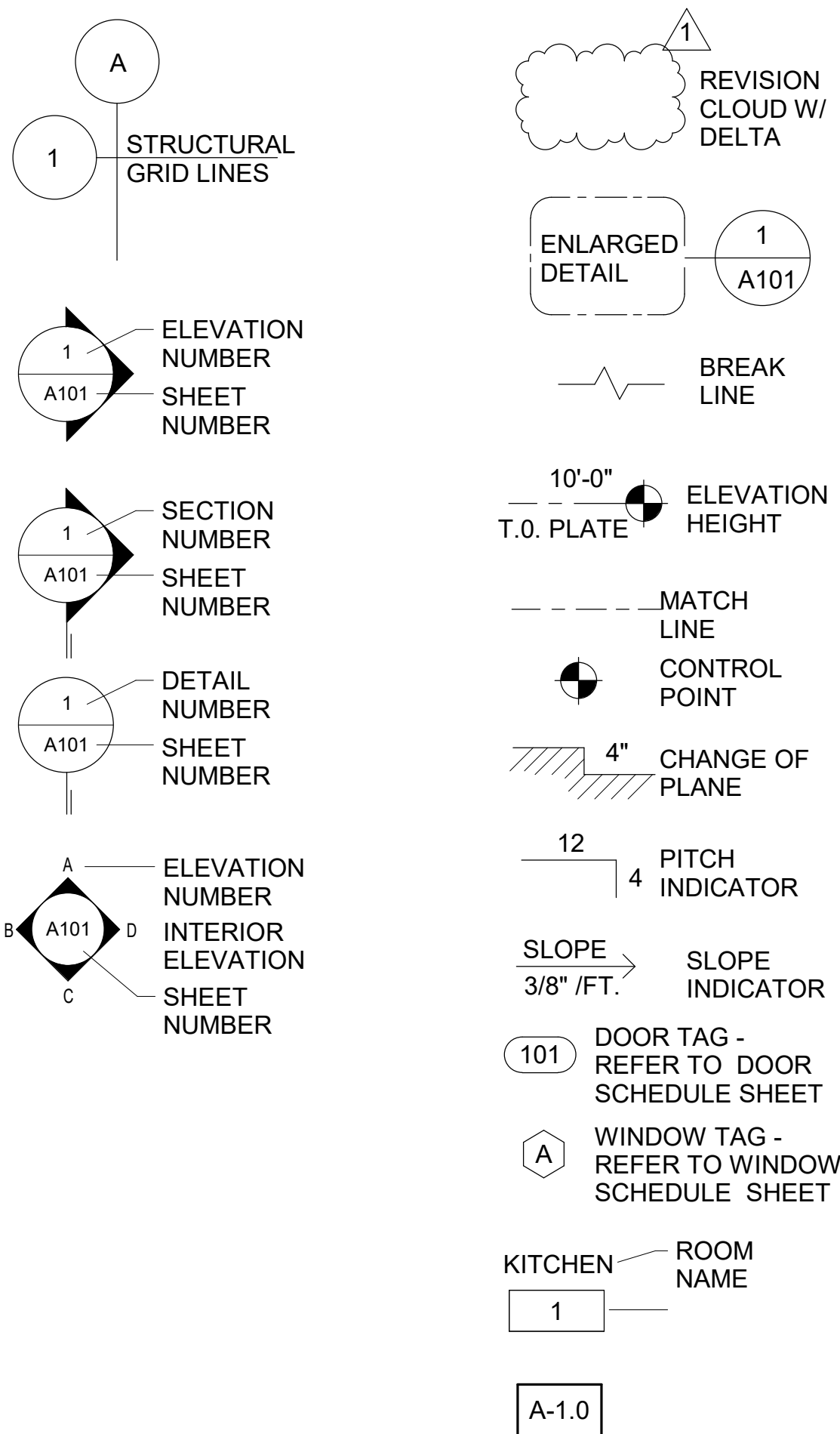


## VIEW FRONT



## SYMBOLS



## DRAWING TITLE

SCALE: 0" = 1'-0"



## SHEETS INDEX

NO.	SHEETS	SHT ISSUE DATE	REV DELTA <1>	REV ISSUED	REV DATE
TC-1.0	COVER SHEET	10.22.2025		No	
S-1.0	SITE PLAN SECTION KEY	10.22.2025		No	
S-1.1	SITE PLAN SECTIONS	10.22.2025		No	
E-1.0	EXTERIOR LIGHTING	10.22.2025		No	
E-3.1	EXTERIOR LIGHTING CUT SHEETS	10.22.2025		No	

## DEFERRED SUBMITTALS

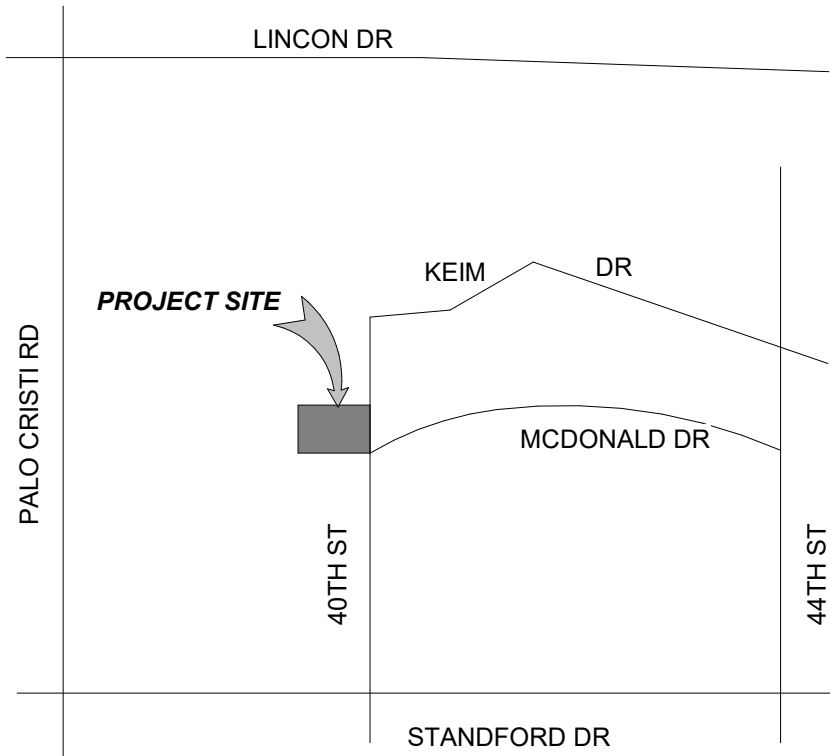
- MANUFACTURED ROOF TRUSSES
- FIRE SPRINKLERS

## SPECIAL INSPECTIONS

SEE STRUCTURAL DRAWINGS FOR REQUIRED SPECIAL INSPECTIONS.

