOWN OTHERWISE	QTY	WUCOLS
TREES					
○	CERCIS OCCIDENTALIS	WESTERN REDBUD	15 GAL	5	L
●	GEIJERA PARVIFLORA	AUSTRALIAN WILLOW	15 GAL	2	L
⊠	PLATANUS MEXICANA 'ALAMO'	MEXICAN SYCAMORE	24 GAL	15	M
SHRUBS					
⊙	BOUGAINVILLEA ROSENKA	ROSENKA BOUGAINVILLEA	1 GAL	15	L
⊖	CEANOTHUS 'CONCHA'	CALIFORNIA MOUNTAIN LILAC	1 GAL	36	L
⊗	HETEROMELES ARBUTIFOLIA	TOYON	5 GAL	20	L
⊕	MYRTUS COMMUNIS	MYRTLE	5 GAL	67	L
⊙	PRUNUS 'BRIGHT AND TIGHT'	BRIGHT AND TIGHT CAROLINA LAUREL	5 GAL	14	L
⊙	PYRACANTHA 'RED ELF'	RED ELF PYRACANTHA	1 GAL	16	L
⊖	RHAPHIOLEPIS INDICA 'BALLERINA'	BALLERINA INDIA HAWTHORN	1 GAL	10	L
⊕	RHAPHIOLEPIS INDICA 'CLARA'	CLARA INDIA HAWTHORN	5 GAL	71	L
●	SALVIA CLEVELANDII 'WINNIFRED GILMAN'	WINNIFRED GILMAN CLEVELAND SAGE	1 GAL	33	L
⊕	TEGOMA STANS	YELLOW BELLS	5 GAL	77	L
VINES					
▲	MACFADYNEA UNSUIS-CATI	CAT'S CLAW	1 GAL	45	L
▲	BOUGAINVILLEA 'SAN DIEGO RED'	SAN DIEGO RED BOUGAINVILLEA	5 GAL	11	L
GROUND COVERS					
▨	CAREX PANSA	CALIFORNIA MEADOW SEDGE	PLUGS @ 12" O.C.		M
▨	LANTANA MONTEVIDENSIS	PURPLE TRAILING LANTANA	FLATS @ 12" O.C.		L
▨	MYOPORUM PARVIFOLIUM	PROSTRATE MYOPORUM	FLATS @ 12" O.C.		L
▨	ROSEMARINUS 'PROSTRATUS'	PROSTRATE ROSEMARY	FLATS @ 12" O.C.		L



FENCE LEGEND	DETAIL	
—○—	6' TUBULAR STEEL FENCE WITH LOCKING TUBULAR STEEL GATE	A/B
—□—	6' VINYL FENCE WITH 3' WIDE VINYL GATE	D/B
—■—	6' FIREWALL	C/B

NOTE:
SEE SHEET 7 FOR PLANTING NOTES AND DETAILS.
SEE SHEET 8 FOR CONSTRUCTION DETAILS.



APPROVED CHANGES		SHEET	CITY OF OCEANSIDE	9
NO.	DESCRIPTION	APP'VD	ENGINEERING DEPARTMENT	SHEETS
PLANTING PLAN AND LEGEND FOR:				
2137 WILLOWBROOK DRIVE				
BENCH MARK # D-23				
DESCRIPTION: <u>FD, CHISELED TOP OF CURB, N.P.C. NORTHEAST,</u>				
<u>CURB RETURN OCEANSIDE BLVD. & PEACOCK.</u>				
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ELEVATION: <u>338.175</u> DATUM: <u>NGVD 29</u>				
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ria 2681
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