

ADJACENT WAYS  
IMPROVEMENT PLANS

AT

CHAPARRAL ELEMENTARY SCHOOL  
3380 E. FRYE ROAD  
GILBERT, ARIZONA 85295

SHEET INDEX

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PROJECT NOTES

1. ALL DESIGN AND CONSTRUCTION MUST BE IN ACCORDANCE WITH THE UNIFORM STANDARD SPECIFICATIONS AND DETAILS PUBLISHED BY THE MARICOPA COUNTY ASSOCIATION OF GOVERNMENTS (MAG) AND AS AMENDED BY THE TOWN OF GILBERT.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE TOWN OF GILBERT ENGINEERING DEPARTMENT AT LEAST 24 HOURS IN ADVANCE OF ANY CONSTRUCTION FOR INSPECTION.

3. THE CONTRACTOR IS ADVISED THAT AN EXCAVATION AND DIRT MOVING PERMIT IS REQUIRED BY THE MARICOPA COUNTY HEALTH DEPARTMENT AND THE TOWN OF GILBERT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THIS PERMIT AT HIS EXPENSE AND TO COMPLY WITH ITS REQUIREMENTS.

4. ALL DRYWELLS SHOWN ON THIS PROJECT SHALL BE MAINTAINED BY THE OWNER AND ARE TO BE REPLACED BY THE OWNER WHEN THEY CEASE TO DRAIN THE SURFACE WATER IN A 36-HOUR PERIOD. REGULAR MAINTENANCE OF THE DRYWELL, SILTING CHAMBER IS REQUIRED TO ACHIEVE THE BEST OPERATION OF THE DRYWELL.

5. ALL RETENTION BASINS MUST DRAIN ANY STORM EVENT UP TO AND INCLUDING THE 100-YEAR STORM WITHIN 36 HOURS. OWNER OF ANY BASIN FAILING TO MEET THIS REQUIREMENT MUST TAKE CORRECTIVE ACTION TO BRING THE BASIN INTO COMPLIANCE.

6. STRAIGHT GRADE BETWEEN ELEVATIONS SHOWN.

7. THE GRADING AND DRAINAGE PLAN IS TO BE USED FOR ELEVATIONS ONLY (EXCEPT FOR SPECIFIC DIMENSIONS AS SHOWN). SEE THE APPROVED ARCHITECTURAL SITE PLAN FOR HORIZONTAL DIMENSIONS.

8. ALL IMPORTED FILL MATERIALS SHALL BE FREE OF CONTAMINANTS, TRASH, AND HAZARDOUS WASTES.

9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UNDERGROUND PIPELINES, TELEPHONE AND ELECTRIC CONDUITS AND STRUCTURES IN ADVANCE OF ANY CONSTRUCTION AND TO OBSERVE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO SUCH. THE ENGINEER AND/OR OWNER CANNOT GUARANTEE ANY LOCATIONS SHOWN ON THESE PLANS OR THOSE OMITTED FROM SAME.

10. ADD 1200.00 TO ALL ELEVATIONS TO OBTAIN TRUE ELEVATIONS.

11. ALL ADJACENT DAMAGED OR DISPLACED CONCRETE CURBING, SIDEWALK, SLAB, FENCES ETC., SHALL BE REMOVED AND REPLACED IN-KIND AS DIRECTED BY THE ARCHITECT OR ENGINEER.

12. THE PLANS PREPARED FOR THIS PROJECT PRESENT A DESCRIPTION OF THE WORK TO BE ACCOMPLISHED. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND DETERMINE FROM HIS OWN INSPECTION, THE CONDITIONS UNDER WHICH IT IS TO BE PERFORMED. THE CONTRACTOR BY MAKING HIS BID REPRESENTS THAT HE HAS VISITED THE SITE AND FAMILIARIZED HIMSELF WITH LOCAL CONDITIONS. THE TYPE OF WORK TO BE PERFORMED EVALUATED THE DIFFICULTY OF PERFORMING THE REQUIRED TASKS, AND LABOR, EQUIPMENT AND MATERIAL THAT ARE REQUIRED TO PROVIDE A COMPLETE PROJECT.

13. ANY REVISIONS OR ADDITIONS TO THESE PLANS SHALL BE APPROVED BY THE ENGINEER AND THE ARCHITECT PRIOR TO CONSTRUCTION.

14. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, PIPES, OR OTHER MEASURES DESIGNED TO PROTECT BUILDINGS OR PROPERTY FROM STORM RUNOFF MUST BE COMPLETED PRIOR TO ANY STRUCTURE BEING BUILT.

15. PREPARATION OF GROUND. THE AREA OVER WHICH FILLS ARE TO BE MADE SHALL BE CLEARED OF ALL TRASH, TREES, STUMPS, DEBRIS OR OTHER MATERIAL NOT SUITABLE AS A FOUNDATION FOR FILL.

16. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY VARIANCES BETWEEN THESE PLANS AND ON-SITE CONDITIONS. THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS' ELEVATIONS DIFFER FROM THOSE SHOWN ON THESE PLANS, RESULTING IN CONFLICT WITH THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.

17. ALL DRAINAGE SWALES SHALL BE FREE OF TRASH, DELETERIOUS MATERIAL, SLIT, VEGETATION AND DEBRIS.

LEGEND

	EXISTING BUILDING
	FENCE
	WROUGHT IRON FENCE
	CHAIN LINK FENCE
	ELECTRICAL BOX
	STORM DRAIN MANHOLE
	CLEANOUT
	WATER VALVE
	TRANSFORMER
	TELEPHONE JUNCTION BOX
	VERTICAL CURB AND GUTTER
	LIGHT
	CONCRETE
	PAVEMENT
	TOP OF CURB
	GUTTER
	CONCRETE AND PAVEMENT
	GUTTER AND PAVEMENT
	INVERT
	SEWER
	WATER
	IRRIGATION CONTROL VALVE
	GRADE BREAK
	CONCRETE
	BACKFLOW PREVENTER
	SIDEWALK
	RIGHT OF WAY
	BRASS CAP FLUSH
	I-BEAM
	FINISHED FLOOR
	WATER METER
	FIRE HYDRANT
	FLOWLINE
	DOWN SPOUT
	ROOF DRAIN
	CATCH BASIN
	PUBLIC UTILITY EASEMENT
	VALLEY GUTTER
	STORM DRAIN
	IRRIGATION
	MANHOLE
	EXISTING ELEVATION
	EXISTING SPOT ELEVATION

**BENCHMARK**  
BRASS CAP IN HANDHOLE AT THE INTERSECTION OF RAY ROAD AND VAL VISTA ROAD.  
TOWN OF GILBERT DATUM - CHAPARRAL ESTATES DATUM. ELEVATION= 1284.73