## VICINITY MAP

3924 E BETHANY HOME ROAD  
PARADISE VALLEY, AZ 85253  
MARICOPA COUNTY



## PROJECT INFORMATION

3924 E BETHANY HOME ROAD  
PARADISE VALLEY, AZ 85253  
MARICOPA COUNTY

ASSESSOR PARCEL NUMBER: 170-01-006

## LEGAL DESCRIPTION:

LOT 5, ARROYO HEIGHTS, ACCORDING TO BOOK 110 OF MAPS,  
PAGE 50, RECORDS OF MARICOPA COUNTY, ARIZONA.

TRACT: --

LOT: 5

GROSS SITE AREA: 43,970SF / 1.00 ACRES

LOT COVERAGE: --

BUILDING HEIGHT: 24' FT &lt;ALLOWED&gt; 24' FT

USE TYPE: R3

NUMBER OF STORIES: 2

## FLOOR AREA RATIO (FAR)

1. TOTAL LOT AREA:	43,970SF	Square Feet
2. MAIN HOUSE:		
a. MAIN LVL. LIVABLE	5,334 SF	Square Feet (including all overhangs/eaves, covered patios etc.)
b. UPPER LVL. LIVABLE	429 SF	Square Feet (including all overhangs/eaves, covered patios etc.)
c. MAIN LVL. NON-LIVABLE	1,834 SF	Square Feet (portions of non-fully subterranean basement)
d. UPPER LVL. NON-LIVABLE	14 SF	Square Feet
e. COVERED PATIOS	587 SF	Square Feet
SUB-TOTAL A	8,198 SF	Square Feet (Add Lines a,b,c,d,e, & f)
3. DETACHED CASITA:		
a. LIVABLE	1,092 SF	Square Feet (including all overhangs/eaves, covered patios etc.)
b. NON-LIVABLE:	56 SF	Square Feet (i.e. shade structures, ramadas trellis, etc.)
C. COVERED PATIO	0 SF	Square Feet (i.e. shade structures, ramadas trellis, etc.)
D. MISC. TRELLISES	229 SF	Square Feet
E. ROOF EAVES	0 SF	Square Feet
SUB-TOTAL B	1,377 SF	Square Feet (Add Lines a,b,c, & d)
F. TOTAL LIVABLE	6,855 SF	Square Feet
G. TOTAL NON-LIVABLE	1,904 SF	Square Feet
H. TOTAL COV/RD. PATIO	701 SF	Square Feet
I. TOTAL COV/RG.	9,689 SF	Square Feet
4. TOTAL FLOOR AREAS:		
TOTAL FLOOR AREA	9,689 SF	Square Feet (Add SUB-TOTAL A & SUB-TOTAL B)
5. TOTAL AREA RATIO (FAR):		
FAR	22.03 %	% (Divide Line 4 by Line 1)

## ZONING &amp; BUILDING CODE SUMMARY

CODES	2015 IBC
	2015 IRC
	2015 IMC
	2015 IECC
	2015 IPC
	2014 NEC

PLUS CITY APPLICABLE CODES OR AMENDMENTS

ZONE R-43

PARCEL ZONING R-43

GENERAL PLAN USE RESIDENTIAL

TYPE OF CONSTRUCTION TYPE V-B

SETBACKS PER PER R-43 ZONING

FRONT YARD - 40' FT

SIDE YARD - 20' - 40' FT

REAR YARD - 40' FT

## APPROVAL STAMP

CUSTOM NEW HOME  
WOLFSWINKEL RESIDENCE

3924 E BETHANY HOME ROAD  
PARADISE VALLEY, AZ 85253  
MARICOPA COUNTY

DDG  
DUNCAN DESIGN GROUP, LLC  
3723 WEST BARNES LANE  
PHOENIX, ARIZONA 85051  
PHONE: 602.841.1284  
FAX: 602.841.7517  
DUNCANDESIGNGROUPPHX@GMAIL.COM

DATE: 10.22.2025

No.	Description	Date

SHEET NAME:

COVER SHEET

SHEET NUMBER:

TC-1.0

PROJECT #:

\*\*\*



**1 SITE PLAN SECTION KEY**  
1" = 20'-0"



CUSTOM NEW HOME  
WOLF-SWINKEL RESIDENCE  
3924 E BETHANY HOME ROAD  
PARADISE VALLEY, AZ 85253  
MARICOPA COUNTY

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DATE: 10.22.2025

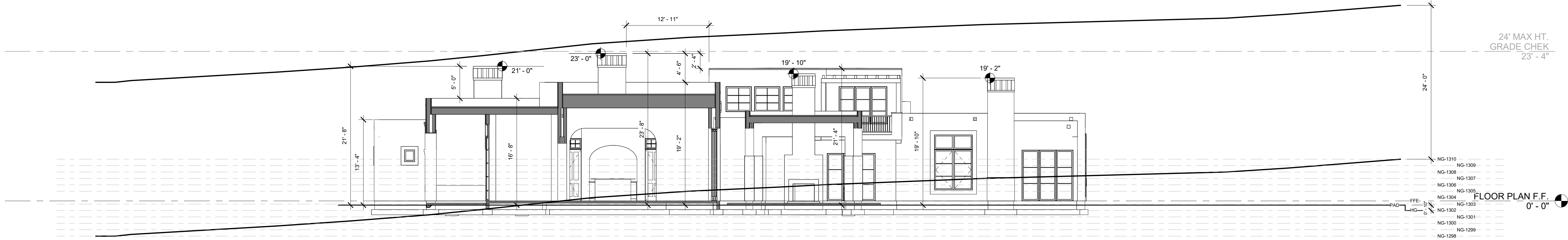
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SITE PLAN SECTION KEY

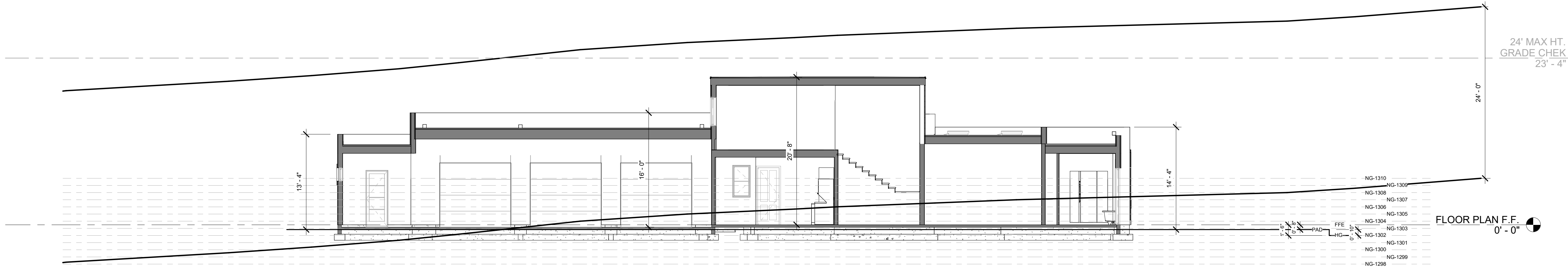
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**S-1.0**  
PROJECT #:

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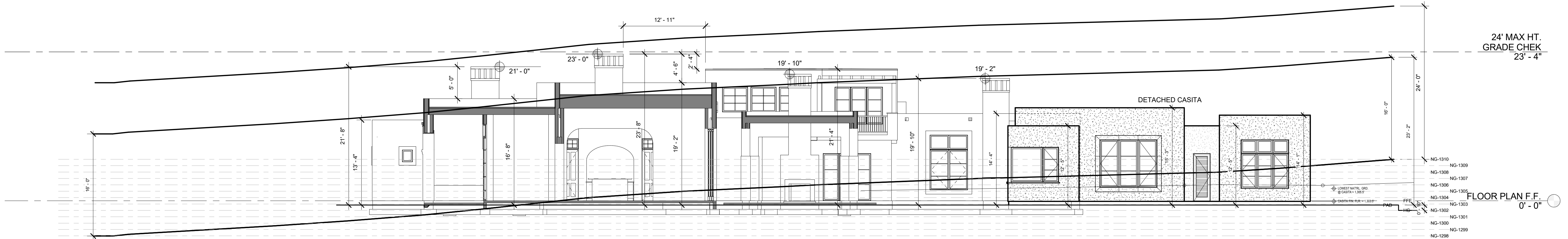
1 Site Section 1  
1/8" = 1'-0"



2 Site Section 2  
1/8" = 1'-0"



3 SITE SECTION 3  
1/8" = 1'-0"



CUSTOM NEW HOME  
WOLF-SWINKEL RESIDENCE

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PARADISE VALLEY, AZ 85253  
MARICOPA COUNTY

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PHONE: 602.841.1284  
FAX: 602.841.7517  
DUNCANDesignGroupPHX@gmail.com

DATE: 10.22.2025

No.	Description	Date

SHEET NAME:  
SITE PLAN SECTIONS

SHEET NUMBER:  
S-1.1

PROJECT #:

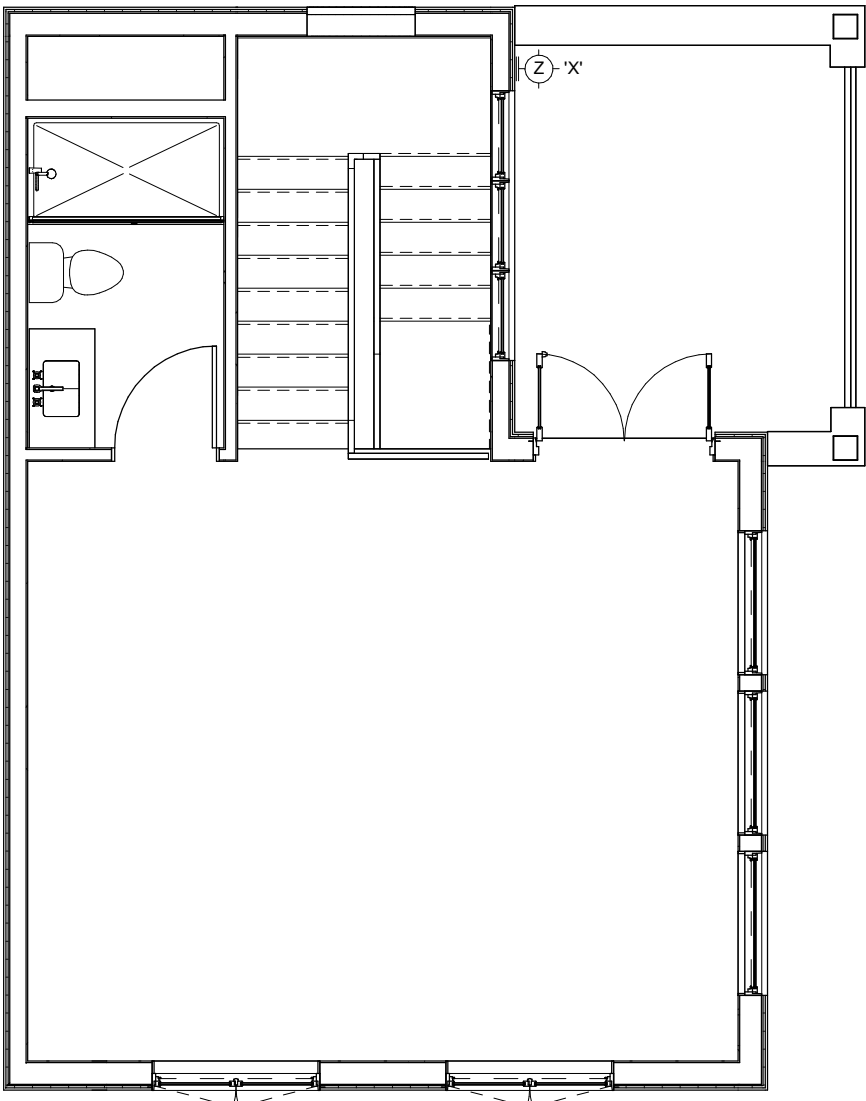
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1 EXTERIOR LIGHTING PLAN  
N.T.S

