

CITY OF ALBUQUERQUE

Hydrology Section Planning Department
David S. Campbell, Director



Timothy M. Keller, Mayor

July 10, 2018

Yolanda Padilla-Moyer, PE
Bohannon-Huston
7500 Jefferson St NE Courtyard I
Albuquerque, NM 87109

**Re: Del Webb @ Mirehaven Units 3 & 4
Grading and Drainage Plan
Engineer's Stamp dated: 7/9/2018 (H09D017G)**

Dear Ms. Padilla-Moyer,

Based on the application received 7/9/2018, the above referenced plan is approved for
Preliminary Plat and Amended Site Plan for Subdivision.

Prior to approval of the Grading and Drainage Plan for Grading Permit:

1. An Erosion and Sediment Control Plan must be submitted to Stormwater Quality.

Prior to approval of Work Order the drainage report must be revised to include:

2. The Drainage Report for Units 3 & 4 does not address the effects of this development on downstream capacity. Representatives of the Unit 3 & 4 development stated in meetings that the downstream capacity was demonstrated in other reports, specifically the West I-40 DMP and the 2013 Drainage Master Plan for the Watershed Subdivision. However, the hydrology from the West I-40 Drainage Management Plan, as referenced in the 2013 Drainage Master Plan for the Watershed Subdivision, does not account for either the increased density of this development nor the increased area draining to the Mirehaven Arroyo. Therefore, pursuant to article 14-5-2-12(G) of the Albuquerque Code of Ordinances which states "The City Engineer shall not approve any plan or report pertaining to proposed construction, platting or other development where the proposed activity or change in the land affected would result in downstream capacity being exceeded", neither the Final Plat nor the Work Order can be approved until downstream capacity has been demonstrated in accordance with the standards established in the DPM.
The Drainage Report for Units 3 & 4 must be modified to include corrected basins for the Mirehaven watershed in accordance with the standards established in the

PO Box 1293

Albuquerque

NM 87103

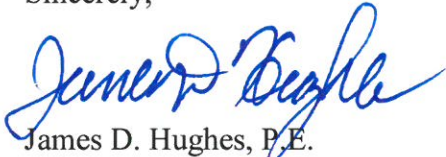
www.cabq.gov

DPM instead of using in the referenced West I-40 DMP, as was done in the 2013 DMP. The basins must be corrected to show the higher density of this development and the increased area draining to the Mirehaven Arroyo. Downstream capacity must be determined based both on existing and fully developed watersheds for the channel and crossing structures of the Mirehaven. AMAFCA indicated in an e-mail on June 2, 2018 that the capacity of the downstream reservoir is not of concern. If additional infrastructure is required it must be added to the infrastructure list.

3. HGL calculations per DPM and profiles showing HGL,
4. A Detail of the pond outlet structure. Hydraulic calculations must be contained in a bound report with an engineer's stamp and signature on it.

Since the initial submittal was received prior to the IDO effective date there will not be any additional fees for the resubmittal. If you have any questions, you can contact me at 924-3986.

Sincerely,



James D. Hughes, P.E.
Principal Engineer, Planning Dept.
Development and Review Services

C: file



DEVELOPMENT REVIEW BOARD SUPPLEMENTAL SUBMITTAL

PROJECT NO. 1006864
Application No. 18DRB-70155,156,157,158,159

TO:

☒ **Kym Dicome, DRB Chair, Planning Department**
☒ **James Hughes, P.E., Hydrology**
☒ **Racquel Michel, P.E., Transportation Development**
☒ **Kris Cadena, P.E., Albuquerque/ Bernalillo Co. WUA**
☒ **Ben McIntosh, Code Enforcement**
☒ **Jason Coffey, Parks/Municipal Development**

NOTE: PDF Required

***(Please attach this sheet with each collated set per board member)**

NEXT HEARING DATE: 7-11-18

NOTE: REQUESTS FOR DEFERRAL OF CASES WILL BE DISCUSSED BY THE BOARD AND THE APPLICANT AND/OR AGENT AT THE BEGINNING OF THE AGENDA. BOTH PARTIES MUST AGREE UPON THE DATE OF DEFERRAL. IF THE APPLICANT/AGENT IS NOT PRESENT, THE ADMINISTRATIVE ASSISTANT MUST RECEIVE A LETTER, PRIOR TO THE HEARING DATE, REQUESTING A SPECIFIC DEFERRAL DATE. THE BOARD WILL DISCUSS AND MAKE A DECISION AT THE HEARING. THE APPLICANT/AGENT WILL THEN BE INFORMED OF THE DEFERRAL DATE AND REASON. IF THE APPLICANT IS NOT PRESENT WHEN THEIR REQUEST IS CALLED, THEN THE REQUEST MAY BE INDEFINITELY DEFERRED ON A NO SHOW.

SUBMITTAL DESCRIPTION: _____

Revised Grading Plan with corrected comments from hydrology.

Directly to Hydrology - New grading plan and response letter to comments provided July 5, 2019

CONTACT NAME: Yolanda Padilla Moyer

TELEPHONE: 505-823-1000 **EMAIL:** ypadilla@bhinc.com



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Del Webb @ MIREHAVEN PHASE 3 & 4 **Building Permit #:** _____ **City Drainage #:** H-9
DRB#: 10006864 **EPC#:** _____ **Work Order#:** _____
Legal Description: Tracts N-2-B-1, N-2-B-2, N-2-C-1
City Address: _____

Engineering Firm: BOHANNAN HUSTON INC **Contact:** Yolanda Moyer
Address: 7500 JEFFERSON ST NE COURTYARD 1 ALBUQUERQUE NM 87109
Phone#: 798-7945 **Fax#:** _____ **E-mail:** ypadilla@bhinc.com

Owner: PULTE **Contact:** KEVIN PATTON
Address: 7601 JEFFERSON STREET NE SUITE 310 ALBUQ. NM 87109
Phone#: 505-341-8591 **Fax#:** _____ **E-mail:** kevin.patton@pultegroup.com

Architect: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Other Contact: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Check all that Apply:

DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

☐ ENGINEER/ ARCHITECT CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☒ DRAINAGE REPORT
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☒ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☒ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR
☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

DATE SUBMITTED: 07-09-18 **By:** YOLANDA PADILLA MOYER, P.E.

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

July 9, 2018

Mr. James D. Hughes, P.E.
Principal Engineer
City of Albuquerque
Planning Department
600 2nd Street NW
Albuquerque, NM 87103

Re: Del Webb at Mirehaven Phase 3&4 Grading and Drainage Plan and Drainage Report
Engineers Stamp Dated: 05/10/2018 (H09D017G)

Dear Mr. Hughes:

Enclosed are responses to the comments provided on June 19, 2018. Responses are listed in red below.

Prior to approval of the Grading and Drainage Plan for Preliminary Plat and Amended Site Plan for Subdivision:

1. Stabilization of the concentrated flow path at the west Boundary between Units 3 & 4 is required, and should be noted in both the Unit 3 & 4 plans. **The cross-section with construction notes are provided on both Unit 3 & Unit 4 plans.** Section F-F should show solid concrete between the lower wall and the street due to the excessive scour potential at the bottom of the wall. **Concrete has been added at the bottom on the wall on either side of the trail** A note should be added at the upstream cutoff wall to "match existing grade". **Note added.** In the plan view, the stabilized area should be shifted south to where the sides are 3' above the invert instead of 2' south and 4' north as the plan currently shows. **This has been corrected to show 3' on both sides** Add a note to the upstream edge of the rundown to "field verify existing grades and position rundown to provide 3' vertical difference between existing invert and edges". **Note has been added.**
2. The APS site was not designed to receive any offsite flows. It was designed and constructed in accordance with the Watershed @ Estrella Site Plan for Subdivision as approved 9/13/2013. Lots 1 thru 16 will have to be graded to drain to the street, unless cross lot drainage easements can be obtained from APS to accommodate the drainage shown on the plan. Revised street drainage capacity calculations and perhaps modified storm drain design will be necessary if the flow to the street is changed. **Lots 1-16 have been revised to drain forward to the roadway.**

Prior to approval of the Grading and Drainage Plan for Grading Permit:

3. An Erosion and Sediment Control Plan must be submitted to Stormwater Quality.

It will be submitted prior to Grading Permit

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

Prior to approval of Work Order the drainage report must be revised to include: **Items below will be address prior to work order approval.**

4. The Drainage Report for Units 3 & 4 does not address the effects of this development on downstream capacity. Representatives of the Unit 3 & 4 development stated in meetings that the downstream capacity was demonstrated in other reports, specifically the West 1-40 DMP and the 2013 Drainage Master Plan for the Watershed Subdivision. However, the hydrology from the West 1-40 Drainage Management Plan, as referenced in the 2013 Drainage Master Plan for the Watershed Subdivision, does not account for either the increased density of this development nor the increased area draining to the Mirehaven Arroyo. Therefore, pursuant to article 14-5-2-12(0) of the Albuquerque Code of Ordinances which states "The City Engineer shall not approve any plan or report pertaining to proposed construction, platting or other development where the proposed activity or change in the land affected would result in downstream capacity being exceeded", neither the Final Plat nor the Work Order can be approved until downstream capacity has been demonstrated in accordance with the standards established in the DPM.
The Drainage Report for Units 3 & 4 must be modified to include corrected basins for the Mirehaven watershed in accordance with the standards established in the DPM instead of using in the referenced West 1-40 DMP, as was done in the 2013 DMP. The basins must be corrected to show the higher density of this development and the increased area draining to the Mirehaven Arroyo. Downstream capacity must be determined based both on existing and fully developed watersheds for the channel and crossing structures of the Mirehaven. AMAFCA indicated in an e-mail on June 2, 2018 that the capacity of the downstream reservoir is not of concern. If additional infrastructure is required it must be added to the infrastructure list.
5. HGL calculations per DPM and profiles showing HGL,
6. A Detail of the pond outlet structure. Hydraulic calculations must be contained in a bound report with an engineer's stamp and signature on it.

A separate copy of the grading plans are enclosed to be replaced in the drainage report.
Please feel free to contact me at 823-1000 with questions or comments.

