

GRADING & DRAINAGE PLAN with OFFSITE IMPROVEMENTS (combination) NATIONAL WATER WORKS NORTH PHOENIX BRANCH

Parcel #209-03-104 A
2140 W Williams Drive, Phoenix, Arizona
SECTION 13, TOWNSHIP 4 NORTH, RANGE 2 EAST OF THE GSRBM, MARICOPA COUNTY, ARIZONA

GRADING NOTES:

A GRADING PERMIT IS REQUIRED UNDER CHAPTER 32A OF THE PHOENIX CITY CODE.

HAUL PERMITS, WHEN REQUIRED, MUST BE OBTAINED PRIOR TO OR CONCURRENTLY WITH THE GRADING AND DRAINAGE PERMIT.

EXCAVATING CONTRACTOR MUST GIVE LOCATION FOR WASTING EXCESS EXCAVATION AND A LETTER FROM OWNER GIVING PERMISSION FOR DUMPING PRIOR TO STARTING ON-SITE CONSTRUCTION. IF EXCESS EXCAVATION EXCEEDS 100 CUBIC YARDS, THE DISPOSAL SITE WILL ALSO REQUIRE A GRADING AND DRAINAGE PERMIT.

DEVELOPMENT SERVICES DEPARTMENT FIELD INSPECTION GROUP SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON-SITE AND/OR OFF-SITE CONSTRUCTION BEGINS, TELEPHONE (602) 262-7811.

MINIMUM FINISH FLOOR ELEVATIONS SHOWN ARE SAFE FROM THE 100-YEAR FLOOD OR PER MINIMUM SPECIFIED IN THE CITY OF PHOENIX STORM DRAIN DESIGN MANUAL, WHICHEVER IS GREATER.

STAKING FINISH FLOOR ELEVATIONS IS THE RESPONSIBILITY OF THE OWNER AND HIS ENGINEER. THE OWNER'S ENGINEER SHALL SUBMIT THREE SEALED COPIES OF THIS GRADING AND DRAINAGE PLAN DESIGNATED AS "RECORD DRAWING" (BEARING AN ORIGINAL SIGNATURE) PRIOR TO THE REQUEST FOR FINAL INSPECTION.

A SEPARATE PERMIT IS NECESSARY FOR ANY OFFSITE CONSTRUCTION.

AN APPROVED GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.

GRADING AND DRAINAGE PLAN APPROVAL INCLUDES THE CONSTRUCTION OF ALL SURFACE IMPROVEMENTS SHOWN ON THE APPROVED PLAN, INCLUDING, BUT NOT LIMITED TO, RETENTION AREAS, SEDIMENTATION BASINS, AND/OR OTHER DRAINAGE FACILITIES, DRAINAGE PATTERNS, WALLS, CURBS, ASPHALT PAVEMENT, AND BUILDING FLOOR ELEVATION.

CONTRACTOR SHALL PROVIDE LEVEL BOTTOM IN ALL RETENTION BASINS AT ELEVATIONS SHOWN ON THE PLANS. SLOPE PROTECTION SHALL BE APPLIED TO PREVENT EROSION.

GRADES SHOWN IN RETENTION BASINS ARE DESIGN FINISHED GRADES. SHOULD THE CONTRACTOR OR ANY SUB-CONTRACTOR PLAN TO PLACE SPOIL DIRT FROM FOOTINGS, UTILITY TRENCHES, LANDSCAPING, SWIMMING POOLS, ETC. IN THE BASINS, THEN THE BASINS SHOULD BE SUFFICIENTLY OVER-EXCAVATED DURING THE ROUGH GRADING OPERATION TO ALLOW FOR THE PLACEMENT OF THE FILL OR LANDSCAPING MATERIALS.

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND CONFIRMING DEPTHS OF ALL THE EXISTING UTILITY LINES WITHIN PROPOSED RETENTION BASIN AREAS. IF THE BASIN CANNOT BE CONSTRUCTED PER PLAN BECAUSE OF CONFLICTS, THE CONTRACTOR SHOULD DISCUSS MODIFICATION OF BASIN CONFIGURATION WITH THE CITY INSPECTOR TO DETERMINE IF A PLAN REVISION OR A FIELD CHANGE IS REQUIRED.

ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTOR DITCHES, PIPES, PROTECTIVE BERMS, BARRIER WALLS, CONCRETE CHANNELS, OR OTHER MEASURES DESIGNED TO PROTECT ADJACENT BUILDINGS OR PROPERTY FROM STORM RUNOFF MUST BE COMPLETED PRIOR TO BUILDING CONSTRUCTION.

RETENTION BASIN SIDE SLOPES SHALL BE A MAXIMUM OF 4:1 UNLESS APPROVAL IS RECEIVED FROM THE PLAN REVIEWER FOR A STEEPER SLOPE.

RETAINING WALLS UNDER 3'-4" SHOWN ON THE G&D PLANS ARE TO BE REVIEWED AND PERMITTED BY THE CIVIL PLAN REVIEW STAFF AND INSPECTED BY THE CIVIL INSPECTIONS STAFF. REQUIRED RETAINING WALLS OVER 3'-4" REQUIRE A ZONING VARIANCE. WALLS OVER 3'-4" WILL BE REVIEWED, PERMITTED AND INSPECTED BY THE BUILDING SAFETY BRANCH OF THE DEVELOPMENT SERVICES DEPARTMENT UNDER SEPARATE SUBMITTAL BY THE APPLICANT.

CERTIFICATE OF OCCUPANCY (C OF O) AND/OR FINAL ELECTRICAL CLEARANCE FOR ANY BUILDING IS DENIED UNTIL ALL GRADING AND DRAINAGE IMPROVEMENTS ARE COMPLETED.

EXISTING OR NEWLY DAMAGED AND/OR DISPLACED CONCRETE CURB, GUTTER, SIDEWALK, OR DRIVEWAY SLAB THAT IS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED, AS NOTED BY CITY INSPECTORS, BEFORE FINAL ACCEPTANCE OF THE WORK.

ALL RAMPS MUST MEET ADA ACCESSIBILITY GUIDELINES (ADAAG) STANDARDS; 2% MAX. CROSS SLOPE AND 12:1 MAX. LONGITUDINAL SLOPES. TRUNCATED DOMES AS DETECTABLE WARNINGS ARE REQUIRED ON ALL ON-SITE RAMPS PER ADAAG SECTION 4.7.7. TRUNCATED DOMES AS DETECTABLE WARNINGS ARE ALSO REQUIRED ON ALL ON-SITE WALKS THAT CROSS OR ADJOIN A VEHICULAR WAY PER ADAAG SECTION 4.29.5.

SHOULD RETENTION BASINS FAIL TO DRAIN WITHIN 36-HOURS, THE OWNER IS RESPONSIBLE FOR INSTALLING ADDITIONAL DRYWELLS.

GENERAL NOTES (CONTINUED):

THE ENGINEERING DESIGN ON THESE PLANS ARE ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE CITY. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.

THE CITY OF PHOENIX POLICE DEPARTMENT ENFORCES LAWS REGULATING THE OPERATION OF COMMERCIAL VEHICLES. THIS INCLUDES ENFORCEMENT OF FEDERAL, STATE, COUNTY AND LOCAL LAWS AND ORDINANCES. QUESTIONS REGARDING COMMERCIAL VEHICLE ENFORCEMENT MAY BE DIRECTED TO THE COMMERCIAL VEHICLE ENFORCEMENT SUPERVISOR AT (602) 495-7813 (TRAFFIC BUREAU SOUTH) OR (602) 495-6784 (TRAFFIC BUREAU NORTH).

CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND DETAILS AND THE LATEST CITY OF PHOENIX SUPPLEMENT TO THE MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS.

PLAN APPROVAL IS VALID FOR TWELVE (12) MONTHS. IF APPROVAL EXPIRES, THE PLANS MUST BE RESUBMITTED FOR CITY UPDATE REVIEW AND APPROVAL.