LIGHTING FIXTURE SYMBOLS LEGEND	
MARK	FIXTURE DESCRIPTION
○ A	4" RECESSED ROUND LED WIDE FLOOD FIXTURE - 'Halo' ML4D; 09; FL; 927; E; TIR45WFL55; TL41R; MW; H995ICAT; 120volt
⬆ B	4" RECESSED ROUND LED WALL WASH FIXTURE - 'Halo' ML4D; 09; NFL; 927; E; TIR50AWW25; TL45R; MW; H995ICAT; 120volt
⊙	4" RECESSED ROUND LED NARROW FLOOD FIXTURE - 'Halo' ML4D; 09; NFL; 927; E; TIR45NFL25; TL41R; MW; H995ICAT; 120volt
○	RECESSED MINI LED SPOT FIXTURE - 'Juno' MD1LG2 (RD)-27K-FL-WH; 4.8W, 12V, 2 inch recessed dry location ic-rated miniature LED downlight.
○ AW	3" ADJUSTABLE ROUND PLASTER-IN RECESSED LED WIDE FLOOD FIXTURE - 'Element' E3R; LF or WC as occurs; LH; 927; 6; A-I & E3R; L; F-OW; & E3TREFS3B; 120volt - FLANGELESS TRIM RED'S. COORD.
⬆ J	5" RECESSED LED FIXTURE - 'Halo' H550ICAT; ML5612B37; 5925C Clear Cone; Dimming:ELV; 17.5W; 120volt; INTEGRAL LED; 2725K, 90CRI
⬆ K	4" RECESSED ROUND LED SHWR. LENS FIXTURE - 'Halo' ML4D; 09; FL; 927; E; L100 SERIES; TL43R.2G; MWBB; H995ICAT; 120volt
□	6" SQR. SURFACE MOUNTED LED CLOSET FIXTURE- 'Philips' - S6S927K10 - White Fin.; 14.2w 120v 2700K Warm White LED integral to fixture.
□	PRESSED GLASS 9" SQR. SURFACE MOUNTED LED CLOSET FIXTURE- 'Tech Lighting' - 700BX-L-S-LED - Satin Nickel; 15w 120v 2700K Warm White LED integral to fixture.
N	LED STRIP LIGHT e.g. UNDERCABINET, ETC.; 'Environmental Lights'; ww2216-240-10-reel - 16.4' peel & stick led ribbon; 5.1wft.24vDC; LED: 2700K, 95+CRI INTEGRAL TO FIXTURE CS106 recessed channel + frosted lens; track clips and end caps req'd.; Utilize appropriate remote 48w, 96w or 288w dimmable driver; Install per mfr.
V	1x4' LED PREMIUM PANEL TROFFER - CREE C-TR-A-FP14-HE-50L-35K-WH; 120v; LED: 3500K, INTEGRAL TO FIXTURE
⬆ W	INGROUND SQR. RECESSED LED UPLIGHT - 'LUXR' flush to grade, M4; LS; I; AB2 (vrfy.); 36; 27; HIACAN. Req's remote transformer. Coordinate w/ concrete pour & G.C. for level install. 6" from fin. material.
⬆	PLASTERED IN VERTICAL MOUNTED RECESSED WALL LIGHT - 'WAC Lighting' WL-LED200TR-AM-WT; LED integral to fixture. Vert. mount +15" to +18" A.F.F. as shown on plans; illuminate downward.
⬆	SURFACE MOUNT DUAL FLOOD LIGHT w/ PHOTOCELL - LITHONIA OLF-2RH-40K-120-MO-B2; Bronze; NON-DIM; 19w 120v; LED: 4000K, 75CRI, INTEGRAL TO FIXTURE
⬆	REINFORCED J-BOX FOR FUTURE CHANDELIER OR CEILING FAN -
⬆	SURFACE MOUNT ADJUSTABLE SPOT FIXTURE - 'Lumiere' 203-50MR16 -12V-BZ; TM05-BZ; LVR/Louwer. Requires remote 12V transformer. Aim fixture downward @ ext. (SORAA #00247 MR16-65-B01-12-927-25)
⬆	WALL MOUNTED PICTURE LIGHTS - provide recessed wall outlet at 'specified' height in inches (VERIFY HGT. w/ OWNER & INT. DESIGNER)
⬆ X	Decorative wall mounted light fixtures supplied by Owner and assembled / installed by Electrical Contractor. See schedule.
⬆ X	Decorative ceiling mounted light fixtures supplied by Owner and assembled / installed by Electrical Contractor. See schedule.



3 SEC. FLOOR EXTERIOR LIGHTING PLAN  
N.T.S

CUSTOM NEW HOME  
WOLFSPINKEL RESIDENCE  
3924 E BETHANY HOME ROAD  
PARADISE VALLEY, AZ 85253  
MARICOPA COUNTY

DDG  
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3723 WEST BARNES LANE  
PHOENIX, ARIZONA 85051  
PHONE: 602.841.1284  
FAX: 602.841.7517  
DUNCANDesignGroupPHX@gmail.com

DATE: 10.22.2025

No.	Description	Date

SHEET NAME:  
EXTERIOR LIGHTING

SHEET NUMBER:  
E-1.0  
PROJECT #:

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GENERAL NOTES:

- THESE CONSTRUCTION DOCUMENTS, INCLUDING ALL PLANS, NOTES, DETAILS AND SPECIFICATIONS ARE INTENDED TO FACILITATE THE INSTALLATION CONTRACTOR BY PROVIDING GENERAL GUIDELINES FOR DESIGN INTENT. IT IS THE GOAL OF THE DOCUMENTS THAT THE WORK IS TO BE COMPLETED WITHOUT CHANGE ORDERS. ALL QUANTITIES SHOWN IN THE DOCUMENTS ARE ESTIMATES ONLY AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL SUPPLY ALL MATERIALS, LABOR AND EQUIPMENT IN ORDER TO FULFILL THE INTENT OF THE DESIGN DRAWINGS.
- INTERPRETATION OF THE PLANS AND SPECIFICATIONS SHALL BE MADE BY THE "AUTHOR" OR "ARCHITECT/ENGINEER-OF-RECORD" OF THE RESPECTIVE DOCUMENT AND SHALL BE CONSIDERED FINAL. ANY POSSIBLE AMBIGUITY SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR PRIOR TO SUBMITTING FORMAL BIDS. ALL CLARIFICATIONS SHALL BE PREPARED IN WRITING BY THE "ARCHITECT/ENGINEER-OF-RECORD" PRIOR TO BIDDING. THE CONTRACTOR SHALL ACCEPT THE INTERPRETATION OF THE "ARCHITECT/ENGINEER-OF-RECORD" AS THE CORRECT AND FINAL INTERPRETATION.
- ANY INCIDENTAL INSTALLATION PROCEDURE, MATERIAL OR EQUIPMENT, NOT MENTIONED IN THESE CONSTRUCTION DOCUMENTS, THE SPECIFICATIONS NOR SHOWN ON THE PLANS, WHICH MAY BE NECESSARY FOR COMPLETION AND SATISFACTORY OPERATION OF THE DESIGN SYSTEM SHALL BE FURNISHED AND INSTALLED (AS BASED ON INDUSTRY STANDARDS) AS THOUGH SHOWN OR PROVIDED FOR.
- EXISTING CONDITIONS AND BASE INFORMATION ARE BASED ON PLANS PREPARED BY THE CIVIL ENGINEER.
- THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE LOCATIONS OF EXISTING AND FUTURE UNDERGROUND SERVICES AND IMPROVEMENTS WHICH MAY CONFLICT WITH THE WORK TO BE DONE. NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE IMMEDIATELY SHOULD A CONFLICT ARISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS AND SHALL NOTIFY ALL UTILITY COMPANIES WITH UTILITIES ON SITE PRIOR TO THE CONSTRUCTION OF THE PROJECT.
- FOR UTILITY COORDINATION, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES 48 HOURS PRIOR TO START OF CONSTRUCTION (DEPENDING ON AREA OR JURISDICTION), THE CONTRACTOR IS RESPONSIBLE.
- THESE NOTES ARE TO BE USED FOR GENERAL REFERENCE IN CONJUNCTION WITH AND AS A SUPPLEMENT TO THE WRITTEN SPECIFICATIONS, APPROVED ADDENDUMS, AND THE CHANGE ORDERS AS ASSOCIATED WITH THESE CONSTRUCTION DOCUMENTS.
- SHOULD THE CONTRACTOR HAVE ANY QUESTIONS REGARDING THESE CONSTRUCTION DOCUMENTS OR SHOULD THERE BE ANY DISCREPANCIES, HE SHALL CONTACT THE LANDSCAPE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING FURTHER.
- ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS AND PER GOVERNING CODES AND/OR ORDINANCES.
- THE CONTRACTOR SHALL PROVIDE BARRICADES AND TRAFFIC CONTROL ALONG PUBLIC STREETS, IF REQUIRED, DURING INSTALLATION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPORT TO THE LANDSCAPE ARCHITECT AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND FIELD CONDITIONS PRIOR TO THE START OF WORK.
- BEFORE WORK BEGINS ON THE PROJECT, THE CONTRACTOR SHALL REVIEW THE PROJECT WITH THE LANDSCAPE ARCHITECT AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE.
- THE LANDSCAPE ARCHITECT AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE SHALL APPROVE ANY OR ALL CHANGES PRIOR TO THE START OF WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND COORDINATING EXISTING SITE CONDITIONS.
- THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE LOCAL, STATE, AND/OR FEDERAL LAWS AND/OR REGULATIONS PERTAINING TO THE PROJECT.
- THE CONTRACTOR SHALL PROPERLY COORDINATE HIS WORK WITH OTHER CONTRACTOR'S WORK PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT EXISTING IMPROVEMENTS AND THE PUBLIC FROM DAMAGE THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGES IMPOSED, UNINTENTIONALLY OR ACCIDENTALLY TO EXISTING UTILITIES, STRUCTURES, WALLS, OR OTHER AMENITIES, DUE TO THE ACTION OF THE CONTRACTOR, CONTRACTOR'S EMPLOYEES AND/OR THE CONTRACTOR'S SUBCONTRACTORS. DAMAGE OCCURRED DURING THE CONTRACTOR'S OPERATION SHALL BE REPAIRED, AT THE EXPENSE OF THE CONTRACTOR, TO THE SATISFACTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE.