Sincerely,



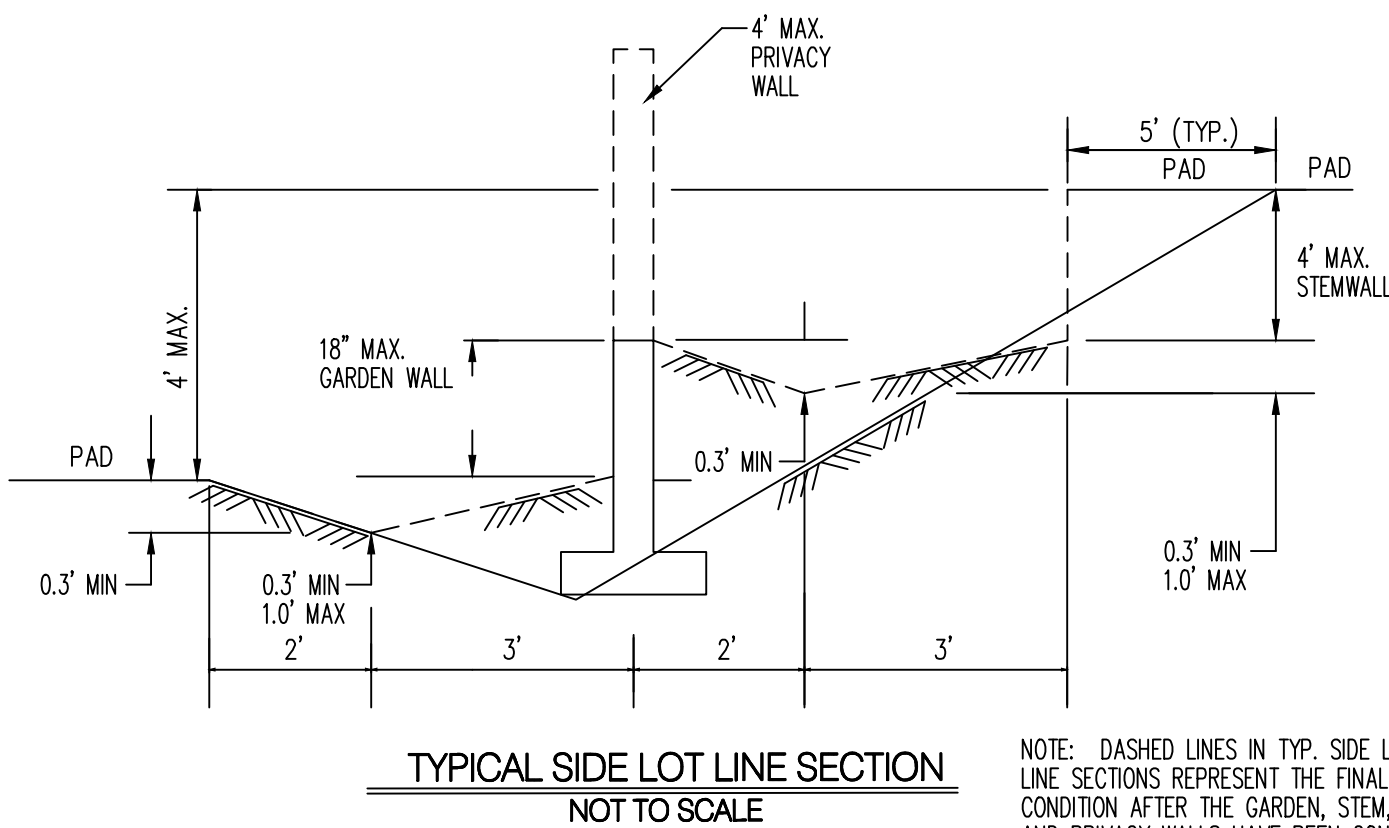
Yolanda Padilla Moyer, P.E.
Senior Project Manager
Community Development and Planning

YPM/cc
Enclosures

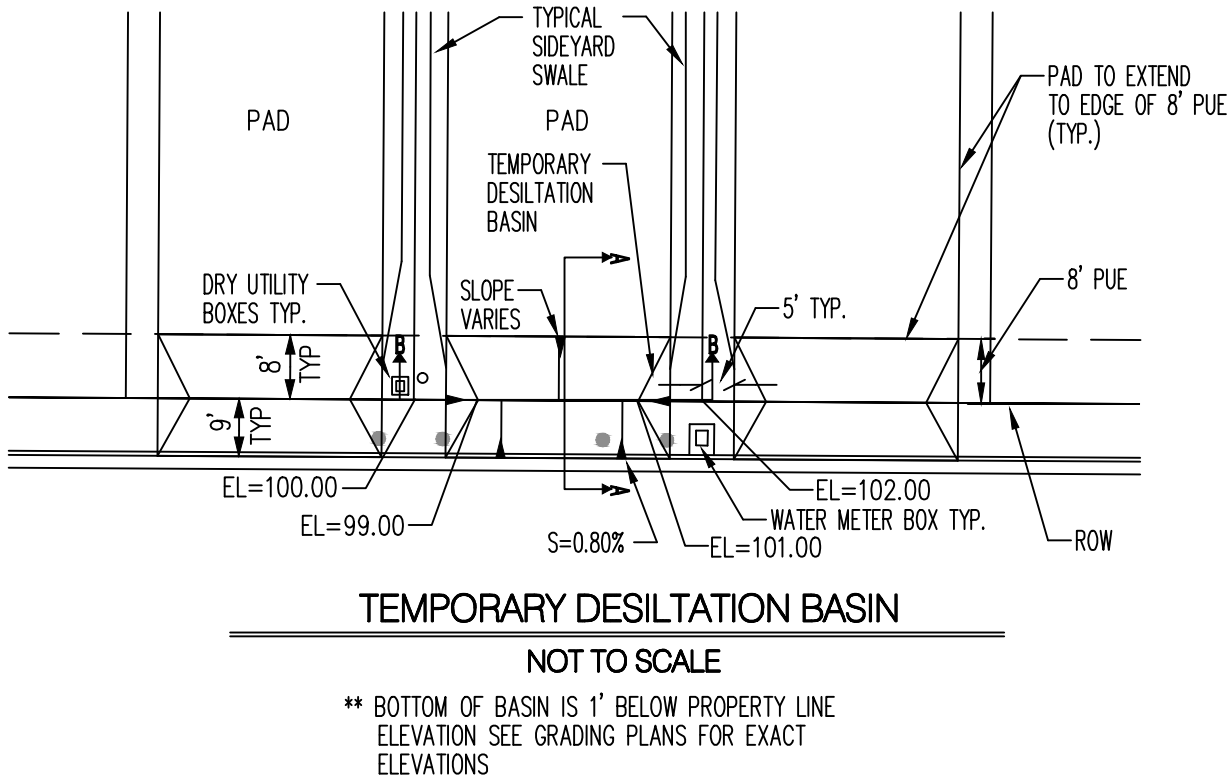
cc: Kevin Patton, Pulte Group w/enclosures



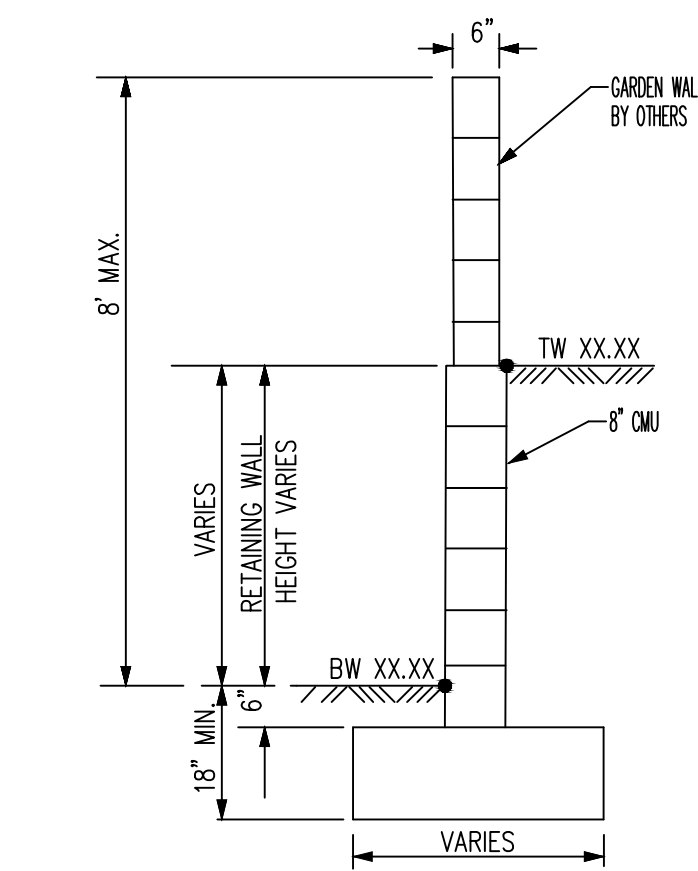
NOTE
ALL SLOPES ON HOA TRACTS TO BE STABILIZED BY NATIVE SEED AND MULCH PER STD SPEC 1012 WITH GRAVEL MULCH OR BETTER.