**PROJECT BENCHMARK**  
BRASS CAP FLUSH AT THE INTERSECTION OF FRYE ROAD AND COLT DRIVE.  
ELEVATION= 1283.96

OWNER

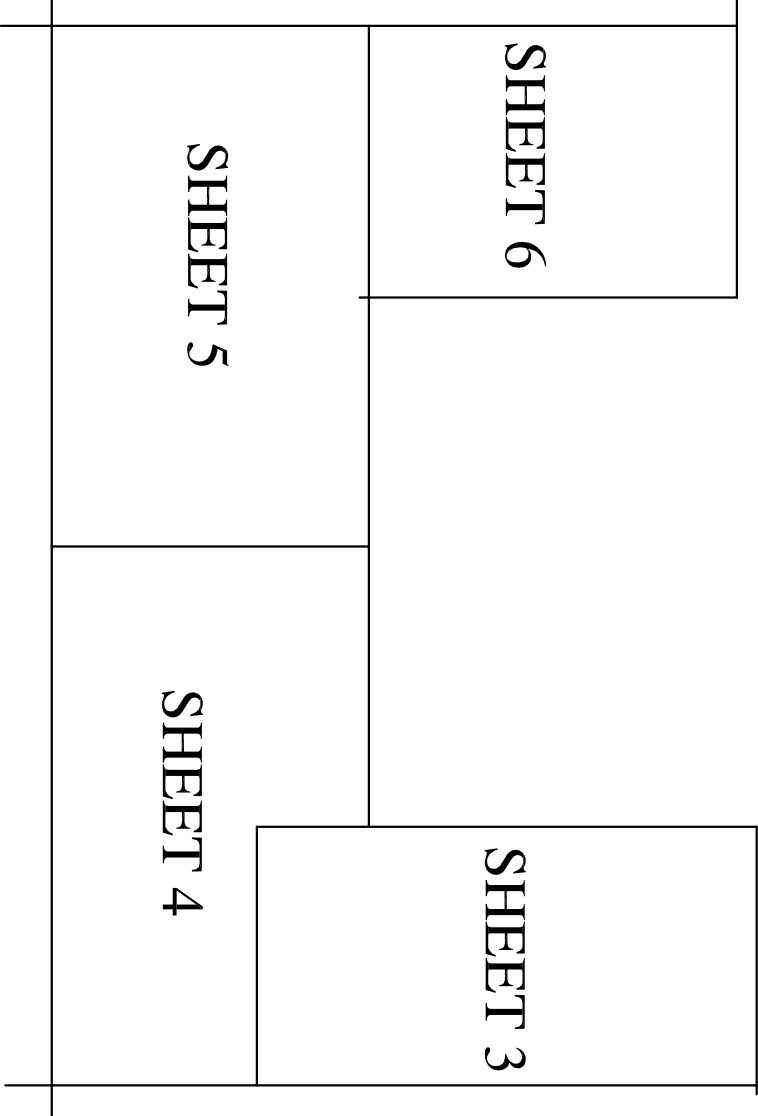
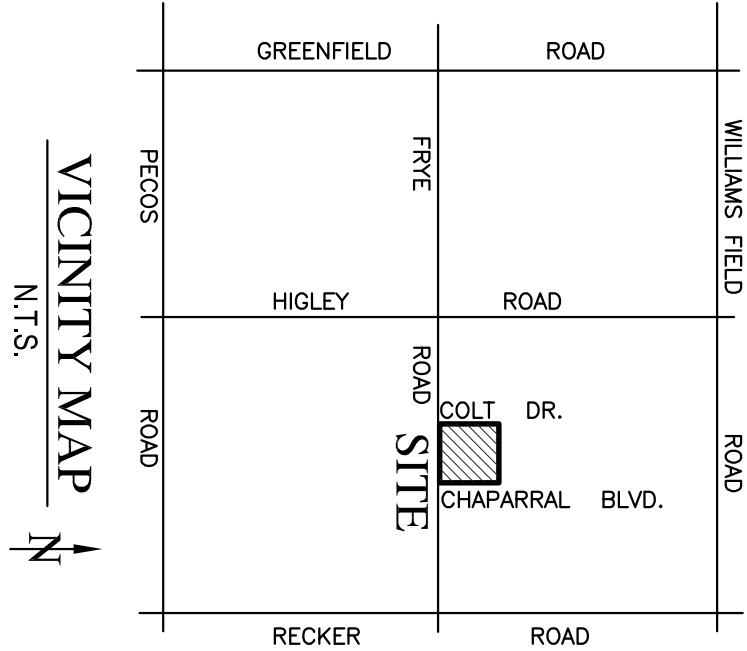
HIGLEY UNITED SCHOOL DISTRICT  
2835 SOUTH RECKER ROAD  
GILBERT, AZ 85295  
CONTACT: BENNY BUCHOLZ  
PHONE (480) 797-9779

ARCHITECT

ORCUTT WINSLOW  
2929 NORTH CENTRAL AVENUE  
ELEVENTH FLOOR  
PHOENIX, AZ 85012  
CONTACT: ASHISH DANDAVATE  
TEL.: (602) 257-1784

ENGINEER

MARTIN ENGINEERING & SURVEYING, INC.  
1734 E. FRIER DRIVE  
PHOENIX, AZ 85020  
CONTACT: DENIS MARTIN  
TEL.: (602) 944-5829



KEY MAP  
N.T.S.



RECORD DRAWING CERTIFICATION

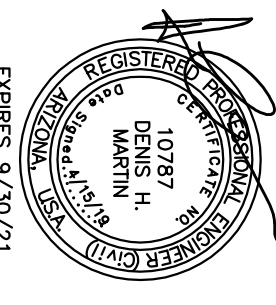
I HEREBY CERTIFY THAT THE RECORD DRAWING MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/ LAND SURVEYOR	DATE
REGISTRATION NUMBER	
APPROVALS	

TOWN OF GILBERT ENGINEER	DATE
TOWN OF GILBERT FIRE DEPARTMENT	DATE

MARTIN ENGINEERING  
& SURVEYING, INC.

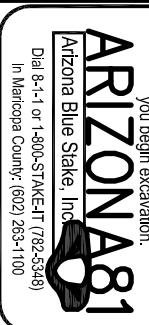
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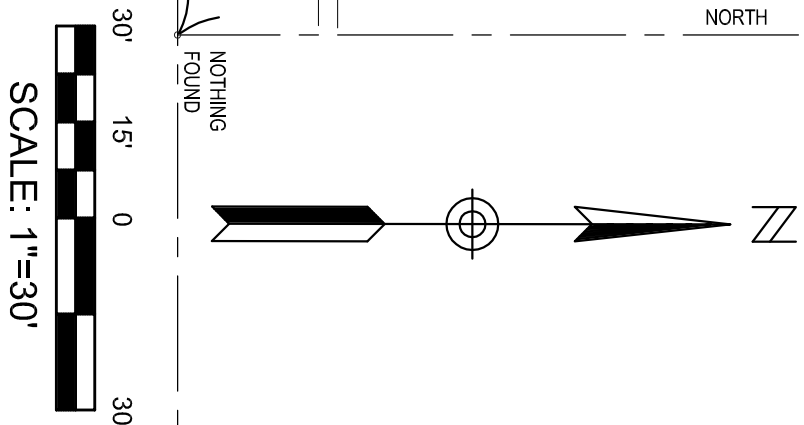
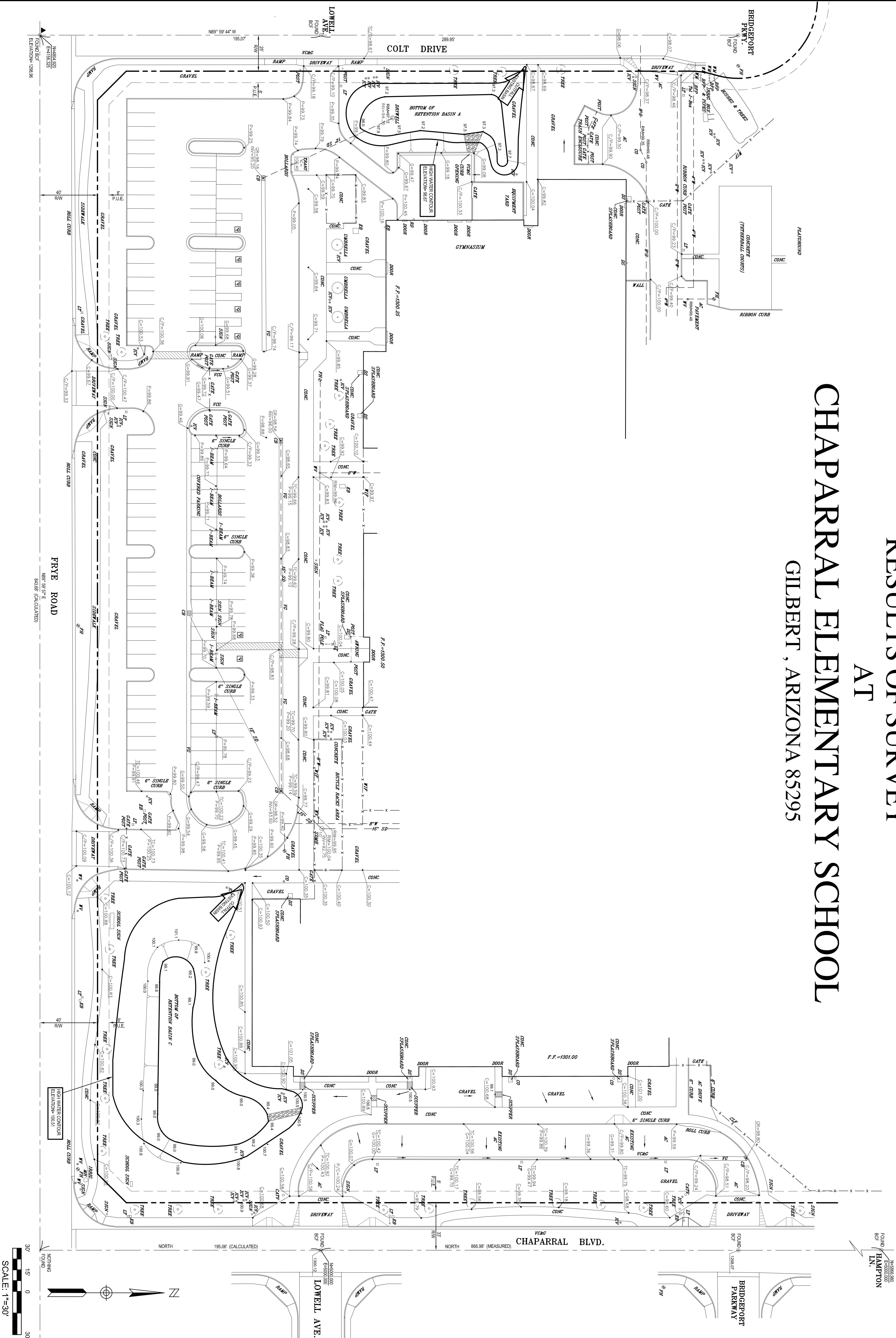
Designed	D.H.M.
Drafted	B.C.T.
Checked	D.H.M.