- MATCH GRADES, LAYOUT AND ELEVATIONS OF ADJOINING LANDSCAPE WORK BY OTHERS. NOTIFY THE LANDSCAPE ARCHITECT OF CONFLICTS BEFORE PROCEEDING WITH CONSTRUCTION.

PLANTING GENERAL NOTES:

- THE CONTRACTOR SHALL REVIEW PLANTING PLAN WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- THE LANDSCAPE ARCHITECT OR THEIR REPRESENTATIVE RESERVES THE RIGHT TO REFUSE ANY PLANT MATERIALS THEY DEEM UNACCEPTABLE. SEE SPECIFICATIONS.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL PLANT MATERIAL AS SPECIFIED ON THE PLANTING PLANS. HOWEVER, SHOULD THE PLANT MATERIAL BE TEMPORARILY UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AND INSTALL 5 GALLON NURSERY BUCKETS WITH IRRIGATION AT EACH PLANT LOCATION. AS THE PLANT MATERIAL BECOMES AVAILABLE, THE 5 GALLON BUCKETS SHALL BE REMOVED AND PLANT MATERIAL INSTALLED.
- ANY AND ALL SUBSTITUTIONS TO BE APPROVED BY THE LANDSCAPE ARCHITECT.
- LOCATE PLANTS AWAY FROM SPRINKLER HEADS, LIGHT FIXTURES AND OTHER OBSTRUCTIONS.
- FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE.
- PLANTING AND IRRIGATION DESIGN MAY BE MODIFIED TO ADAPT TO WALK CONFIGURATIONS THAT DIFFER FROM THESE PLANS, OR BECAUSE OF GRADE LIMITATIONS ON SITE. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF THESE MODIFICATIONS.
- WATER TEST ALL TREE PLANTING HOLES PRIOR TO PLANTING. IF TREE HOLE DOES NOT DRAIN, DO NOT PLANT, SEE HARDPAN DETAIL.
- REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON DRAWINGS.
- TREES SHALL BE PLANTED A MINIMUM OF 10'-0" FROM STREET LIGHTS / FIRE HYDRANTS, 6'-0" FROM EDGE OF UNDERGROUND PIPELINES AND A MINIMUM OF 4'-0" FROM WALKS, CURBS AND WALLS. SHRUBS SHALL BE PLANTED A MINIMUM OF 2'-0" FROM CURB AND WALKS. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF CONFLICTS BEFORE PROCEEDING WITH INSTALL.
- ALL SPECIMEN TREES, SHRUBS AND CACTI SHALL BE FIELD LOCATED BY LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ROOT BARRIER PANELS AT ALL TREES WITHIN 7'-0" FEET OF HARDSCAPE ELEMENTS INCLUDING (BUT NOT LIMITED TO) SIDEWALKS, ASPHALT, CONCRETE SLABS / FOOTINGS AND STRUCTURES. CONTRACTOR SHALL SUBMIT SPECIFICATION SHEETS OF PROPOSED ROOT BARRIER PANELS TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL INSTALL ARBOR GUARDS AT ALL TREES LOCATED IN TURF AREAS.
- ON-SITE AND OFF-SITE TOPSOIL SHALL CONFORM TO CONTENT REQUIREMENTS AS SPECIFIED IN PART 2 OF THE PLANTING SPECIFICATIONS. AGRONOMY TEST SUBMITTALS ARE REQUIRED FOR ALL MATERIAL USED FOR TOPSOIL AND BACKFILL. SUBMIT REPORT TO LANDSCAPE ARCHITECT FOR REVIEW.
- ALL PLANT MATERIAL SHALL BE IN COMPLIANCE WITH THE JURISDICTIONS STANDARDS FOR NURSERY STOCK. THE CONTRACTOR TO NOTIFY THE LANDSCAPE ARCHITECT IF THEY CANNOT FIND THESE, OR REQUIRE CLARIFICATIONS PERTAINING TO THE STANDARDS.
- ALL PLANT MATERIAL NOT IN COMPLIANCE WITH THESE STANDARDS WILL BE DEEMED UNACCEPTABLE. THE CONTRACTOR IS RESPONSIBLE TO REPLACE.
- THE CONTRACTOR SHALL PROVIDE MAINTENANCE FOR ALL PLANT MATERIAL FROM THE TIME OF INSTALLATION THROUGH SUBSTANTIAL COMPLETION.
- CACTI SHALL BE PLANTED A MINIMUM OF 3'-0" AWAY FROM ALL PEDESTRIAN ROUTES.
- CACTI SHALL BE WELL ROOTED AND NON-SCARRED.
- PLANT MATERIAL MARKED 'SALVAGE' SHALL BE SELECTED FROM ON-SITE SALVAGE INVENTORY. ALL MATERIAL SELECTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND/OR OWNER'S AUTHORIZED REPRESENTATIVE.
- IN DISTURBED AREAS INDICATED TO RECEIVE VEGETATION HYDROSEED AND/OR PLANTING, THE CONTRACTOR SHALL MATCH EXISTING NATURAL DESERT STONE GROUND COVER CONDITIONS ADJACENT TO THE PROJECT.
- NATIVE REVEGETATION AREAS AND PLANTER BEDS SHALL BE TREATED WITH PRE-EMERGENT AS PER MANUFACTURER'S INSTRUCTIONS. RE-APPLY AS NECESSARY TO ELIMINATE INVASIVE WEEDS. REMOVE ALL DEAD DEBRIS.
- THE CONTRACTOR SHALL PROVIDE A 50'-0" BY 50'-0" TYPICAL MOCK-UP OF NATIVE REVEGETATION AREAS FOR REVIEW BY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE.
- ALL TREE STAKING SHALL CONFORM TO THE PLANTING DETAILS OR AS NOTED IN THE SPECIFICATIONS. THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE SHALL REVIEW TYPICAL TREE STAKING PRIOR TO FINAL ACCEPTANCE.