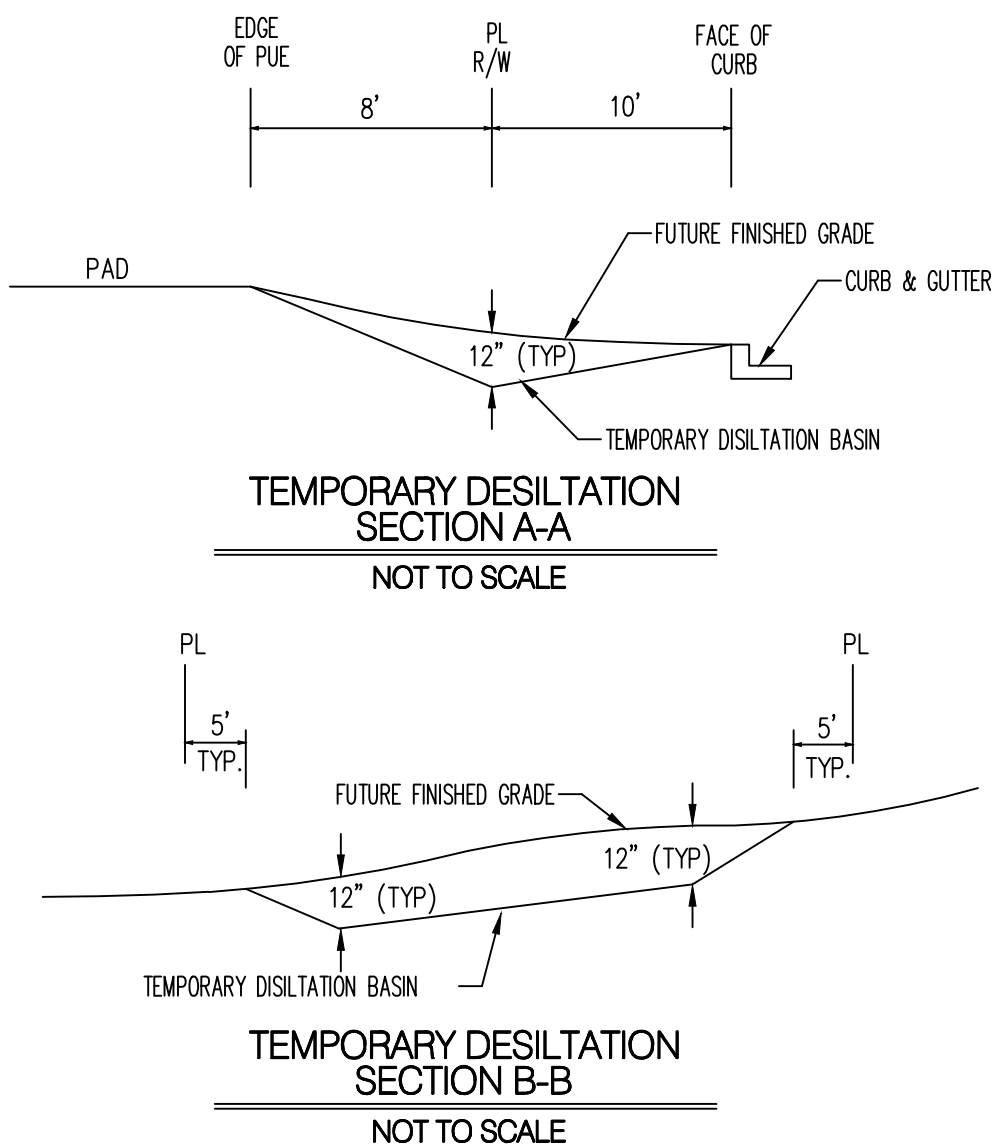
NOTE- DASHED LINES IN TYP. SIDE LOT LINE SECTIONS REPRESENT THE FINAL CONDITION AFTER THE GARDEN, STEM, AND PRIVACY WALLS HAVE BEEN CONSTRUCTED. THE INTERM CONDITION, WHICH IS TO BE CONSTRUCTED BY THE GRADING CONTRACTOR AND CERTIFIED BY THE ENGINEER, IS REPRESENTED BY THE SOLID LINES. RETAINING WALLS WILL BE CONSTRUCTED PRIOR TO GRADING CERTIFICATION.



** BOTTOM OF BASIN IS 1' BELOW PROPERTY LINE ELEVATION SEE GRADING PLANS FOR EXACT ELEVATIONS

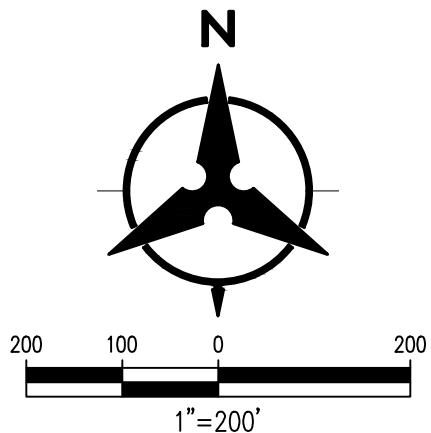


TW=FINISHED GRADE ELEVATION AT TOP OF RETAINING WALL
BW=FINISHED GRADE ELEVATION AT BOTTOM OF RETAINING WALL
**TYPICAL RETAINING WALL NOMENCLATURE
NOT TO SCALE**
(RETAINING HEIGHT IS TAKEN TO BE DIFFERENCE IN FINISHED GRADES ON LEFT AND RIGHT SIDE OF WALL.)
HEIGHT IS IN ACCORDANCE WITH CITY COMPREHENSIVE ZONING CODE, SECTION 14-16-3-19, GENERAL HEIGHT AND DESIGN REGULATIONS FOR WALLS, FENCES, AND RETAINING WALLS.



LEGEND

- PROPOSED SPOT ELEVATION • 5235.25
- EXISTING SPOT ELEVATION • EX 5235.25
- PROPOSED CONTOUR — 5225
- EXISTING STORM DRAIN LINE - - - - -
- PROPOSED STORM DRAIN INLET [Symbol]
- PROPOSED STORM DRAIN LINE [Symbol]
- PROPOSED STORM DRAIN MANHOLE [Symbol]
- PROPOSED WATER BLOCK [Symbol]
- RETAINING WALL [Symbol]
- PAD [Symbol]
- TURNED BLOCK [Symbol]
- STREET SLOPE [Symbol]




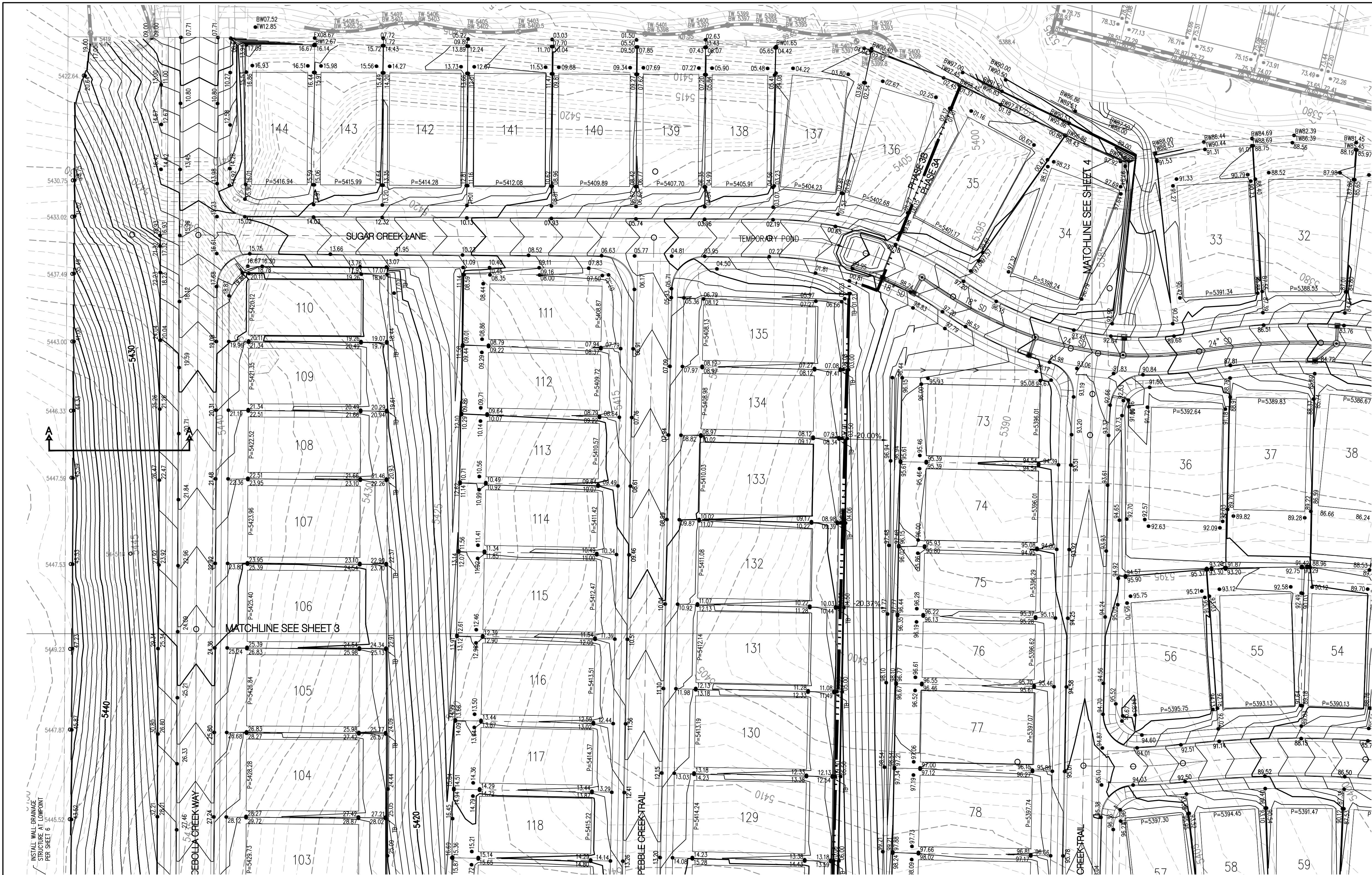
GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.
2. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
5. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.
7. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
8. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.
9. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).
10. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.
11. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
12. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