COMPACTION SHALL COMPLY WITH M.A.G. SECTION 601.

GENERAL NOTES (CONTINUED):

OBSTRUCTIONS TO PROPOSED IMPROVEMENTS IN THE RIGHT-OF-WAY SHALL BE REMOVED OR RELOCATED BEFORE BEGINNING CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

THE ACTUAL POINT OF PAVEMENT MATCHING AND/OR TERMINATION SHALL BE DETERMINED IN THE FIELD BY THE CITY OF PHOENIX, DEVELOPMENT SERVICES DEPARTMENT FIELD INSPECTOR.

TREES AND SHRUBBERY IN THE RIGHT-OF-WAY THAT CONFLICT WITH PROPOSED IMPROVEMENTS SHALL NOT BE REMOVED WITHOUT APPROVAL OF THE CITY LANDSCAPE ARCHITECT OR HIS ASSIGNEES. THE PERMITTEE SHALL BE RESPONSIBLE FOR OBTAINING AUTHORIZATION TO REMOVE AND/OR RELOCATE SAID TREES OR SHRUBBERY BY CALLING THE PARKS AND RECREATION DEPARTMENT AT (602) 262-6501.

A PAVEMENT CUT SURCHARGE SHALL BE ASSESSED ON THIS PROJECT FOR ANY TRENCHING OR POTHOLING IN NEW ASPHALT PAVEMENT THAT IS LESS THAN 30 MONTHS OLD. SURCHARGE FEES ASSESSED ARE IN ADDITION TO THE REGULAR PERMIT FEES AND ARE OVER AND ABOVE ANY SPECIAL BACKFILL, COMPACTION, AND PAVEMENT REPLACEMENT STIPULATIONS THAT MAY BE IMPOSED AS A CONDITION OF PERMITTING. PAVEMENT CUT SURCHARGE FEES IS ASSESSED IN ACCORDANCE WITH SECTION 31-38 OF THE PHOENIX CITY CODE.

OFF-SITE DRAINAGE:

NO OFFSITE FLOW IMPACTS SITE.

OFF-SITE QUANTITIES:

SIDEWALK.....388SF

ELEVATION CERTIFICATE:

A FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) " ELEVATION CERTIFICATE" MUST BE COMPLETED FOR EACH STRUCTURE CONSTRUCTED IN A SPECIAL FLOOD HAZARD AREA (SFHA) PRIOR TO AN ELECTRICAL CLEARANCE FOR THAT STRUCTURE. ONE COPY OF THE "ELEVATION CERTIFICATE" IS TO BE SUBMITTED TO THE GENERAL BUILDING SAFETY INSPECTOR ON SITE AND ONE COPY IS TO BE SUBMITTED TO THE CITY OF PHOENIX FLOOD PLAIN MANAGER.

BENCHMARK:

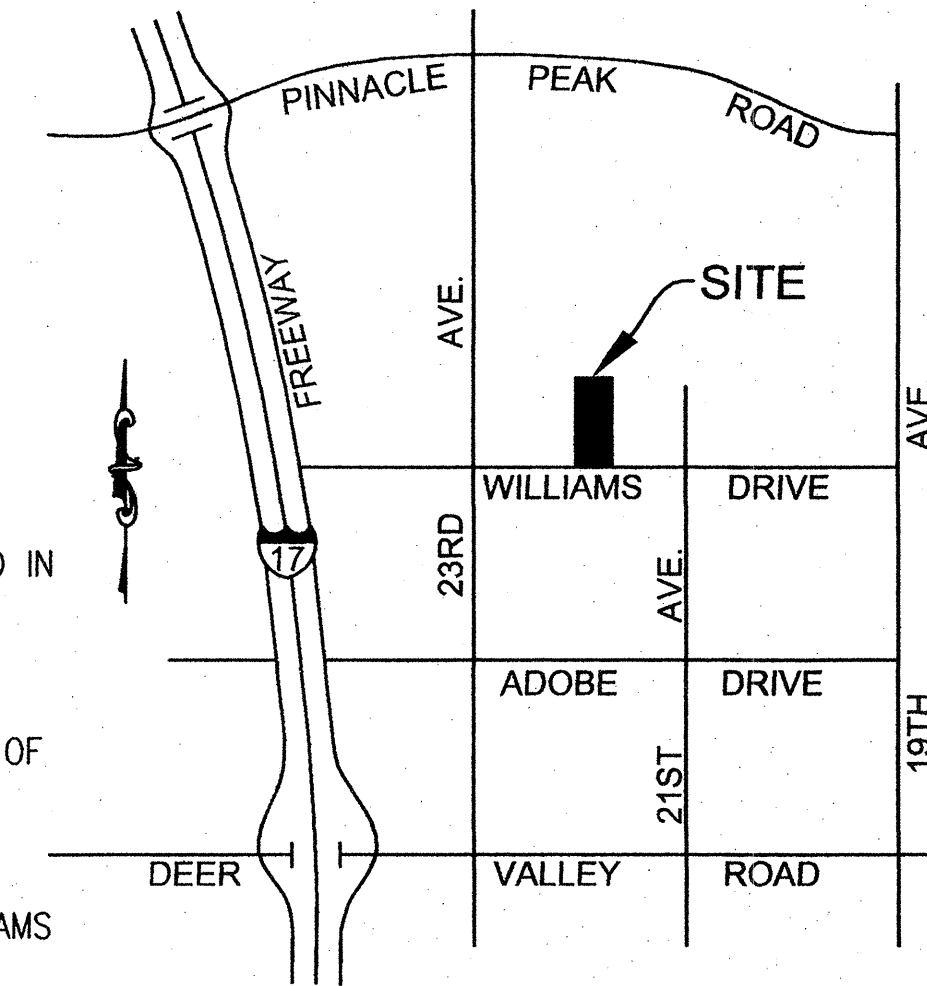
CHISLED BOX EAST SIDE OF REPUBLIC DRIVEWAY, NORTH SIDE OF WILLIAMS ROAD ELEV=1431.27, CITY OF PHOENIX DATUM

AS BUILT 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



VICINITY MAP
NO SCALE

EARTHWORK ESTIMATE:

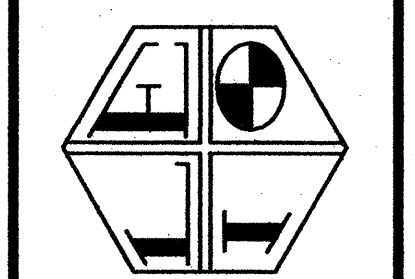
CUT.....962 CY
FILL.....2057 CY
IMPORT.....1095 CY

NOTE: THIS MAP OR PLAN IS NOT TO BE USED, RELIED UPON, OR CONSIDERED COMPLETE OR READY FOR CONSTRUCTION, UNLESS STAMPED BY A PROFESSIONAL FROM LEMME ENGINEERING.

COPYRIGHT NOTICE: THIS DRAWING IS COPYRIGHTED AND ANY ELECTRONIC COPY PROVIDED, IS FOR THE SPECIFIC USE INTENDED OF THE PROJECT AND MAY NOT BE UTILIZED FOR ANY OTHER PROJECTS UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM LEMME ENGINEERING.

PRELIMINARY
 APPROVED

PLANNING - CIVIL ENGINEERING - SURVEYING
LEMME ENGINEERING INC.
3608 WEST BETHANY HOME ROAD
PHOENIX, ARIZONA 85019
PHONE (602) 841-6804 FAX (602) 841-6351



GRADING & DRAINAGE PLAN
NATIONAL WATER WORKS
NORTH PHOENIX BRANCH
2140 W Williams Drive, Phoenix, AZ

OWNER/BUILDER:

YELLOWKNIFE BUILDING SYSTEMS
TOM PORTER
815 N. ALAMO CIRCLE
MESA, ARIZONA 85213
PH: 480-734-3457

ENGINEER:

LEMME ENGINEERING
DANIEL BERRYMAN
3608 W. BETHANY HOME ROAD
PHOENIX, AZ 85019
TEL:(602)841-6904
FAX:(602)841-6351

SHEET INDEX:

COVER.....SHEET 1
PLAN.....SHEET 2

ACREAGE:

NET = 2.70 ACRES

KIVA #06-4203
PRE-APP #0604020
QS # 44-24
CCPR #0700632

CALL TWO WORKING DAYS BEFORE YOU DIG
802-263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

DESIGNED BY:DB

DRAWN BY:

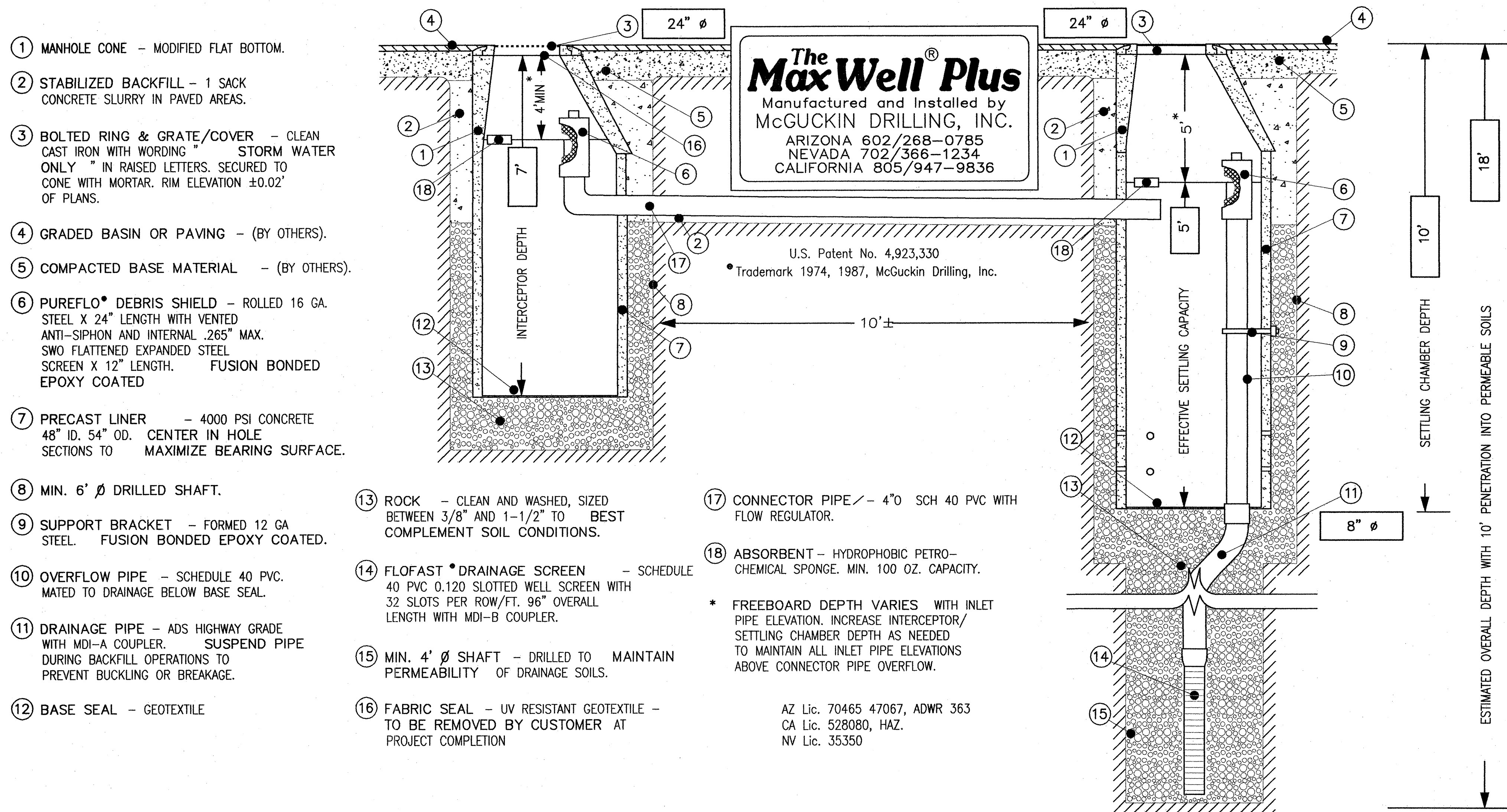
SCALE:
HORIZONTAL=1"=40'
VERTICAL= 1"=4'