INERT GENERAL NOTES:

ANGULAR GRANITE RIP-RAP:

- INSTALL GRANITE RIP-RAP IN ALL DRAINAGE SWALES, AND WHERE INDICATED ON PLANS (TYPICAL). REFER TO MATERIALS SCHEDULE / PLANTING LEGEND FOR COLOR AND SIZE OF GRANITE RIP-RAP.
- THE CONTRACTOR SHALL SUBMIT SAMPLES TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION.

DECOMPOSED GRANITE / BARK MULCH:

- DECOMPOSED GRANITE / BARK MULCH IS REQUIRED IN ALL PLANTING AREAS, EXCEPT AREAS OF TURF AND GRANITE RIP-RAP, AND SHALL EXTEND UNDER PLANT MATERIAL UNLESS NOTED OTHERWISE ON PLANS. REFER TO MATERIALS SCHEDULE / PLANTING LEGEND.
- ALL PLANTING AREAS SHALL RECEIVE A 2" MINIMUM LAYER OF DECOMPOSED GRANITE / BARK MULCH, THROUGHOUT (TYPICAL).
- CONTRACTOR SHALL SUBMIT SAMPLES TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

IRRIGATION GENERAL NOTES:

- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FULL IRRIGATION COVERAGE OF ALL PLANT MATERIAL.
- THE LANDSCAPE CONTRACTOR SHALL SUBMIT FULL PIPING PLANS, AFTER FIELD VERIFICATION, DEPICTING POINT OF CONNECTION, METER LOCATION AND SIZE, BACKFLOW PREVENTER LOCATION AND SIZE, AND PIPE ROUTING AND SIZES.
- THE LANDSCAPE CONTRACTOR SHALL INSTALL THE SPECIFIED SYSTEM IN ACCORDANCE WITH THE ATTACHED SCHEDULES, NOTES, DETAILS, AND SPECIFICATIONS.
- THE LANDSCAPE CONTRACTOR TO SITE VERIFY PRESSURE AND NOTIFY LANDSCAPE ARCHITECT OF ANY DIFFERENCES PRIOR TO INSTALLATION OR ORDERING OF MATERIALS. IF CONTRACTOR FAILS TO NOTIFY LANDSCAPE ARCHITECT, HE IS FINANCIALLY RESPONSIBLE FOR ANY NECESSARY SYSTEM ALTERATIONS THAT RESULT.
- THE LANDSCAPE CONTRACTOR SHALL FIELD VERIFY EXISTING TAP LOCATIONS, INSTALL NEW METERS PER THE ATTACHED IRRIGATION SCHEDULE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING OF ASPHALT AND CONCRETE AS REQUIRED FOR SLEEVE INSTALLATION ACCORDING TO THE IRRIGATION SCHEDULE.
- CONTROLLER TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS. CONTROLLER SIZE AND QUANTITIES TO BE DETERMINED BY THE VALVE REQUIREMENTS AND POINTS OF CONNECTION. INSTALL ONE (1) CONTROLLER AT EACH POINT OF CONNECTION.
- INSTALL PVC MAINLINE AND LATERALS ACCORDING TO THE IRRIGATION AND PIPING SCHEDULES.
- ALL VALVE FLOWS SHALL NOT EXCEED MANUFACTURER'S SPECIFICATIONS.
- VALVE BOXES SHALL BE SQUARE TO ADJACENT WALKS OR CURBS AND FLUSH WITH THE FINAL GRADE.
- ALL PIPE TO BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS AND ASTM STANDARD D 2774.
- THE LANDSCAPE CONTRACTOR SHALL INSTALL GREEN VALVE BOXES IN TURF AREAS AND TAN VALVE BOXES IN DECOMPOSED GRANITE AREAS (TYPICAL).
- REFER TO THE IRRIGATION NOTES FOR THE CALCULATED PRESSURE AT THE WATER METER. REFER TO NOTE #4 IF PRESSURE DIFFERS FROM THAT NOTED.
- THE LANDSCAPE CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING ON PROJECT TO VERIFY INSTALLATION CONDITIONS.
- PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL CONTACT BLUE STAKE TO VERIFY LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY HIS WORK, AND HE SHALL BE RESPONSIBLE FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF HIS IRRIGATION INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPENSATING THE OWNER AND/OR THE OWNER'S REPRESENTATIVE FOR ANY DESIGN CHANGES MADE AS A RESULT OF DEVIATION BY THE CONTRACTOR FROM THE PLANS AND SPECIFICATIONS OR DUE TO ERRORS, FAULTY MATERIAL OR FAULTY WORKMANSHIP.
- INSTALL ALL MAINLINES WITH A MINIMUM OF 20' OF COVER.
- INSTALL ALL LATERALS WITH A MINIMUM OF 12" OF COVER.
- ALL PIPE TO BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS AND ASTM STANDARD D 2774.
- ALL THREADED JOINTS TO BE COATED WITH TEFLON TAPE UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. USE LIQUID TEFLON ON METAL PIPE THREADS ONLY.
- FLUSHING OF ALL LINES PRIOR TO INSTALLATION OF SPRINKLERS AND EMITTERS IS REQUIRED.
- INSTALL ALL SPRINKLERS, EMITTERS, AND RELATED MATERIAL PER IRRIGATION SYSTEM SPECIFICATIONS AND DETAILS.
- INSTALL ALL ELECTRICAL JOINTS WITH 3-M WATERPROOF CONNECTORS.
- ALL ELECTRICAL CONNECTIONS SHALL BE MADE AT THE REMOTE-CONTROL VALVE BOXES, CONTROLLER ENCLOSURES AND VALVE BOXES SPECIFICALLY FOR ELECTRICAL CONNECTIONS.
- A CERTIFIED ELECTRICIAN SHALL BE RESPONSIBLE FOR INSTALLING ALL WIRING FROM THE CIRCUIT BREAKER AT THE 120 VOLT SOURCE LOCATION TO AUTOMATIC CONTROLLER.
- ALL 120 VOLT POWER WIRE TO BE INSTALLED PER LOCAL CODE AND THE N.E.C.
- INSTALL ALL VALVE WIRING IN MAINLINE TRENCH AS DETAILED.
- INSTALL ALL REMOTE-CONTROL VALVES AT HEIGHT INDICATED ON DETAILS, AS HIGH AS POSSIBLE BUT ALLOWING CLEARANCE BETWEEN VALVE BOX LID AND FLOW CONTROL HANDLE ON REMOTE CONTROL VALVE.
- INSTALL ALL MAINLINE GATE VALVES IN A ROUND PLASTIC VALVE BOX PER DETAILS.
- ALL PVC SOLVENT WELD FITTINGS SHALL BE JASCO OR APPROVED EQUAL.
- THE MAINLINE, LATERAL PIPE, AND VALVES ARE SHOWN SCHEMATICALLY AND SHALL BE INSTALLED WITHIN THE LANDSCAPE AREA, OUTSIDE R.O.W. AND P.U.I.E., ADJACENT TO SIDEWALK OR CURB AND OFFSET 18" WHEREVER POSSIBLE.
- SUPPLY THE FOLLOWING MATERIAL TO THE OWNER:
  - TWO WRENCHES FOR DISASSEMBLY AND ADJUSTING OF EACH TYPE OF SPRINKLER HEAD AND VALVE SUPPLIED.
  - TWO KEYS FOR EACH OF THE CONTROLLERS.
  - TWO COUPLERS WITH MATCHING HOSE BIBS AND SHUT-OFF VALVE.
  - TWO VALVE BOX KEYS.
- ALL MAINLINE FITTINGS FOR PIPE 3" AND LARGER SHALL BE CAST OR DUCTILE IRON FOR PVC; SCHEDULE 80 PVC FOR 2 1/2" AND SMALLER.
- ALL MAINLINE PIPE SHALL BE A MINIMUM OF SCHEDULE 40.
- SLEEVES SHALL BE A MINIMUM OF TWO TIMES THE DIAMETER OF THE LINE SIZE.
- ALL MAINLINE AND IRRIGATION EQUIPMENT SHALL BE PLACED IN THE LANDSCAPED AREAS.
- CONTROLLER WIRES THAT ARE DIRECT BURIED SHALL BE #14 OR BETTER, BUNDLED OR WRAPPED A MINIMUM OF EVERY TWELVE (12) FEET. DURING INSTALLATION WIRES SHALL HAVE A 24" LOOP TIED IN ALL DIRECTION CHANGES GREATER THAN 30 DEGREES AND BE UNIED PRIOR TO TRENCH FILL IN.
- DRIP SYSTEM FLUSH CAPS SHALL BE PLACED IN A VALVE BOX AT THE END OF ALL DRIP LATERAL RUNS, AS DESCRIBED ON THE DRAWINGS.
- ALL VALVES, PRESSURE REGULATORS AND OTHER DEVICES SHALL BE PLACED IN AN APPROPRIATELY SIZED VALVE BOX WITH A MINIMUM OF TWO (2") INCHES OF PEA GRAVEL.
- PRIOR TO PLACING ANY IRRIGATION SYSTEM IN SERVICE, AN STATE CERTIFIED BACKFLOW DEVICE TESTER SHALL TEST THE BACKFLOW PREVENTION DEVICE AND GIVE A COPY OF THE PASSED TEST RESULTS TO THE COUNTY INSPECTOR OR MAIL IT TO THE COUNTY DEPARTMENT OF PUBLIC WORKS INSPECTION STATION.
- AFTER INITIAL TESTING, ALL BACKFLOW DEVICES SHALL BE TESTED ANNUALLY.
- BACKFLOW DEVICES SHALL BE A MINIMUM OF TWO (2) FEET FROM THE WATER METER AND BE THE SAME SIZE AS THE METER SERVICE LINE.
- ALL BACKFLOW PREVENTION DEVICES SHALL HAVE A MINIMUM 24"x36"x4" CLASS B CONCRETE SLAB WITH PIPE SLEEVES. IF A SECURITY CAGE IS INSTALLED, CONCRETE SHALL BE SIX (6") INCHES LARGER ON ALL SIDES THAN THE SECURITY CAGE.
- ALL PIPE CROSSINGS IN THE RIGHT-OF-WAY SHALL BE MARKED ON EACH SIDE OF THE CURB WITH A NON-DESTRUCTIBLE MARKING.