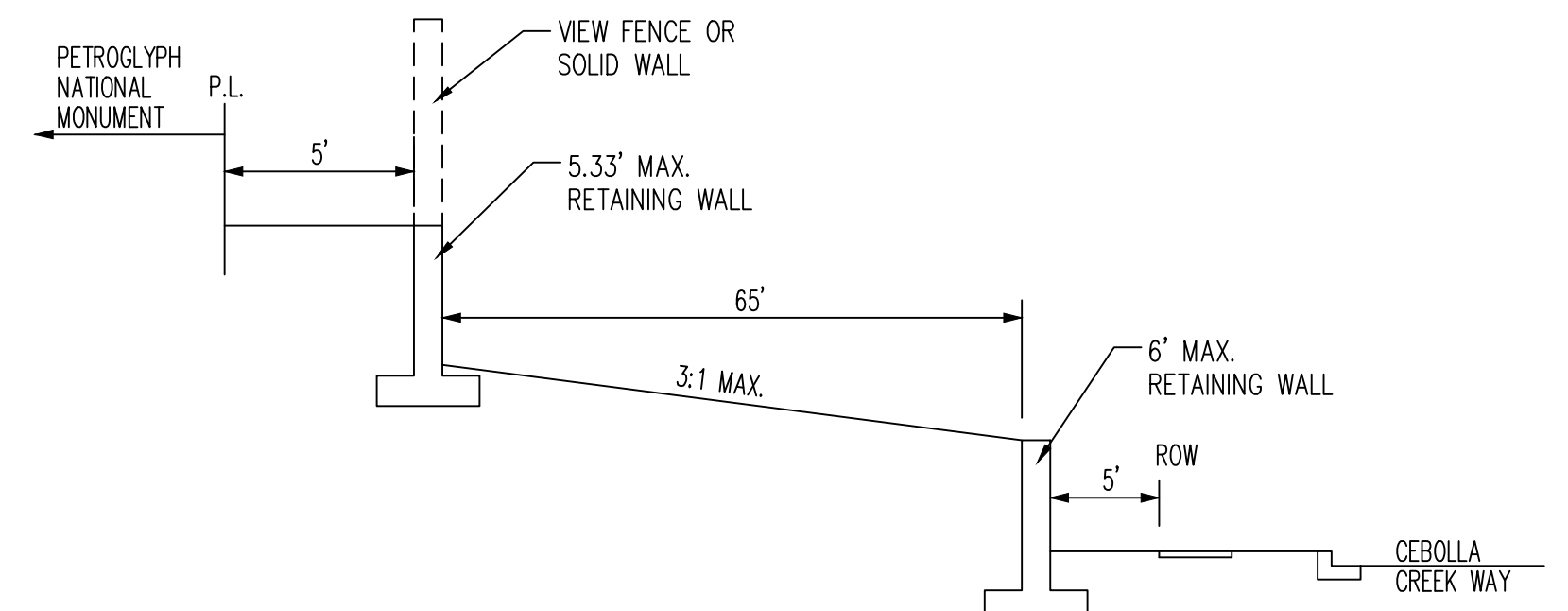
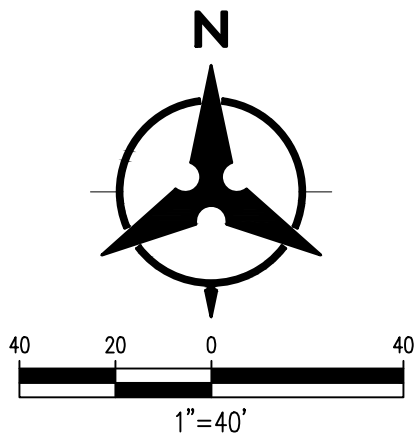
GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
2. CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION, PRIOR TO CONSTRUCTION. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL MEASURES AND REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.
3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SOILS REPORT PREPARED BY XBENVINYARD DATED JULY 22, 2013. ALL OTHER WORK, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS (FIRST PRIORITY), AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).
4. TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (765-1264) FOR LOCATION OF EXISTING UTILITIES.
5. PRIOR TO GRADING, ALL VEGETATION DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE OR STOCK-PILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
6. EARTH SLOPES SHALL NOT EXCEED 4 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
7. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.
8. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.
9. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION AND UNSUITABLE MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERE TO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
10. PAVING AND ROADWAY GRADES SHALL BE +/- 0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATIONS.
11. ALL SPOT ELEVATIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. VALLEY GUTTER ELEVATIONS ARE SHOWN AT FLOWLINE ELEVATION.

		CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
DEL WEBB @ MIREHAVEN PHASE 3 OVERALL GRADING PLAN			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
	LAST DESIGN UPDATE		
CITY PROJECT NO.	ZONE MAP NO. H-8/9	SHEET 1	OF 6



- LEGEND**
- PROPOSED SPOT ELEVATION: • 5235.25
 - EXISTING SPOT ELEVATION: • EX 5235.25
 - PROPOSED CONTOUR: --- 5025 ---
 - EXISTING STORM DRAIN LINE: = = = =
 - PROPOSED STORM DRAIN INLET: □
 - PROPOSED STORM DRAIN LINE: ————
 - PROPOSED STORM DRAIN MANHOLE: ○
 - PROPOSED WATER BLOCK: ~~~~~
 - RETAINING WALL: ————
 - PAD: □
 - TURNED BLOCK: ————
 - STREET SLOPE: XX




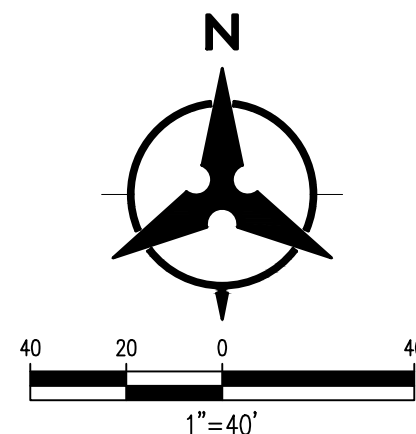
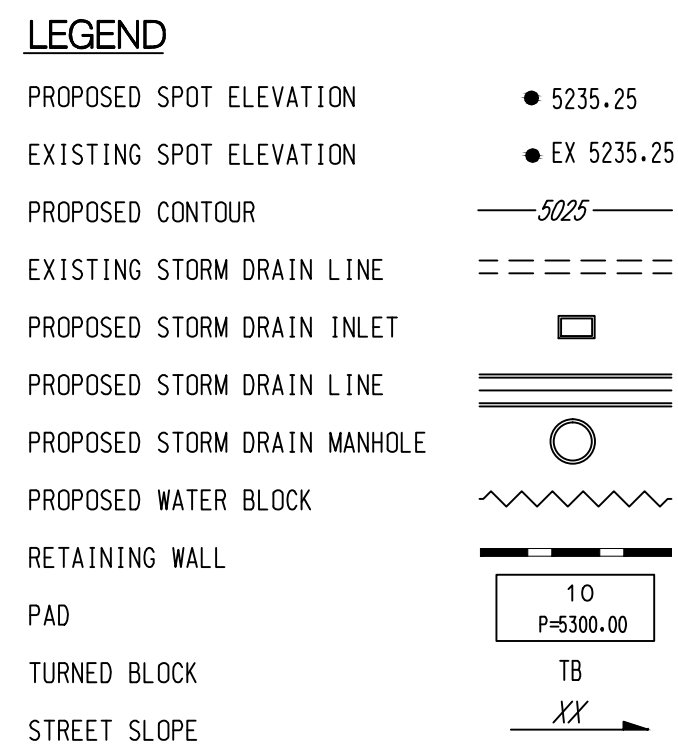
TYPICAL CROSS SECTION A-A
NOT TO SCALE

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BHI JOB NO. 20180338

Bohannon & Huston
www.bhinc.com 800.877.5332

		CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
DEL WEBB @ MIREHAVEN PHASE 3 GRADING PLAN			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
LAST DESIGN UPDATE			
CITY PROJECT NO.	ZONE MAP NO. H-8/9	SHEET 2	OF 6



Bohannon  **Huston**
www.bhinc.com 800.877.5332



DEL WEBB @ MIREHAVEN PHASE 3
GRADING PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.

PROJECT NO.	ZONE MAP NO. H-8/9	SHEET 3	OF 6
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AS-BUILT INFORMATION	
CONTRACTOR	DATE
WORK STARTED BY	DATE
INSPECTOR'S ACCEPTANCE BY	DATE
VERIFICATION BY	DATE
DRAWINGS CORRECTED BY	DATE
MICRO-FILM INFORMATION	
RECORDED BY	DATE
NO.	DATE

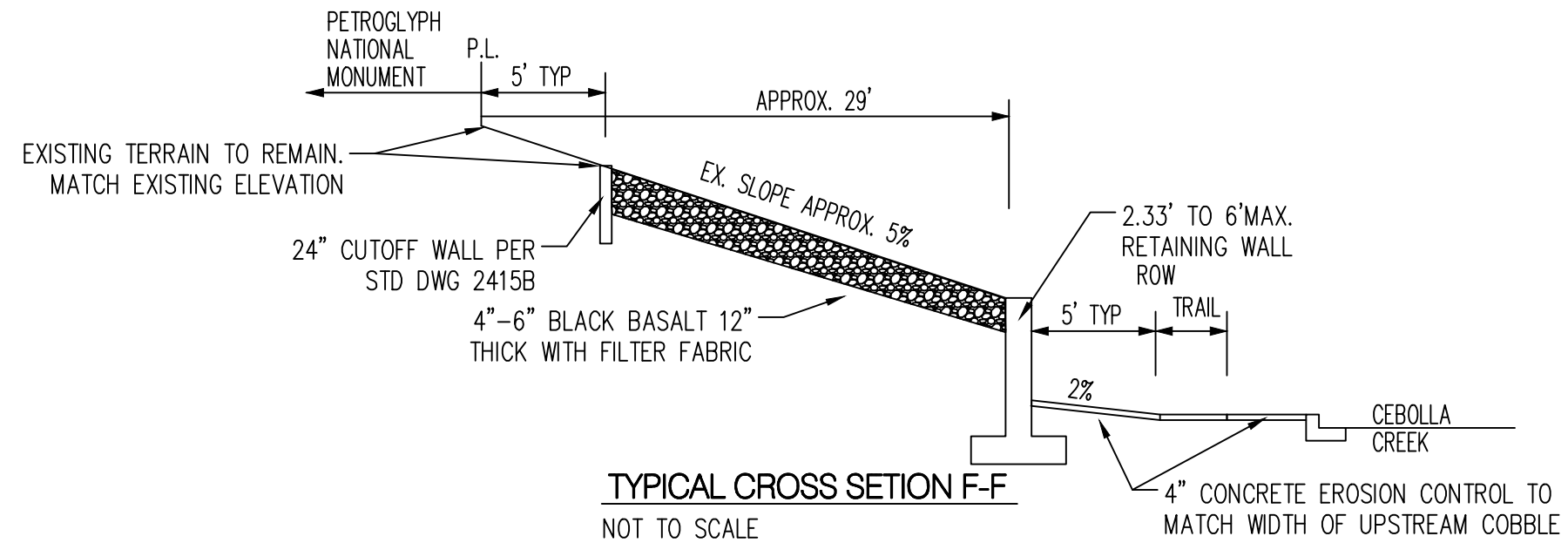
BENCH MARKS	
1	USCGS BRASS DISC STAMPED "REWARD 1969"
2	GEOGRAPHIC POSITION (NAD 83)
3	N.M. STATE PLANE COORDINATES
4	(CENTRAL ZONE)
5	N=1487364.063 E=149130.819
6	GROUND TO GRID = 0.999675005
7	DELTA ALPHA = -0017'12.26"
8	NAVD 1988 ELEVATION = 5319.688