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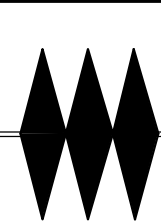
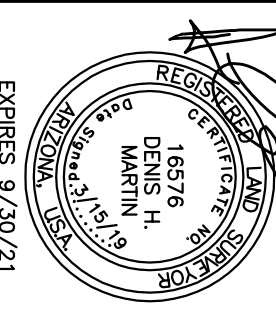
Job No.	40012C
Date	4/15/19
Revised	



RESULTS OF SURVEY  
AT  
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B.C.T.  
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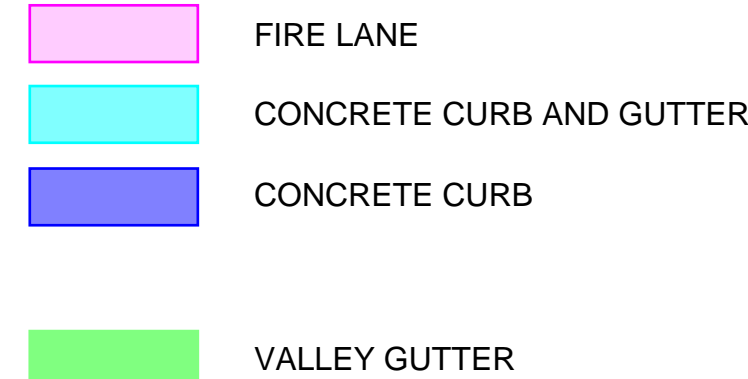
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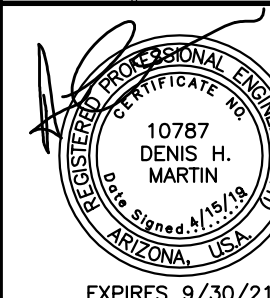
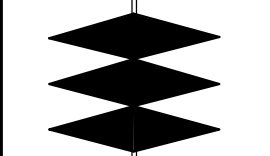






- 1 CONSTRUCT SINGLE CURB PER M.A.G. STD. DETAIL 222, TYPE "A". (6" HEIGHT UNLESS OTHERWISE NOTED)
- 2 INSTALL NEW 3" AC ( $C\frac{3}{4}$ ) OVER 8" A.B.C. PAVEMENT.
- 3 CONSTRUCT 3' WIDE CONCRETE VALLEY GUTTER PER M.A.G. STD. DETAIL 240.
- 4 CONSTRUCT CONCRETE SIDEWALK/ SLAB PER M.A.G. STD. DETAIL 230.
- 5 CONSTRUCT VERTICAL CURB AND GUTTER PER M.A.G. STD. DETAIL 220-1 TYPE "A". (6" HEIGHT UNLESS OTHERWISE NOTED)
- 6 CONSTRUCT MAXWELL IV DRYWELL OR APPROVED EQUAL PER DETAIL ON SHEET 7.
- 7 SEE DETAIL 2 ON SHEET 7.
- 8 SEE DETAIL 1 ON SHEET 7.
- 9 CONSTRUCT CURB TERMINATION PER M.A.G. STD. DETAIL 222. (MODIFIED TO 2')
- 10 SEE DETAIL 4 ON SHEET 7.
- 11 CONSTRUCT RAMP PER DETAIL 3 ON SHEET 7.
- 12 CONSTRUCT 5'x7' GROUTED RIP-RAP PAD TO BOTTOM OF RETENTION (9" THICK,  $D_{50}=6"$ ) AS SHOWN. ROCKS TO BE HANDPLACED AND EXPOSED PORTION TO BE FREE OF GROUT.
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- 15 SEE RAMP DETAIL 5 ON SHEET 7.
- 16 ADJUST WATER VALVE PER M.A.G. STD. DETAIL 391-1, TYPE "A".
- 17 SEE RAMP DETAIL 6 ON SHEET 7.
- 18 CONSTRUCT HEADWALL PER M.A.G. STD. DETAIL 501-1, "U" TYPE. (MODIFIED PER DIMENSIONS SHOWN PER DETAIL ON SHEET 6)
- 19 CONSTRUCT 9" THICK PORTLAND CEMENT DRIVEWAY SLAB.
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- 24 CONSTRUCT RIBBON CURB PER M.A.G. STD. DETAIL 220-1, TYPE "B". (MODIFIED TO 6" WIDTH.
- 25 CONSTRUCT 5' WIDE CURB OPENING.
- 26 CONSTRUCT SCUPPER PER M.A.G. DTD. DETAIL 203.
- 27 INSTALL DETECTABLE WARNING MAT PER TOWN OF GILBERT STD. DETAILS GIL-260 & GIL-261.

**MARTIN ENGINEERING  
& SURVEYING, INC.**



Designed D.H.M.
Drafted B.C.T.
Checked

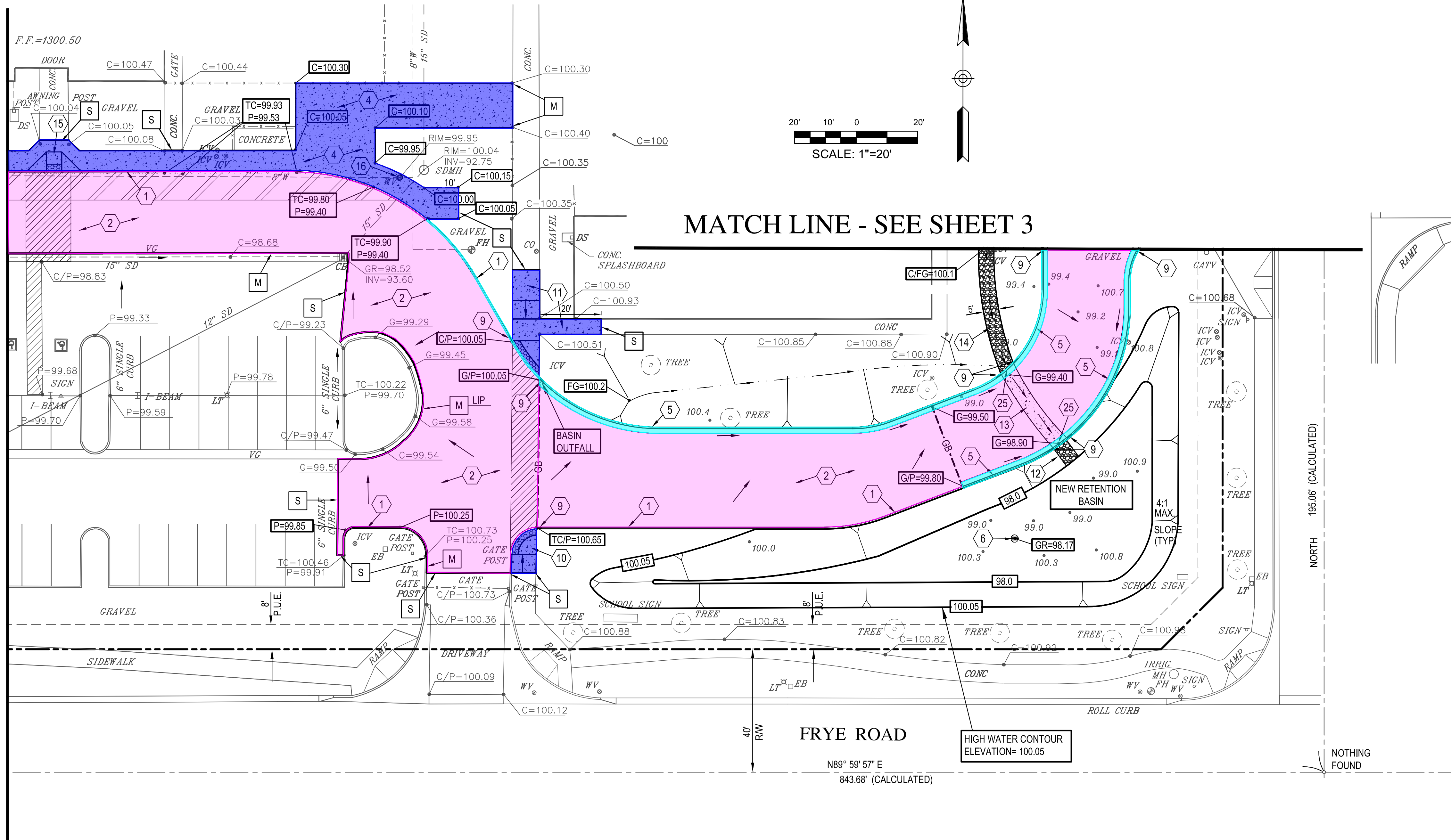
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MATCH LINE - SEE SHEET 5