SHEET 1 OF 2

DATE 05-02-07

W.O. 06-735

MaxWell Plus Drainage System Detail And Specifications



- 1 MANHOLE CONE - MODIFIED FLAT BOTTOM.
- 2 STABILIZED BACKFILL - 1 SACK CONCRETE SLURRY IN PAVED AREAS.
- 3 BOLTED RING & GRATE/COVER - CLEAN CAST IRON WITH WORDING "STORM WATER ONLY" IN RAISED LETTERS. SECURED TO CONE WITH MORTAR. RIM ELEVATION ±0.02' OF PLANS.
- 4 GRADED BASIN OR PAVING - (BY OTHERS).
- 5 COMPACTED BASE MATERIAL - (BY OTHERS).
- 6 PUREFLO® DEBRIS SHIELD - ROLLED 16 GA. STEEL X 24" LENGTH WITH VENTED ANTI-SIPHON AND INTERNAL .265" MAX. SWO FLATTENED EXPANDED STEEL SCREEN X 12" LENGTH. FUSION BONDED EPOXY COATED
- 7 PRECAST LINER - 4000 PSI CONCRETE 48" ID. 54" OD. CENTER IN HOLE 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 - SCHEDULE 40 PVC. MATED TO DRAINAGE BELOW BASE SEAL.
- 11 DRAINAGE PIPE - ADS HIGHWAY GRADE WITH MDI-A COUPLER. SUSPEND PIPE DURING BACKFILL OPERATIONS TO PREVENT BUCKLING OR BREAKAGE.
- 12 BASE SEAL - GEOTEXTILE

- 13 ROCK - CLEAN AND WASHED, SIZED BETWEEN 3/8" AND 1-1/2" TO BEST COMPLEMENT SOIL CONDITIONS.
- 14 FLOFAST® DRAINAGE SCREEN - SCHEDULE 40 PVC 0.120 SLOTTED WELL SCREEN WITH 32 SLOTS PER ROW/FT. 96" OVERALL LENGTH WITH MDI-B COUPLER.
- 15 MIN. 4' Ø SHAFT - DRILLED TO MAINTAIN PERMEABILITY OF DRAINAGE SOILS.
- 16 FABRIC SEAL - UV RESISTANT GEOTEXTILE - TO BE REMOVED BY CUSTOMER AT PROJECT COMPLETION
- 17 CONNECTOR PIPE - 4" SCH 40 PVC WITH FLOW REGULATOR.
- 18 ABSORBENT - HYDROPHOBIC PETRO-CHEMICAL SPONGE. MIN. 100 OZ. CAPACITY.

The MaxWell Plus
Manufactured and Installed by
McGUCKIN DRILLING, INC.
ARIZONA 602/268-0785
NEVADA 702/366-1234
CALIFORNIA 805/947-9836

U.S. Patent No. 4,923,330
Trademark 1974, 1987, McGuckin Drilling, Inc.

* FREEBOARD DEPTH VARIES WITH INLET PIPE ELEVATION. INCREASE INTERCEPTOR/SETTLING CHAMBER DEPTH AS NEEDED TO MAINTAIN ALL INLET PIPE ELEVATIONS ABOVE CONNECTOR PIPE OVERFLOW.

AZ Lic. 70465 47067, ADWR 363
CA Lic. 528080, HAZ.
NV Lic. 35350