[illegible][illegible]

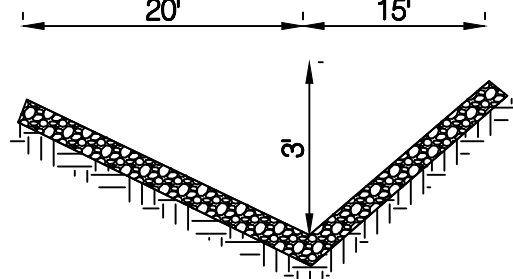
Point Table		
○	TW	BW
1	5438.00*	5433.72
2	5437.00*	5433.71
3	5436.00*	5433.70
4	5437.00*	5433.71
5	5438.00*	5433.72

*EXISTING ELEVATION

*EXISTING ELEVATION



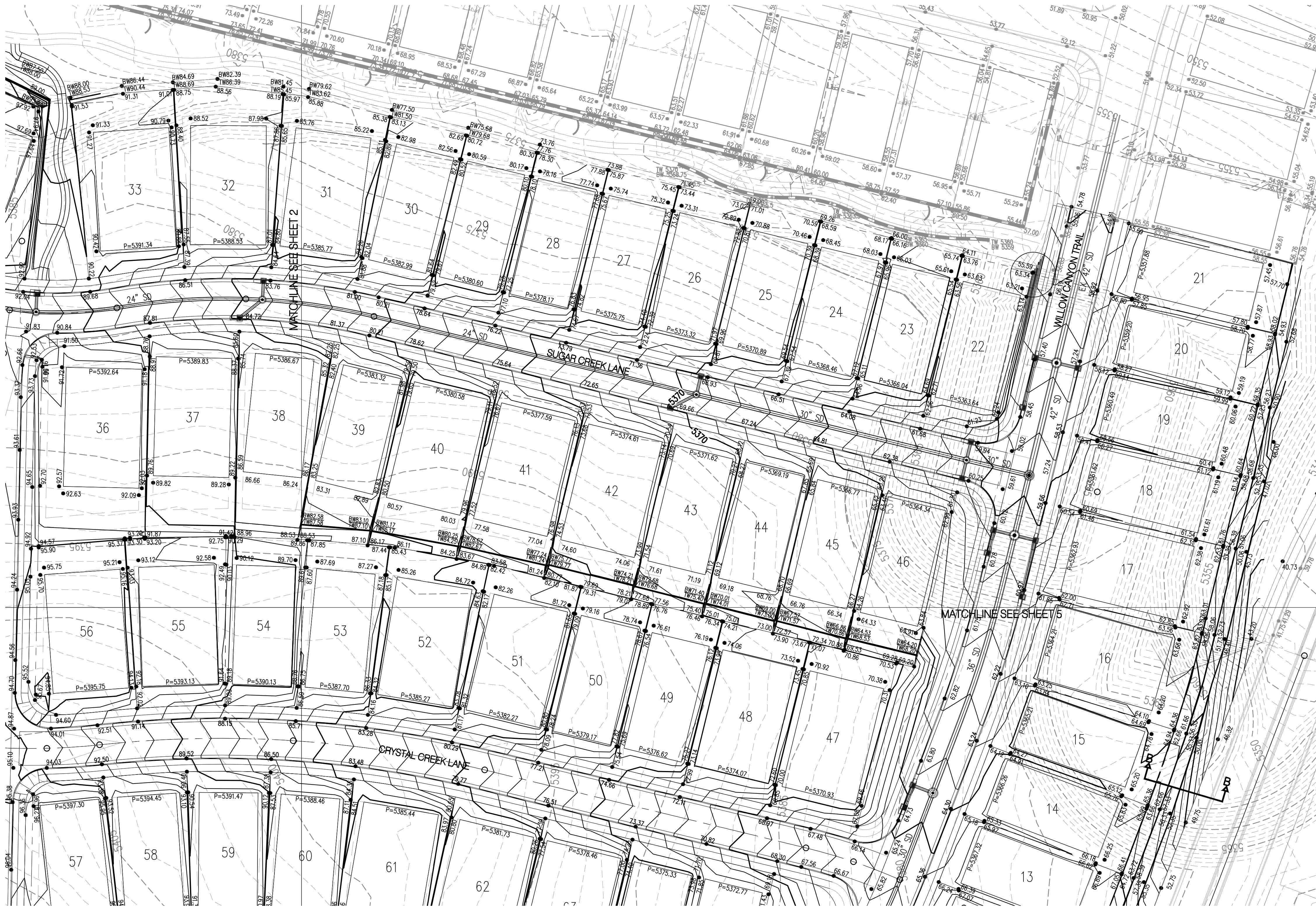
*CONTRACTOR SHALL FIELD
VERIFY TO ENSURE SWALE IS
3' DEEP FROM INVERT TO TOP
OF SWALE ON BOTH SIDES



TYPICAL CROSS SECTION G-G
NOT TO SCALE-SECTION DEPICT EXISTING SWALE

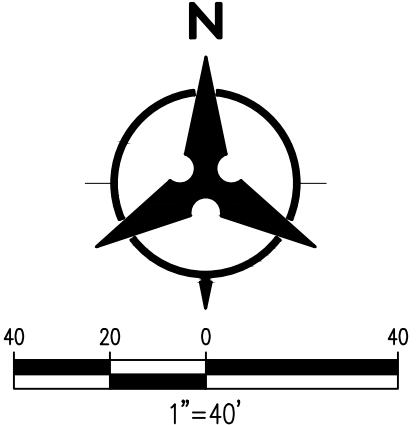
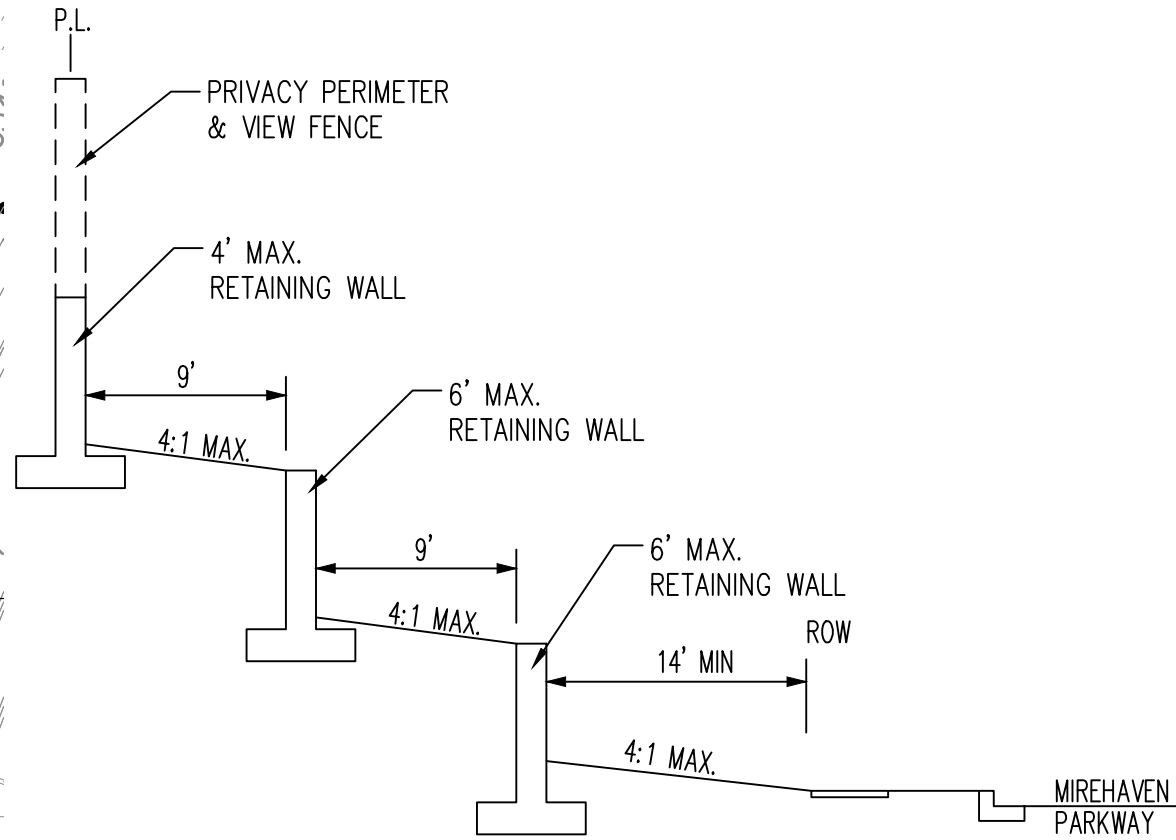
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Mon, 9-Jul-2018 - 10:48:am, Plotted by: AROMERO



LEGEND

PROPOSED SPOT ELEVATION ● 5235.25
EXISTING SPOT ELEVATION ● EX 5235.25
PROPOSED CONTOUR - - - 5025
EXISTING STORM DRAIN LINE - - - - -
PROPOSED STORM DRAIN INLET □
PROPOSED STORM DRAIN LINE ═══════
PROPOSED STORM DRAIN MANHOLE ○
PROPOSED WATER BLOCK ○
RETAINING WALL ┌───┴───┐
PAD P=5300.00
TURNED BLOCK TB
STREET SLOPE XX