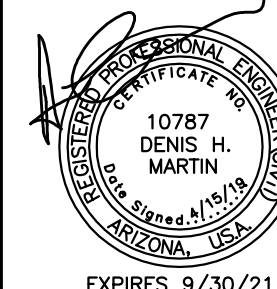
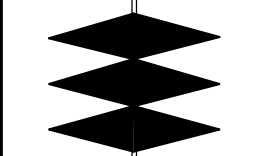
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- FIRE LANE
- CONCRETE CURB AND GUTTER
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- VALLEY GUTTER

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Sht. 4 of 9



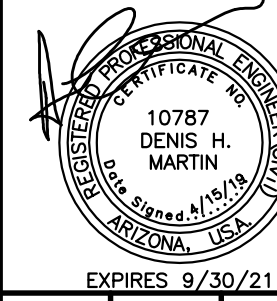
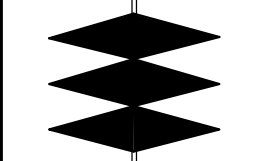
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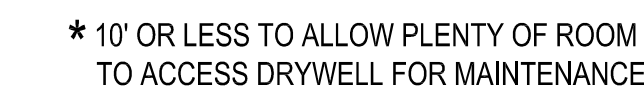
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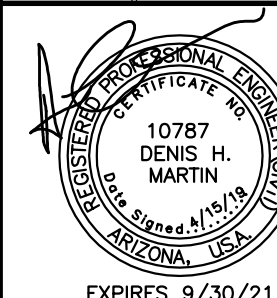
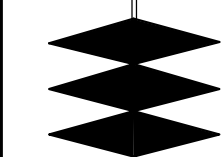
Sht. 5 of 9





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& SURVEYING, INC.**  
1734 E. FRIER DRIVE, PHOENIX ARIZONA, 85020 (602)944-5829



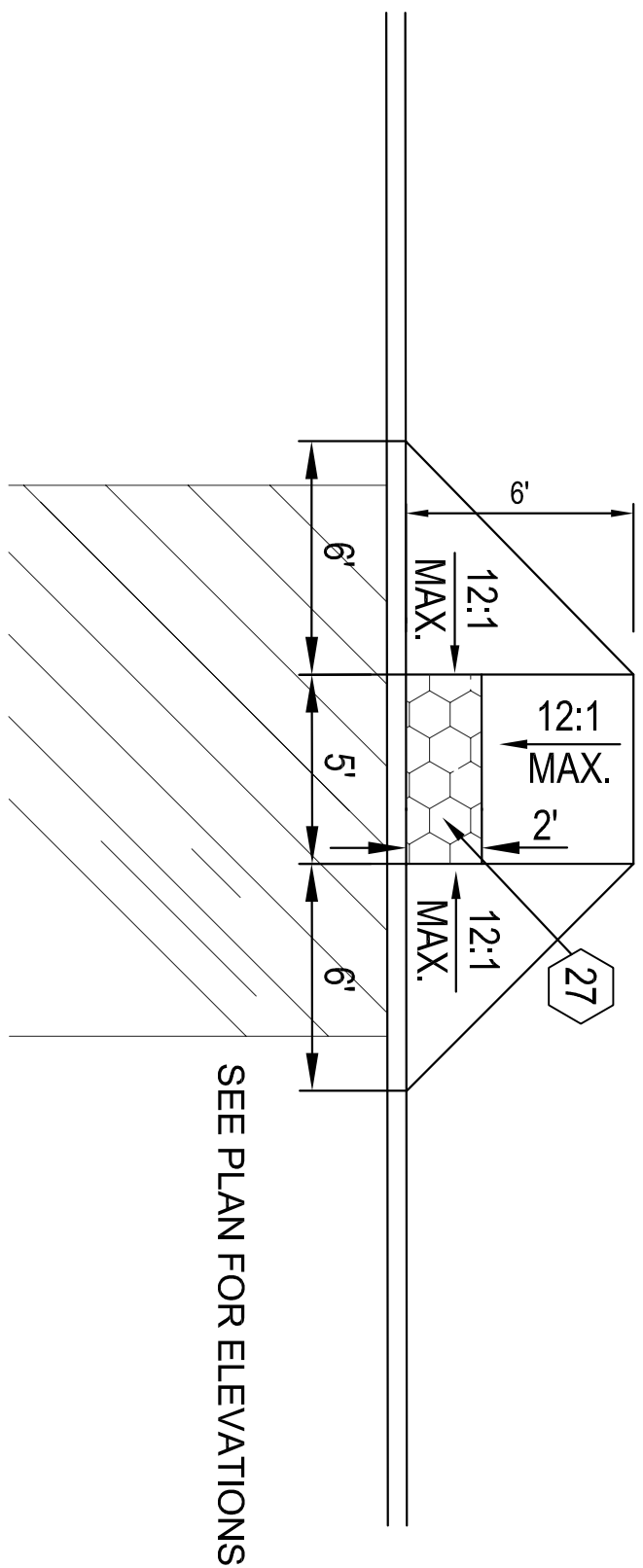
Designed D.H.M.	Drafted B.C.T.	Checked D.H.M.
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ADJACENT WAYS IMPROVEMENT PLANS  
AT  
CHAPARRAL ELEMENTARY SCHOOL  
3380 E. FRYE ROAD  
GILBERT, ARIZONA 85295

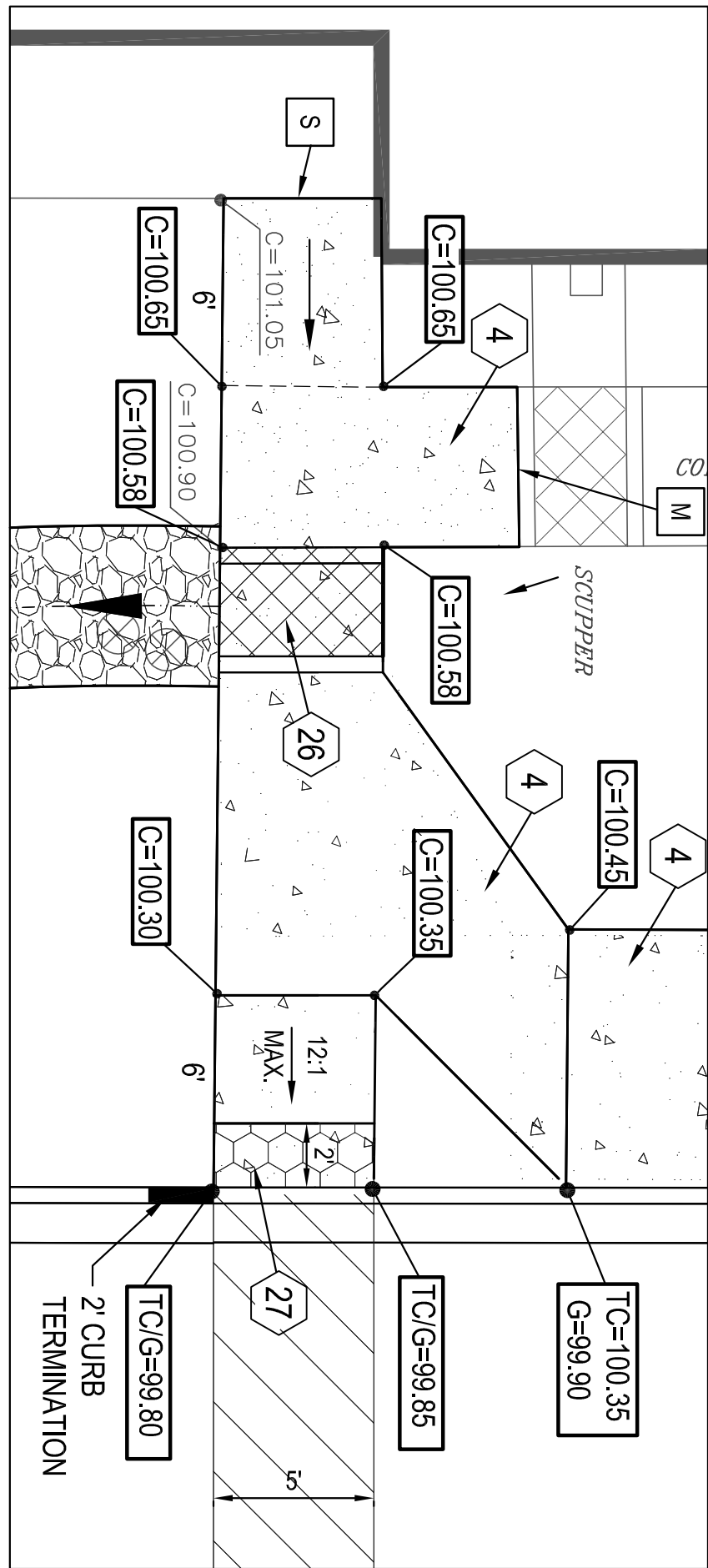
Job No. 40012C	Date 4/15/19	Revised
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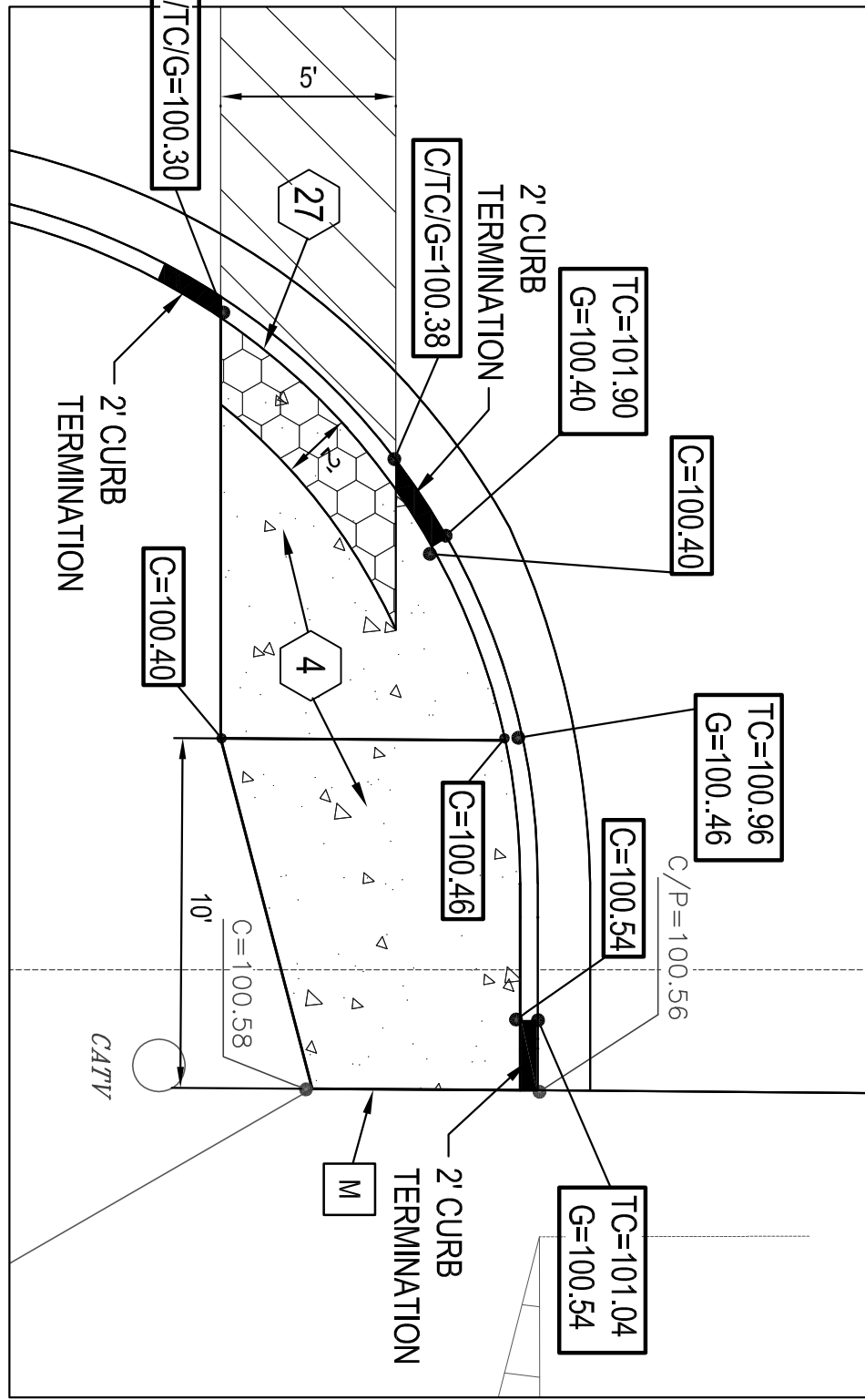