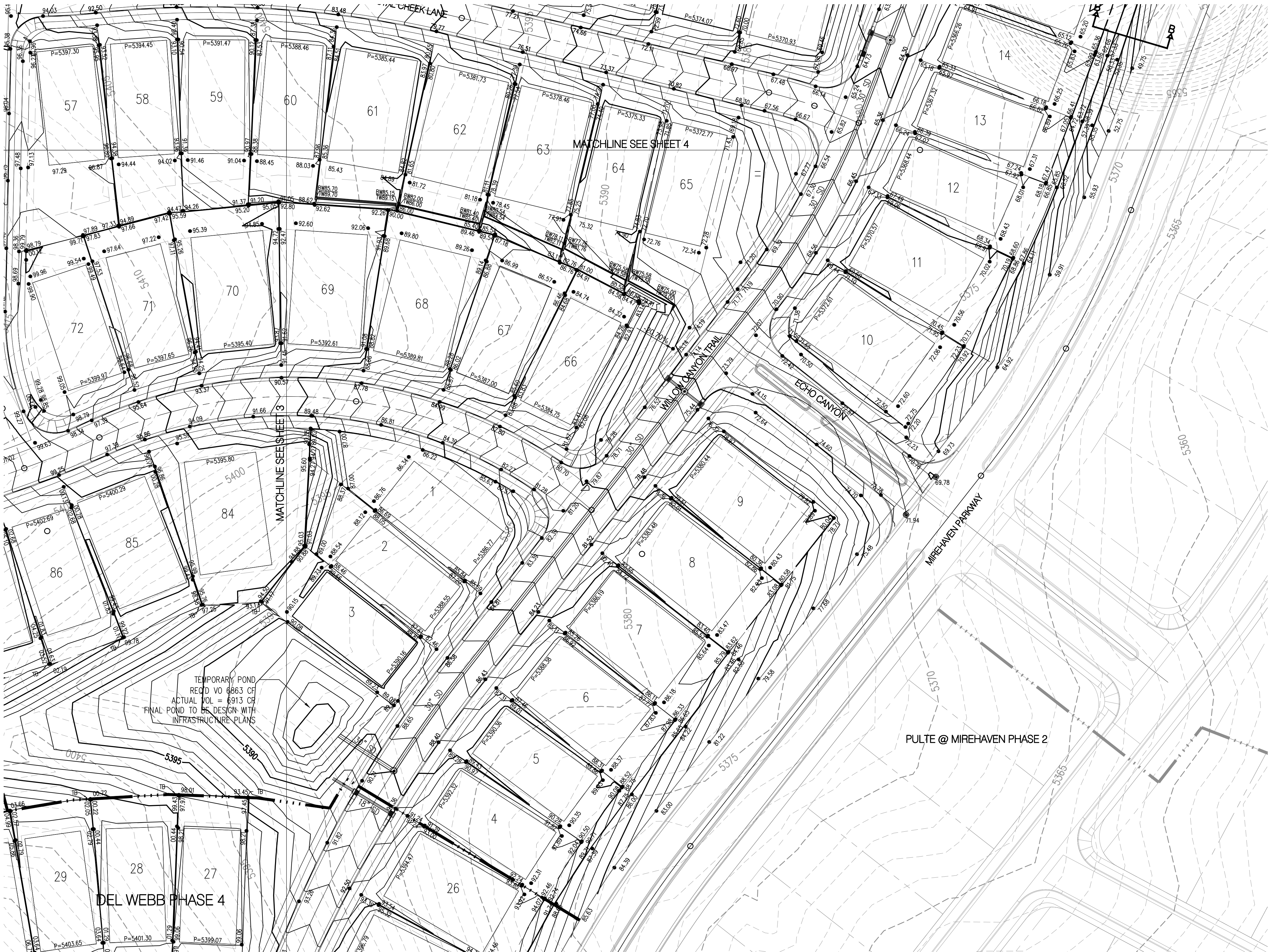
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CITY OF ALBUQUERQUE
DEPARTMENT OF
MUNICIPAL DEVELOPMENT

DEL WEBB @ MIREHAVEN PHASE 3
GRADING PLAN

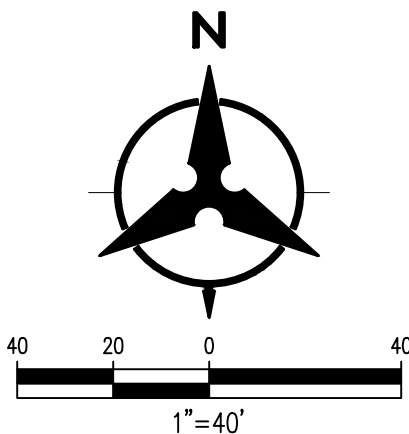
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
	H-8/9	4	6

BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		AS-BUILT INFORMATION	
USC&GS BRASS DISC STAMPED "REWARD 1969"	CONTRACTOR	FIELD NOTES	NO.	BY	DATE	DATE	DATE
GEOGRAPHIC POSITION (NAD 83)							
N.M. STATE PLANE COORDINATES							
(CENTRAL ZONE)							
N=1487364.063 E=149190.819							
GROUND TO GRID = 0.999675005							
DELTA ALPHA = -0071712.26"							
NAVD 1988 ELEVATION = 5319.688							



LEGEND

- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN INLET
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED WATER BLOCK
- RETAINING WALL
- PAD
- TURNED BLOCK
- STREET SLOPE



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CITY OF ALBUQUERQUE
DEPARTMENT OF
MUNICIPAL DEVELOPMENT

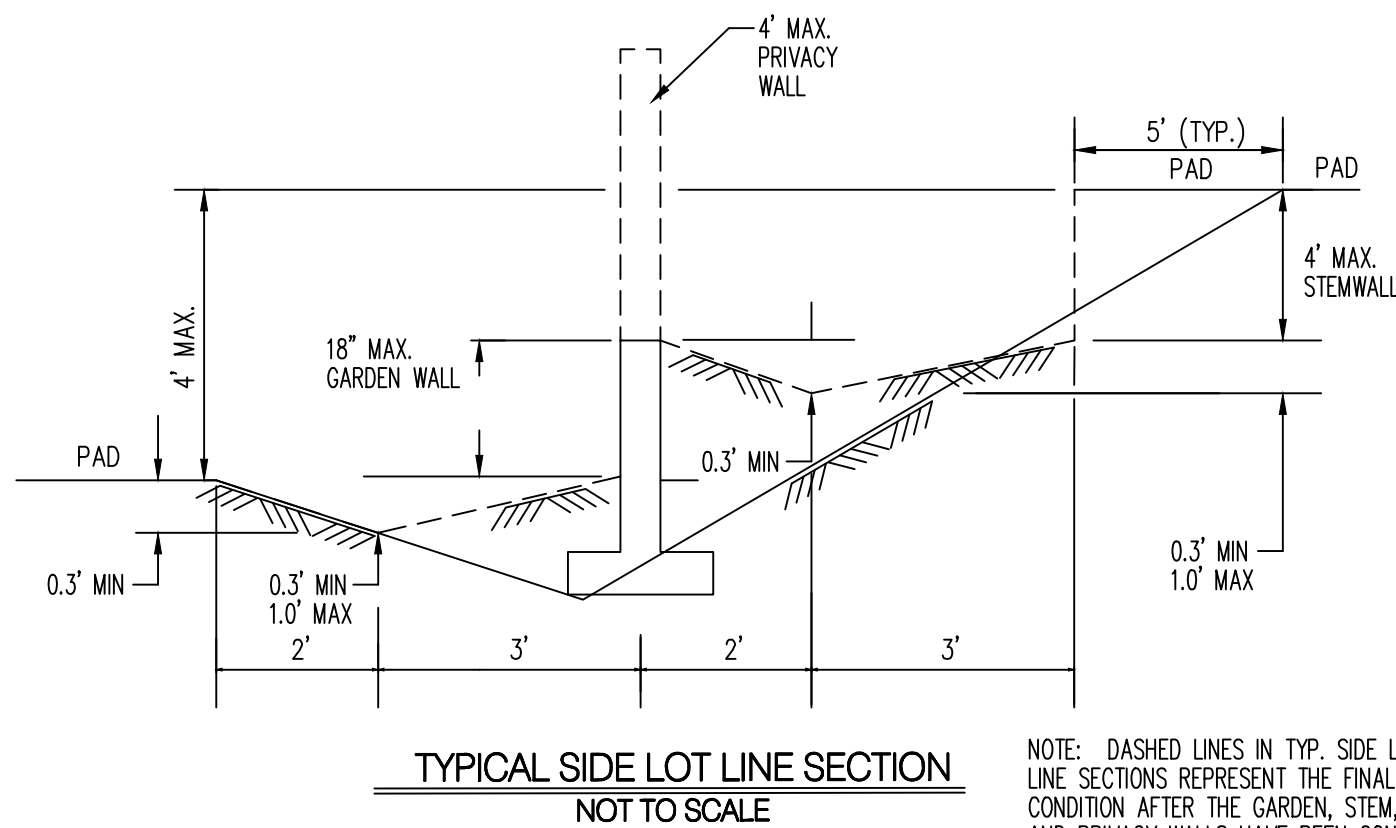
DEL WEBB @ MIREHAVEN PHASE 3
GRADING PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
PROJECT NO.		ZONE MAP NO. H-8/9	SHEET 5	OF 6

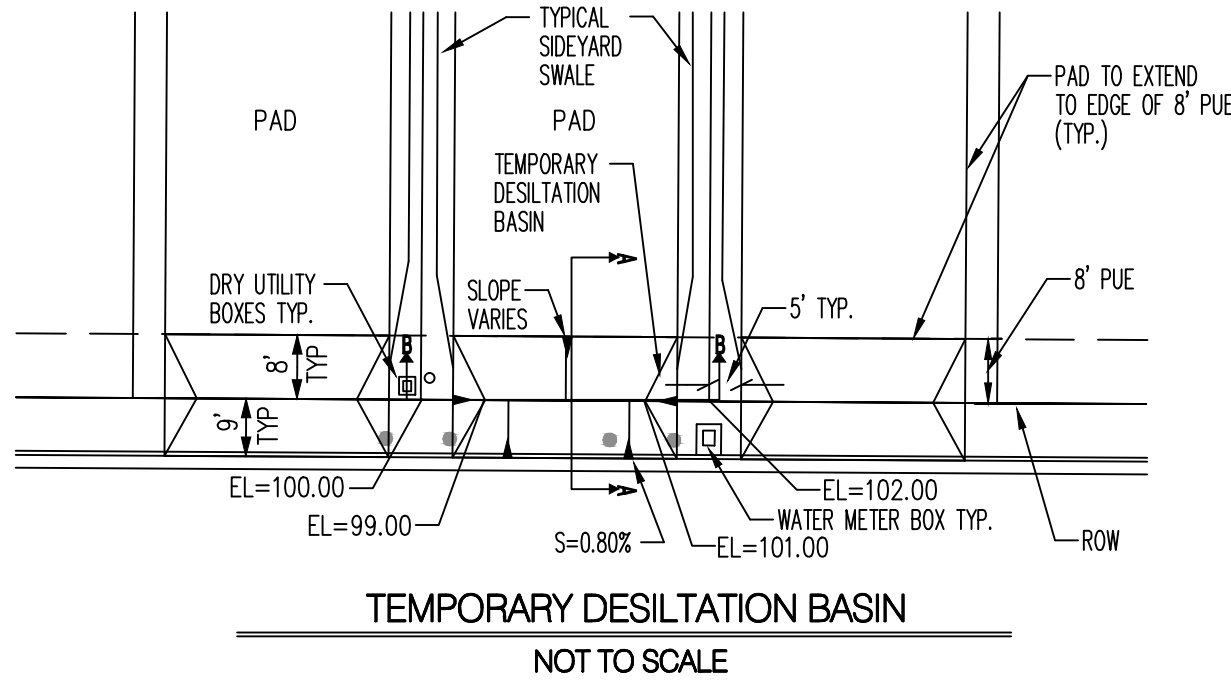
ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
		FIELD NOTES		USC&GS BRASS DISC STAMPED "REWARD 1969"		CONTRACTOR	
		BY		GEOGRAPHIC POSITION (NAD 83)		DATE	
		REMARKS		N.M. STATE PLANE COORDINATES		INSPECTOR'S	
		DESIGN		(CENTRAL ZONE)		DATE	
NO. / DATE		BY		DRAWINGS		DATE	
DESIGNED BY YPM		DATE 04/18		GROUND TO GRID = 0.999675005		MICRO-FILM INFORMATION	
DRAWN BY AR		DATE 04/18		DELTA ALPHA = -0.0712.26"		DATE	
CHECKED BY YPM		DATE 04/18		NAVD 1988 ELEVATION = 5319.688		NO.	