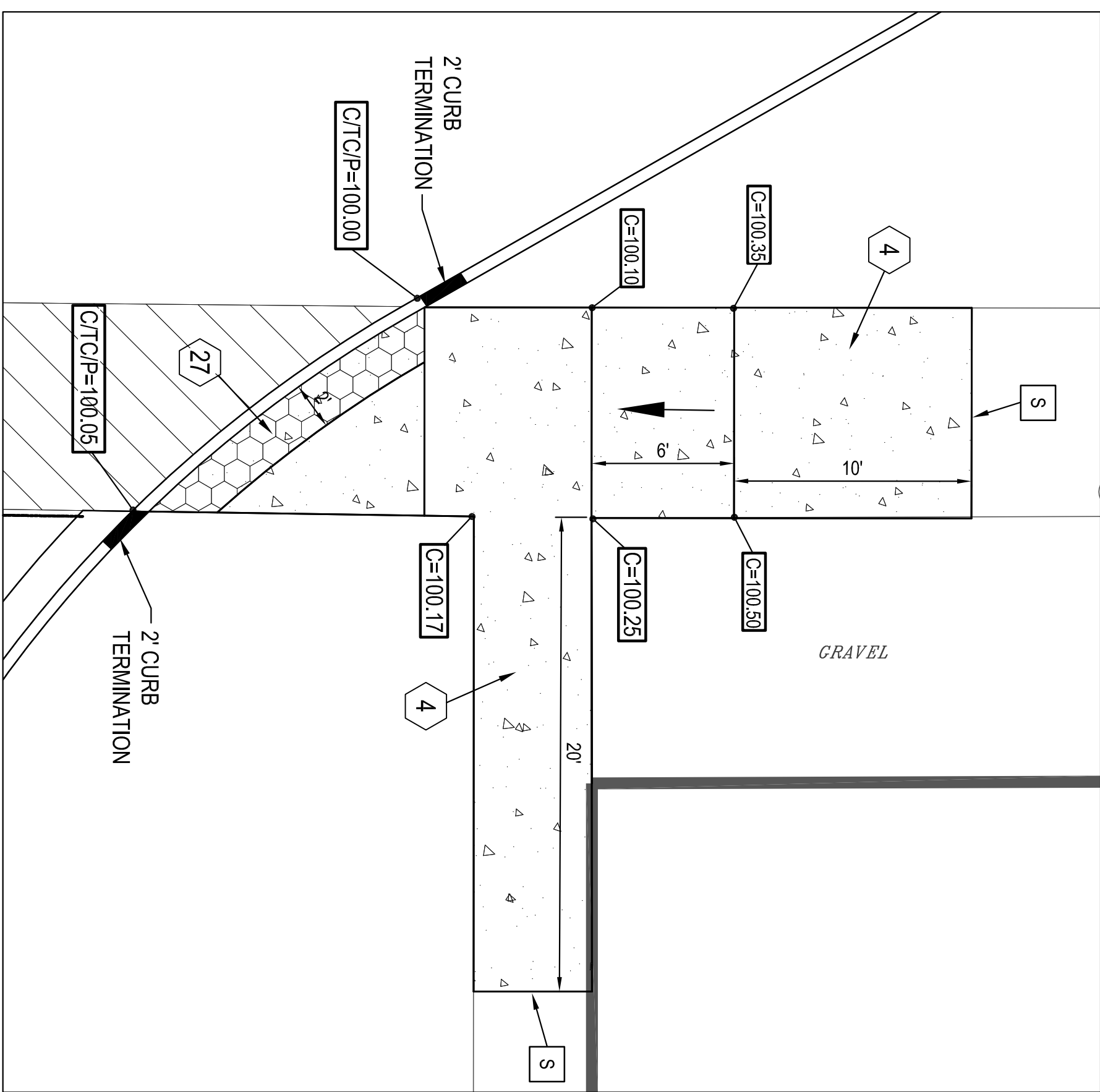
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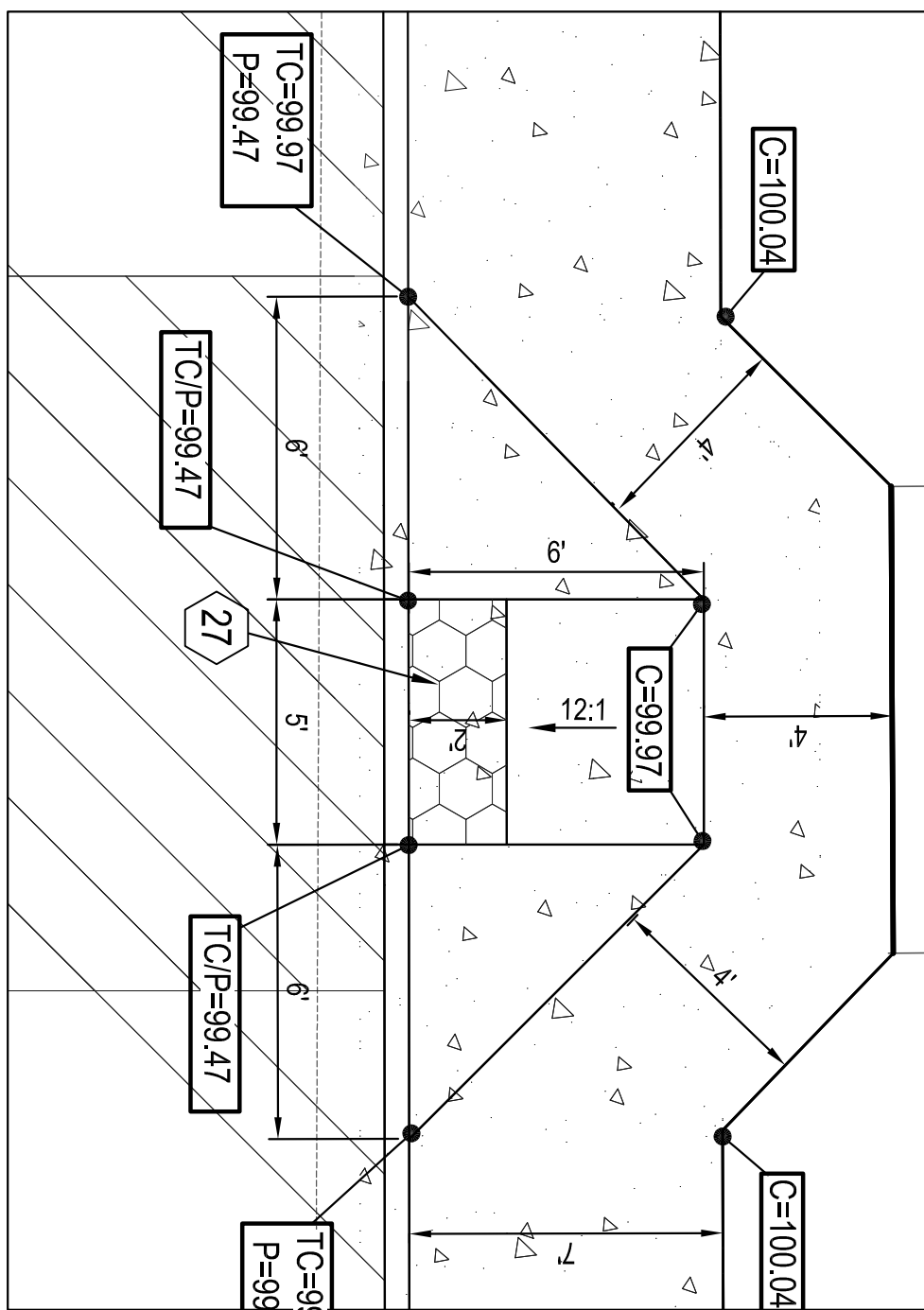
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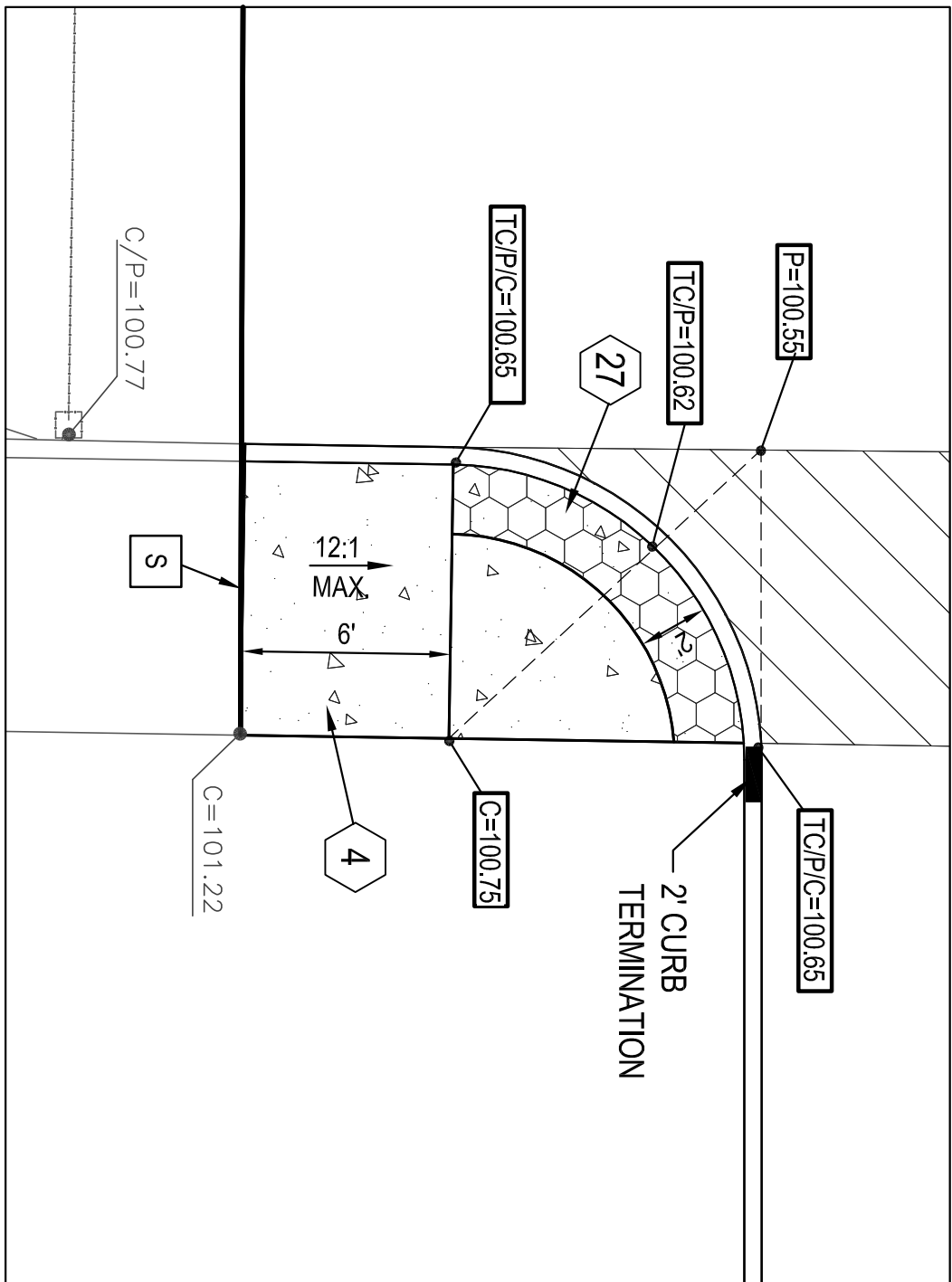
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RAMP DETAIL 3  
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RAMP DETAIL 5  
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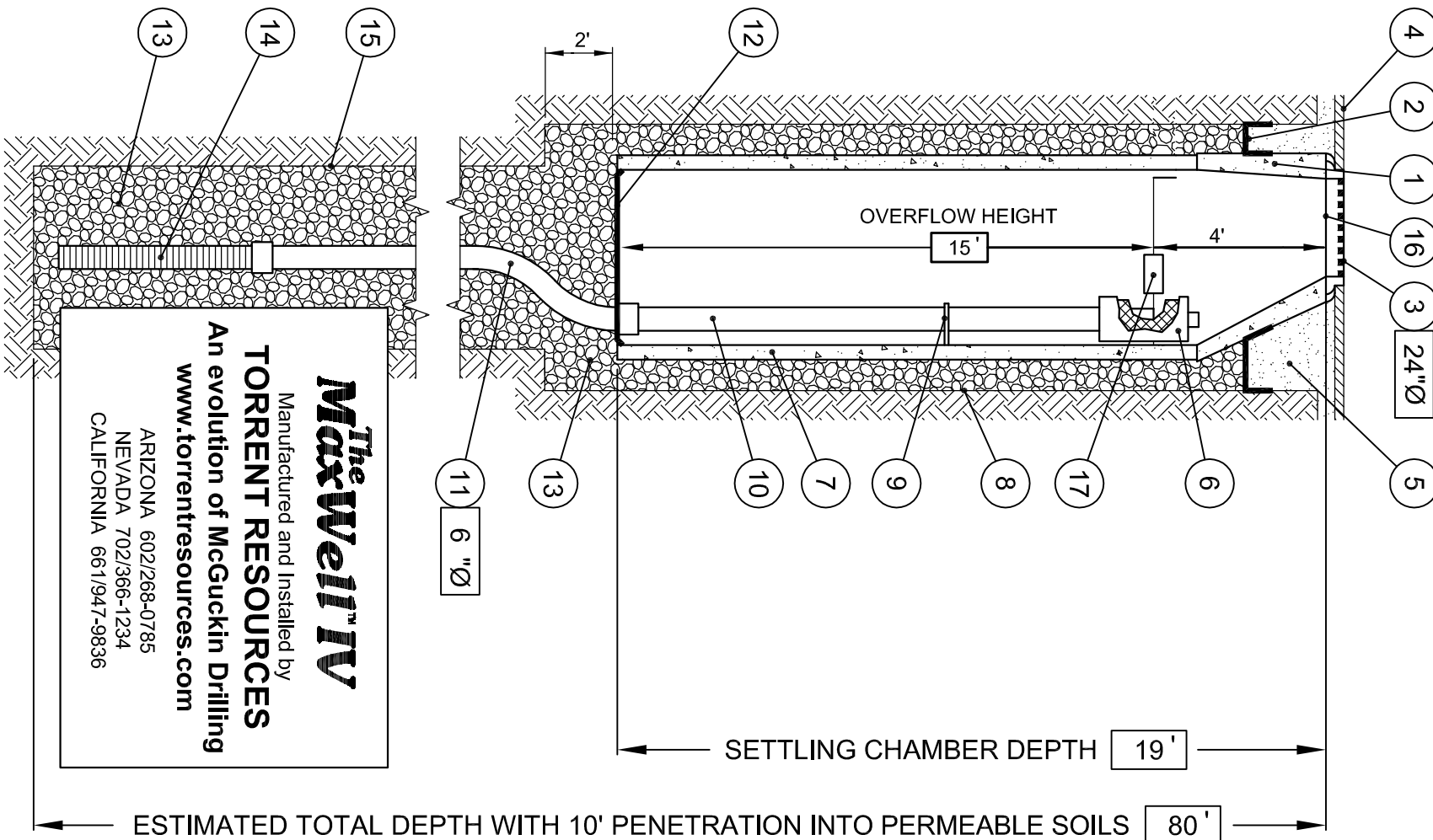
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- SIDEWALK RAMP NOTES**
1. SIDEWALK AND SIDEWALK RAMPS TO MEET ALL ADA REQUIREMENTS.
  2. ALL RAMPS MUST MEET A.D.A. ACCESSIBILITY GUIDELINES (ADAAG) STANDARDS. 2% MAX. CROSS SLOPES AND 12:1 MAX. LONGITUDINAL SLOPES. TRIANGULATED DOMES AS DETECTABLE WARNING ARE REQUIRED ON ALL RAMPS PER ADAAG SECTION 4.7.7. TRIANGULATED DOMES AS DETECTABLE WARNING ARE ALSO REQUIRED ON ALL WALKS THAT CROSS OR ADJOIN A VEHICULAR WAY PER ADAAG SECTION 4.29.5.

## The Maxwell™ IV Drainage System Detail And Specifications

### ITEM NUMBERS

1. MANHOLE CONE - MODIFIED FLAT BOTTOM.
2. MOISTURE MEMBRANE - 6 MIL. PLASTIC PLAGE SECURELY AGAINST ECCENTRIC CONE AND HOLE SIDEWALL.
3. BOLTED RING & GRATE - DIAMETER AS SHOWN. CLEAN CAST IRON WITH WORKING "STORM WATER ONLY" IN RAISED LETTERS. BOLTED IN 2 LOCATIONS AND SECURED TO CONE WITH MORTAR. RIM ELEVATION ±0.02' OF PLANS.
4. GRADED BASIN OR PAVING (BY OTHERS).
5. STABILIZED BACKFILL - 1 SACK SLURRY.
6. PUREFLO™ DEBRIS SHIELD - ROLLED 16 GA. STEEL X 24" LENGTH WITH VENTED ANTI-SIPHON AND INTERVAL .285" MAX. SINO FLATTENED EXPANDED STEEL SCREEN X 12" LENGTH. FUSION BONDED EPOXY COATED.
7. PRE-CAST LINER - 4000 PSI CONCRETE 48" ID. X 54" OD. CENTER IN HOLE AND ALIGN SECTIONS TO MAXIMIZE BEARING SURFACE.
8. MIN. 6" Ø DRILLED SHAFT.
9. SUPPORT BRACKET - FORMED 12 GA. STEEL. FUSION BONDED EPOXY COATED.
10. OVERFLOW PIPE - SCH. 40 PVC MATED TO DRAINAGE PIPE AT BASE SEAL.
11. DRAINAGE PIPE - ADS HIGHWAY GRADE WITH TRI-A COUPLER. SUSPEND PIPE DURING BACKFILL OPERATIONS TO PREVENT BUCKLING OR BREAKAGE. DIAMETER AS NOTED.
12. BASE SEAL - GEOTEXTILE OR CONCRETE SLURRY
13. ROCK - CLEAN AND WASHED. SIZED BETWEEN 3/8" AND 1-1/2" TO BEST COMPLEMENT SOIL CONDITIONS.
14. FLOFAST™ DRAINAGE SCREEN - SCH. 40 PVC 0.120" SLOTTED WELL SCREEN WITH 32 SLOTS PER ROW/FT. 96" OVERALL LENGTH WITH TRIB-COUPLER.
15. MIN. 4" Ø SHAFT - DRILLED TO MAINTAIN PERMEABILITY OF DRAINAGE SOILS.
16. FABRIC SEAL - U.V. RESISTANT GEOTEXTILE - TO BE REMOVED BY CUSTOMER AT PROJECT COMPLETION.
17. **ABSORBENT - HYDROPHOBIC PETROCHEMICAL SPONGE. MIN. 128 OZ. CAPACITY.**



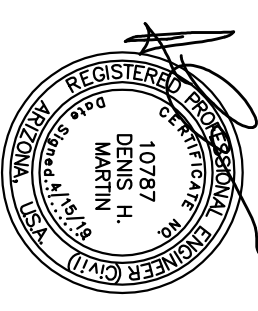
**Maxwell™ IV**  
Manufactured and installed by  
**TORRENT RESOURCES**  
An evolution of McGuckin Drilling  
[www.torrentresources.com](http://www.torrentresources.com)  
ARIZONA 602/288-0785  
NEVADA 702/986-7234  
CALIFORNIA 909/591-5858

AZ LIC. REGISTRATION #4, ADVIS 353  
CA LIC. 228060, C-42, HAZ. GP/4  
NV LIC. 0003350, A - NM LIC. 8054, GP/4  
U.S. Patent No. 4,923,330 - "M" trademark 1974, 1990, 2004