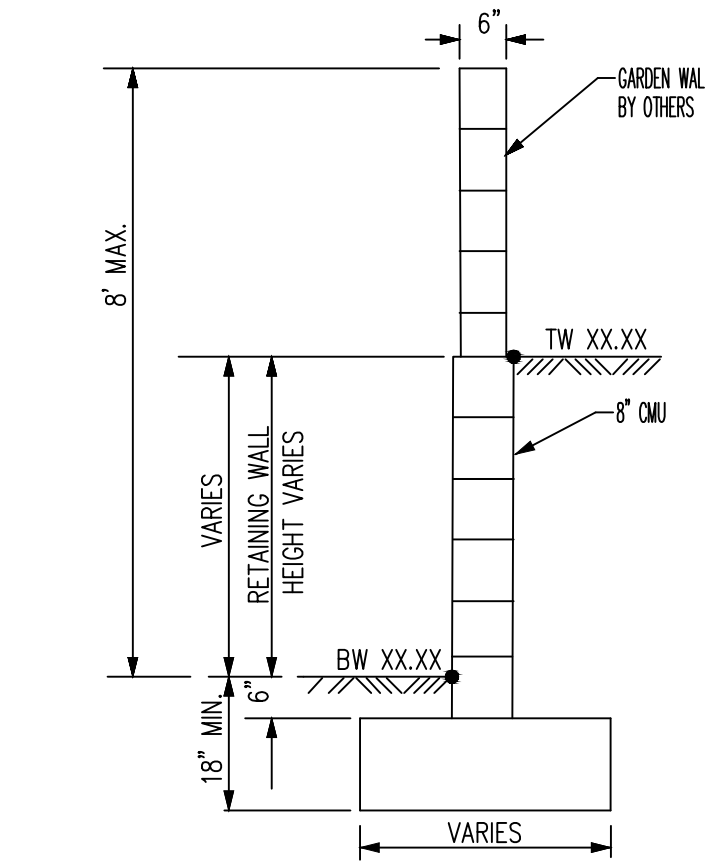
NOTE:
ALL SLOPES ON HOA TRACTS TO BE STABILIZED BY NATIVE SEED AND MULCH PER STD SPEC 1012 WITH GRAVEL MULCH OR BETTER.



NOTE: DASHED LINES IN TYP. SIDE LOT LINE SECTIONS REPRESENT THE FINAL CONDITION AFTER THE GARDEN, STEM, AND PRIVACY WALLS HAVE BEEN CONSTRUCTED. THE INTERM CONDITION, WHICH IS TO BE CONSTRUCTED BY THE GRADING CONTRACTOR AND CERTIFIED BY THE ENGINEER, IS REPRESENTED BY THE SOLID LINES. RETAINING WALLS WILL BE CONSTRUCTED PRIOR TO GRADING CERTIFICATION.

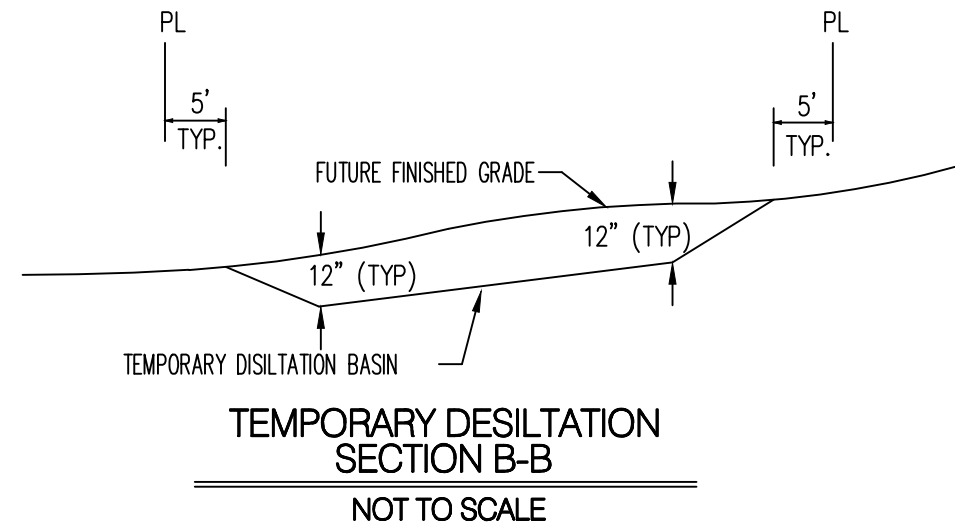
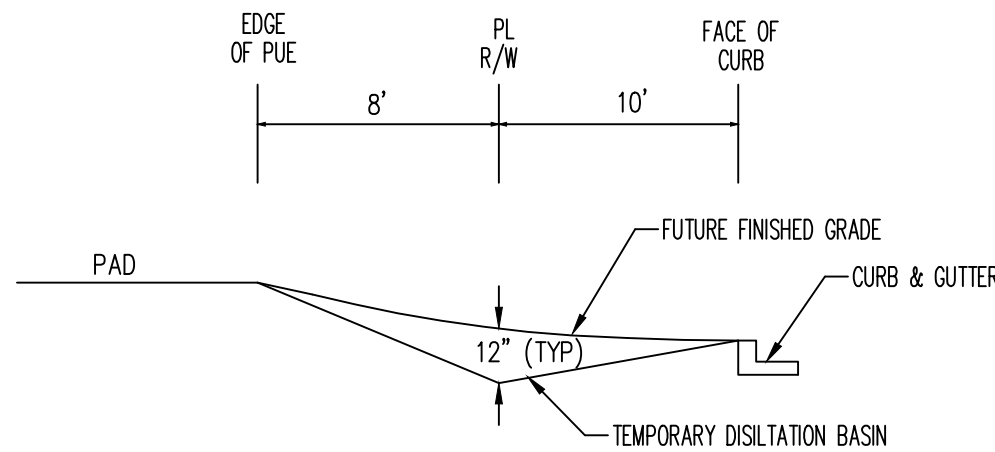


** BOTTOM OF BASIN IS 1' BELOW PROPERTY LINE ELEVATION SEE GRADING PLANS FOR EXACT ELEVATIONS



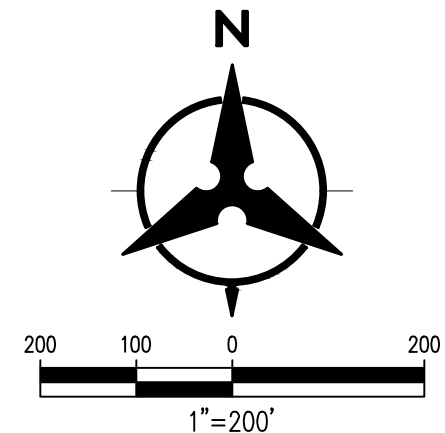
TW=FINISHED GRADE ELEVATION AT TOP OF RETAINING WALL
BW=FINISHED GRADE ELEVATION AT BOTTOM OF RETAINING WALL

(RETAINING HEIGHT IS TAKEN TO BE DIFFERENCE IN FINISHED GRADES ON LEFT AND RIGHT SIDE OF WALL.)
HEIGHT IS IN ACCORDANCE WITH CITY COMPREHENSIVE ZONING CODE, SECTION 14-16-3-19, GENERAL HEIGHT AND DESIGN REGULATIONS FOR WALLS, FENCES, AND RETAINING WALLS.