**NOTE:**  
INSTALLING ANY DRYWELL OTHER THAN A MAXWELL REQUIRES A SUBMITTAL FOR THE PROJECT ENGINEER'S APPROVAL.

## MARTIN ENGINEERING & SURVEYING, INC.

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B.C.T.  
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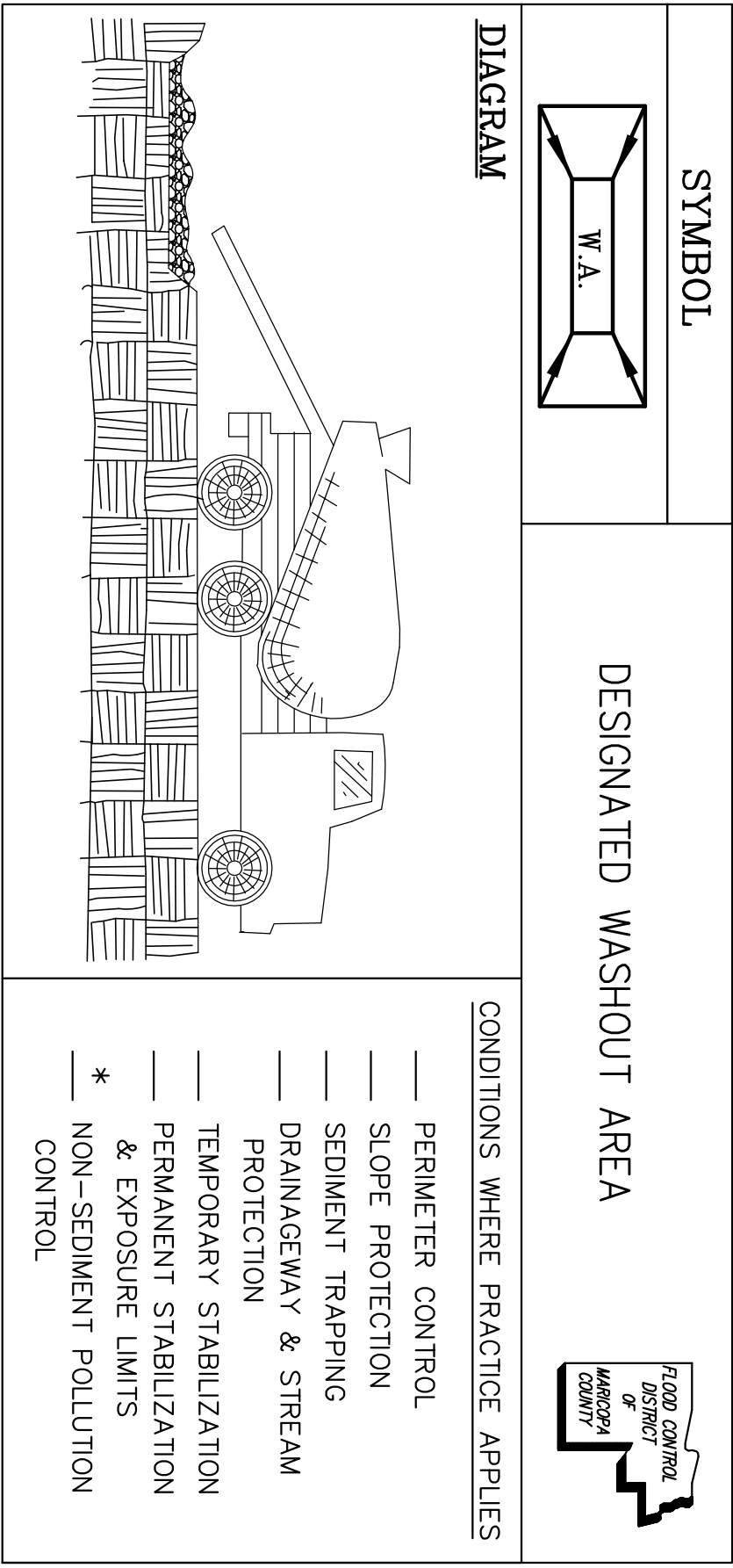
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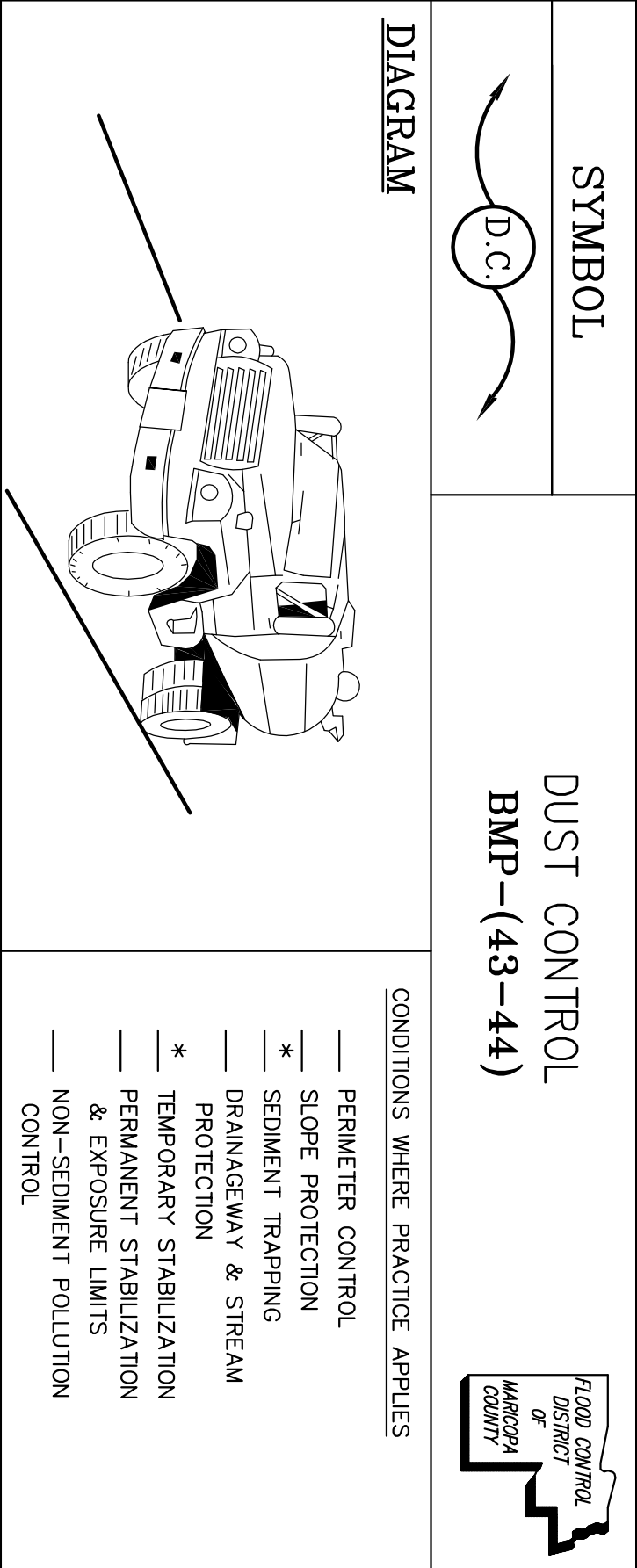


STORM WATER MANAGEMENT PLAN  
AT  
CHAPARRAL ELEMENTARY SCHOOL  
GILBERT, ARIZONA 85295

**NET ACREAGE**  
(DISTURBED AREA)  
1.6 ACRES



GH-4



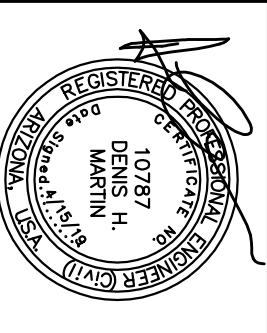
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GENERAL NOTES

- A COPY OF THE GRADING AND DRAINAGE PLAN FOR THIS PROJECT, INCLUDING THE LOCATION OF THE STORM WATER MANAGEMENT PLAN (SWMP) SHALL BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW. THOSE ELEMENTS OF THE GRADING AND DRAINAGE PLAN PERTINENT TO OR REFERENCED ON THE SWMP SHALL BE CONSIDERED A PART OF THE SWMP.
- THE OPERATOR SHALL OBTAIN A DUST CONTROL PERMIT FROM MARICOPA COUNTY HEALTH DEPARTMENT AND PERFORM MEASURES AS REQUIRED BY THE PERMIT TO PREVENT EXCESS DUST.
- THE OPERATOR SHALL PERFORM, AT A MINIMUM, A VISUAL INSPECTION OF THE CONSTRUCTION SITE ONCE EVERY MONTH AND WITHIN 24 HOURS OF RAINFALL GREATER THAN OR EQUAL TO A HALF OF AN INCH OR MORE. THE OPERATOR SHALL PREPARE A REPORT DOCUMENTING HIS/HER FINDINGS ON THE CONDITIONS OF THE SITE AND THE CONSTRUCTION. THE REPORT SHALL BE SUBMITTED TO THE TOWN OF GILBERT AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY SITUATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED. PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
- THE OPERATOR SHALL AMEND THIS PLAN AS NECESSARY DURING THE COURSE OF CONSTRUCTION TO RESOLVE ANY PROBLEM AREAS WHICH BECOME EVIDENT DURING THE CONSTRUCTION AND/OR DURING RAINFALLS.
- THE PERMITTEE SHALL FILE A NOTICE OF TERMINATION (NOT) AFTER COMPLETION OF CONSTRUCTION AND SUBMITTING FINAL LANDSCAPE MATERIALS. THE NOT IS TO BE SUBMITTED TO THE TOWN OF GILBERT.
- THE PERMITTEE SHALL SAVE ALL RECORDS, INCLUDING THE NOI, SWMP, NOT, AND INSPECTION REPORTS, ON FILE FOR MINIMUM OF THREE YEARS FROM THE DATE OF FILING THE NOI.
- THE IMPLEMENTATION OF THESE PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED AND NOT SUBMITTED TO THE TOWN OF GILBERT.
- THE FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO INSURE THAT SEDIMENT-LOADED WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS, AND MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
- DURING CONSTRUCTION OF THIS PROJECT THE CONTRACTOR IS REQUIRED TO PERFORM DAILY CLEANUP AND MAINTENANCE OF ALL ADJACENT STREETS USED DURING THE COURSE OF CONSTRUCTION.



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