LEGEND

- PROPOSED SPOT ELEVATION: • 5235.25
- EXISTING SPOT ELEVATION: • EX 5235.25
- PROPOSED CONTOUR: — 5025 —
- EXISTING STORM DRAIN LINE: - - - - -
- PROPOSED STORM DRAIN INLET: [Symbol]
- PROPOSED STORM DRAIN LINE: [Symbol]
- PROPOSED STORM DRAIN MANHOLE: [Symbol]
- PROPOSED WATER BLOCK: [Symbol]
- RETAINING WALL: [Symbol]
- PAD: [Symbol]
- TURNED BLOCK: [Symbol]
- STREET SLOPE: [Symbol]



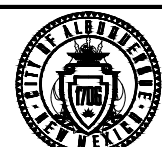
GENERAL NOTES

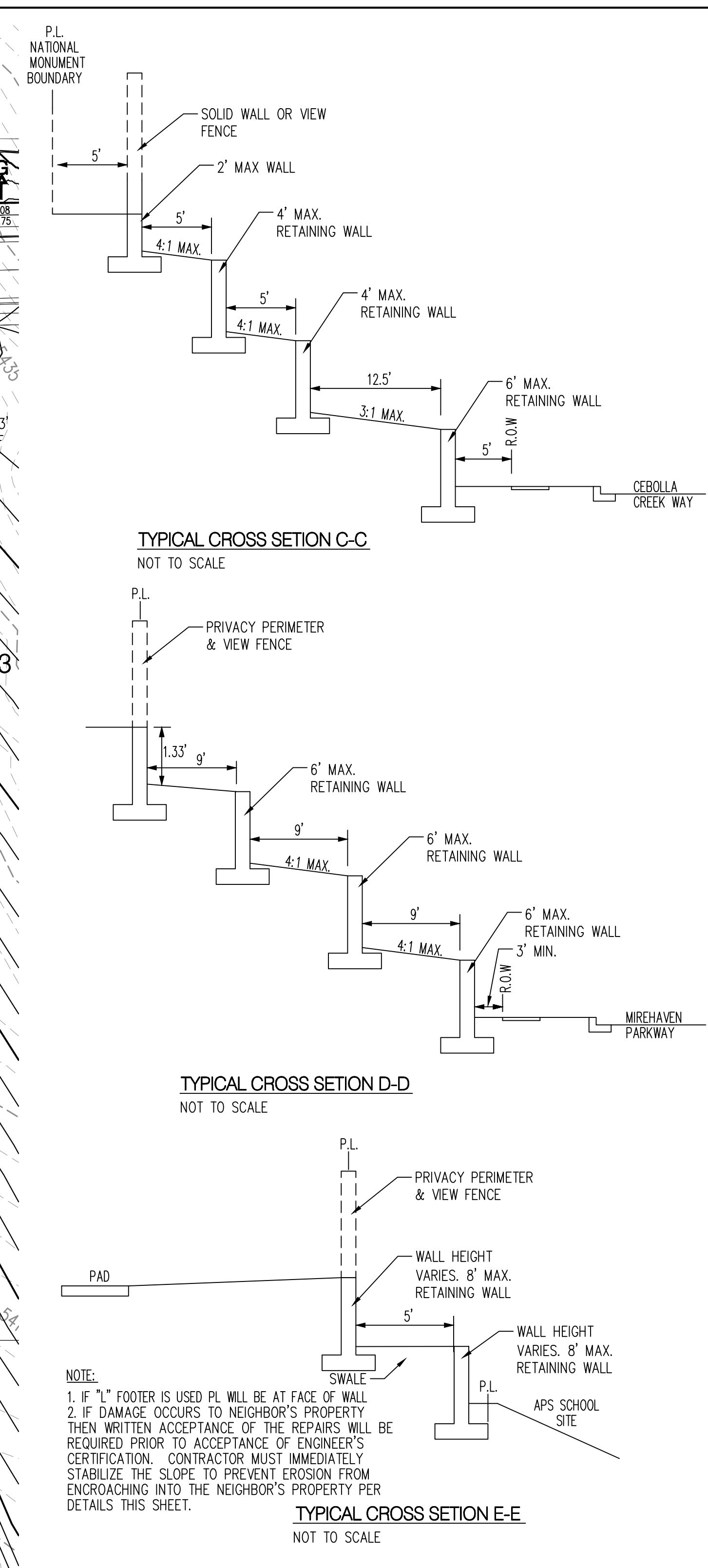
1. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.
2. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
5. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.
7. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
8. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.
9. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).
10. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.
11. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
12. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

GRADING NOTES

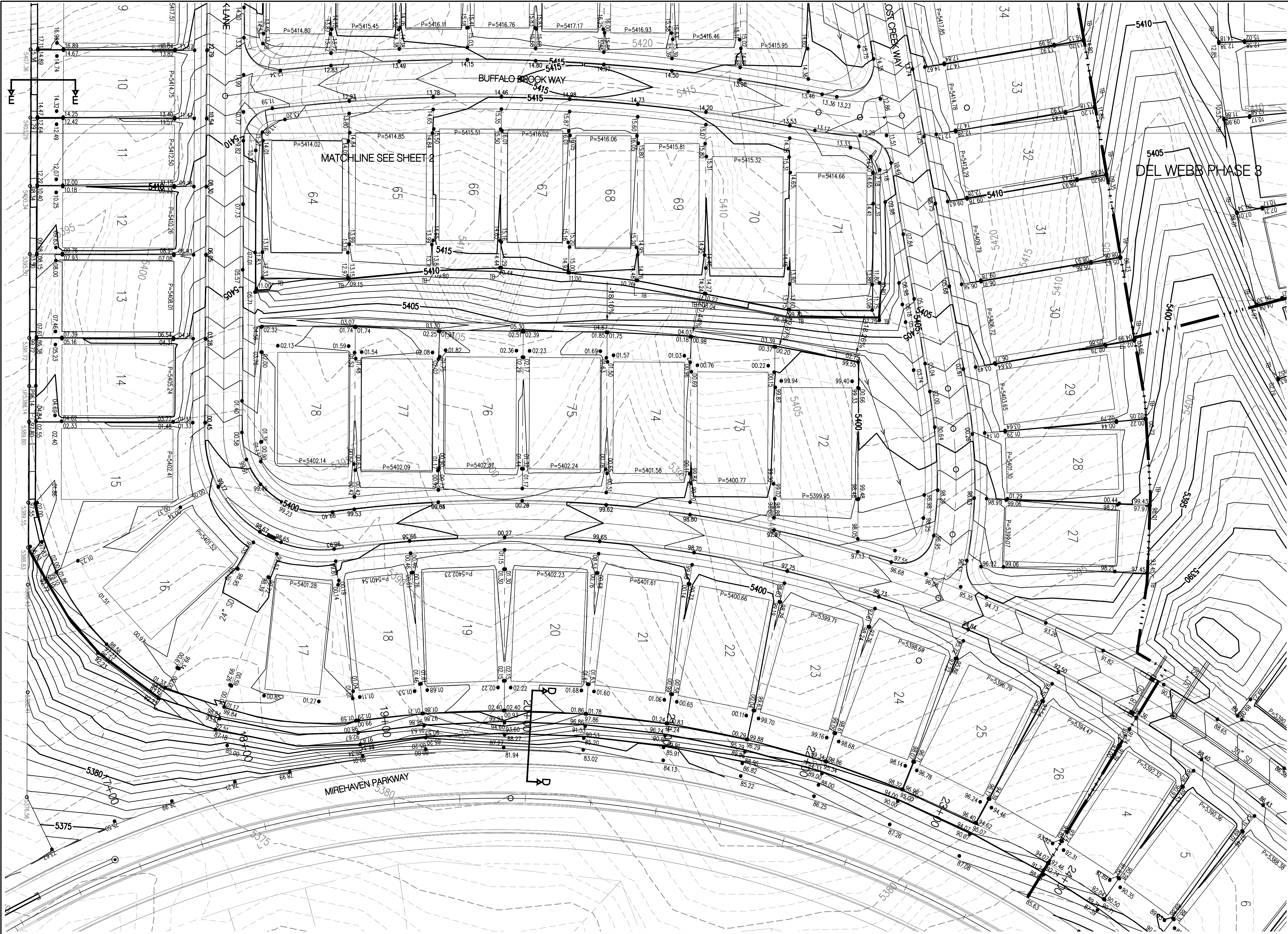
1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
2. CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION, PRIOR TO CONSTRUCTION. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL MEASURES AND REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.
3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SOILS REPORT PREPARED BY XBEVINYARD DATED JULY 22, 2013. ALL OTHER WORK, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS (FIRST PRIORITY), AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).
4. TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (765-1264) FOR LOCATION OF EXISTING UTILITIES.
5. PRIOR TO GRADING, ALL VEGETATION DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE OR STOCK-PILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
6. EARTH SLOPES SHALL NOT EXCEED 4 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
7. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.
8. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.
9. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION AND UNSUITABLE MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERE TO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
10. PAVING AND ROADWAY GRADES SHALL BE +/- 0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATIONS.
11. ALL SPOT ELEVATIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. VALLEY GUTTER ELEVATIONS ARE SHOWN AT FLOWLINE ELEVATION.

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		CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
DEL WEBB @ MIREHAVEN PHASE 4 OVERALL GRADING PLAN			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
LAST DESIGN UPDATE			
CITY PROJECT NO.	ZONE MAP NO. H-8/9	SHEET 1	OF 4

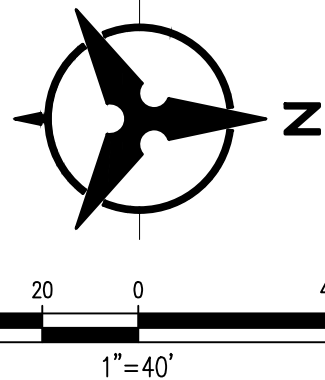
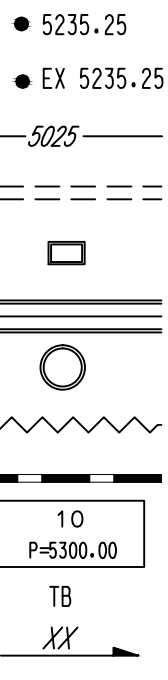


BHI JOB NO. 20180338



LEGEND

- PROPOSED SPOT ELEVATION
EXISTING SPOT ELEVATION
PROPOSED CONTOUR
EXISTING STORM DRAIN LINE
PROPOSED STORM DRAIN INLET
PROPOSED STORM DRAIN LINE
PROPOSED STORM DRAIN MANHOLE
PROPOSED WATER BLOCK
RETAINING WALL
PAD
TURNED BLOCK
STREET SLOPE



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DEL WEBB @ MIREHAVEN PHASE 4
GRADING PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
PROJECT NO.		ZONE MAP NO.	SHEET	OF
		H-8/9	3	4

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
		FIELD NOTES		US&GS BRASS DISC STAMPED "REWARD 1969"		CONTRACTOR	
		NO.	BY	DATE	WORKED BY	DATE	DATE
					INSPECTOR'S	DATE	DATE
					ACCEPTANCE BY	DATE	DATE
					VERIFICATION BY	DATE	DATE
				N.M. STATE PLANE COORDINATES		DRAWINGS	
				(CENTRAL ZONE)		CORRECTED BY	
				N=1487364.063 E=1491190.819		DATE	
				GROUND TO GRID = 0.999675005		MICRO-FILM INFORMATION	
				DELTA ALPHA = -0.00712.26"		RECORDED BY	
				NAVD 1988 ELEVATION = 5319.688		DATE	
						NO.	