GRADING GENERAL NOTES:

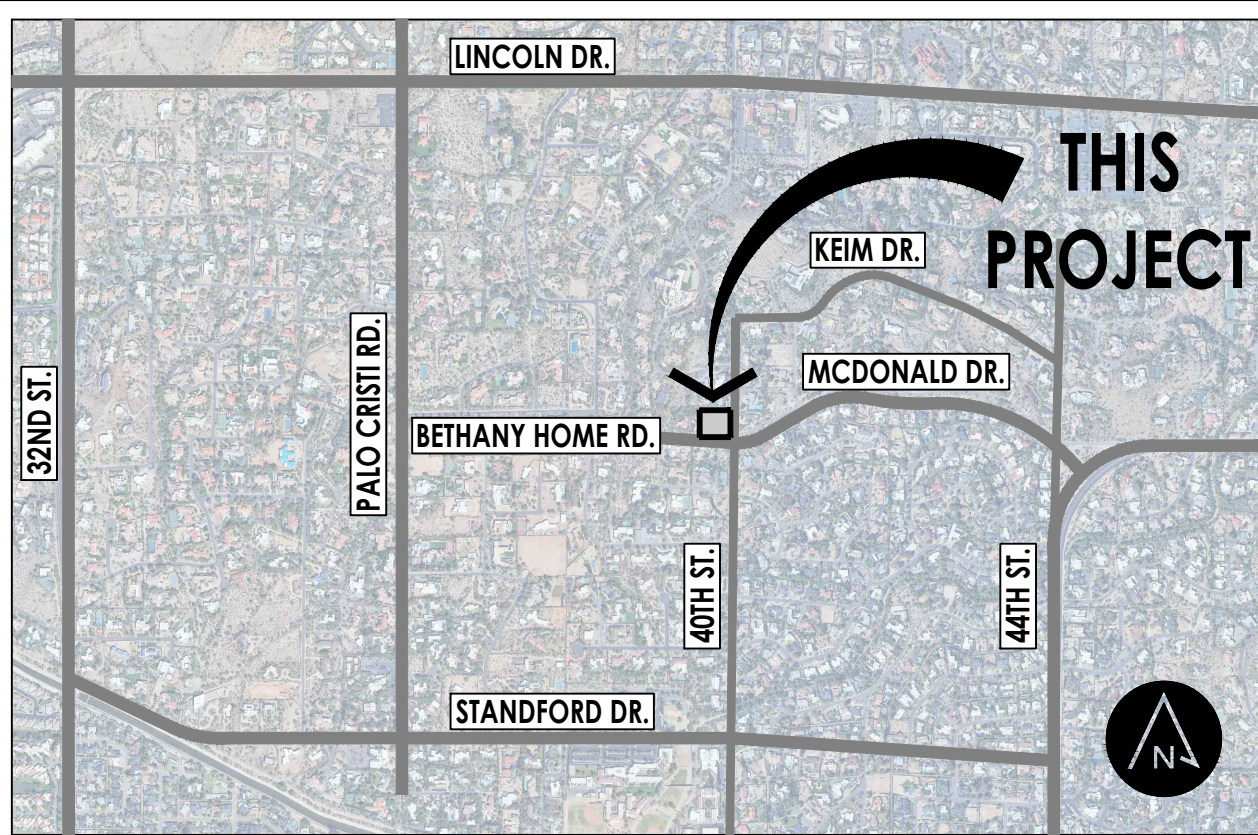
- CONTRACTOR SHALL GRADE TO MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES. REVIEW ENGINEERS PLAN FOR DRAINAGE.
- FINISH GRADING SHALL BE BY THE DIRECTION OF THE LANDSCAPE ARCHITECT.
- LANDSCAPE ARCHITECT SHALL APPROVE GRADING PRIOR TO PLANTING.
- GRADING FOR THIS PROJECT INCLUDES THE FOLLOWING:
  - FINE GRADING OF EXISTING ROUGH GRADES IS REQUIRED TO PROVIDE SMOOTH, EVEN GRADE TRANSITION IN LANDSCAPE AREA.
  - IMPORTING AND PLACING "OFF-SITE 3/8" MINUS TOPSOIL" IN THE FOLLOWING AREAS:
    - TURF, AND ANNUAL AREAS (6" DEPTH).
    - PLANT BACKFILL (CAN BE SCREENED ON-SITE SOIL).
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY CALICHE ENCOUNTERED ON SITE AT NO ADDITIONAL COST TO THE OWNER. THE OWNER AND CONTRACTOR SHALL COORDINATE A SUITABLE LOCATION ON SITE TO DISPOSE OF THE CALICHE MATERIAL. SHOULD A SUITABLE LOCATION ON SITE NOT EXIST, THE OWNER SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH REMOVAL AND DISPOSAL OF THE CALICHE.
- FINISH GRADE OF ALL PLANTING AREAS IS TO BE 1.5" BELOW ADJACENT PAVING UNLESS NOTED OTHERWISE.
- REFERENCE CIVIL ENGINEERING DRAWINGS FOR GRADING AND DRAINAGE FLOWS. THE CONTRACTOR SHALL BE RESPONSIBLE THAT THESE ARE PROVIDED FOR AND NOT IMPAIRED WITH OBSTRUCTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR GRADING ALL AREAS AT THE DIRECTION OF THE LANDSCAPE ARCHITECT TO CREATE A NATURALLY UNDULATING GROUND PLANE.

HARDSCAPE GENERAL NOTES:

- FOOTINGS, WALLS AND FENCES SHALL BE PLACED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY.
- REFER TO CIVIL PLANS FOR ALL INFORMATION REGARDING HORIZONTAL AND VERTICAL CONTROLS.
- ALL DETAILS SHALL BE REVIEWED BY A STRUCTURAL ENGINEER AND MODIFIED (IF NECESSARY) PRIOR TO CONSTRUCTION.
- ALL DIMENSIONS SHOWN ON THIS PLAN ARE BASED ON THE CIVIL PLAN. SHOULD DISCREPANCIES OCCUR, FIELD REVISIONS SHALL BE REQUIRED.
- THE CONTRACTOR SHALL HAVE SIDEWALK SURVEYED AND STAKED FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- IN ADDITION TO SUBMITTING MATERIAL SAMPLES OF ALL SITE RELATED MATERIALS, THE CONTRACTOR SHALL PREPARE A 4'x4' SAMPLE PANEL FOR EACH TYPE OF CONSTRUCTION, I.E., A) CONCRETE PAVERS, B) EXPOSED AGGREGATE PAVING, C) INTEGRAL COLORED CONCRETE, ETC., FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO FINAL CONSTRUCTION.
- UNLESS NOTED OTHERWISE ON CONSTRUCTION DOCUMENTS OR NOTED IN DETAILS, SIDEWALKS SHALL BE 5'-0" WIDE, 4" THICK, 3,000 PSI CONCRETE ON COMPACTED BASE WITH CONSTRUCTION JOINTS AT 5'-0" ON CENTER AND EXPANSION JOINTS AT 20'-0" ON CENTER. SIDEWALKS SHALL HAVE A MEDIUM BROOM, NON-SKID FINISH WITH 1/2" RADIUS TOOLED EDGES.
- RADIUS AT SIDEWALK INTERSECTIONS SHALL BE 5'-0" (TYPICAL), UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL LAYOUT AND VERIFY ALL HARDSCAPE ELEMENTS PRIOR TO CONSTRUCTION FOR REVIEW BY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE. SHOULD DISCREPANCIES EXIST, CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE BEFORE PROCEEDING FURTHER.

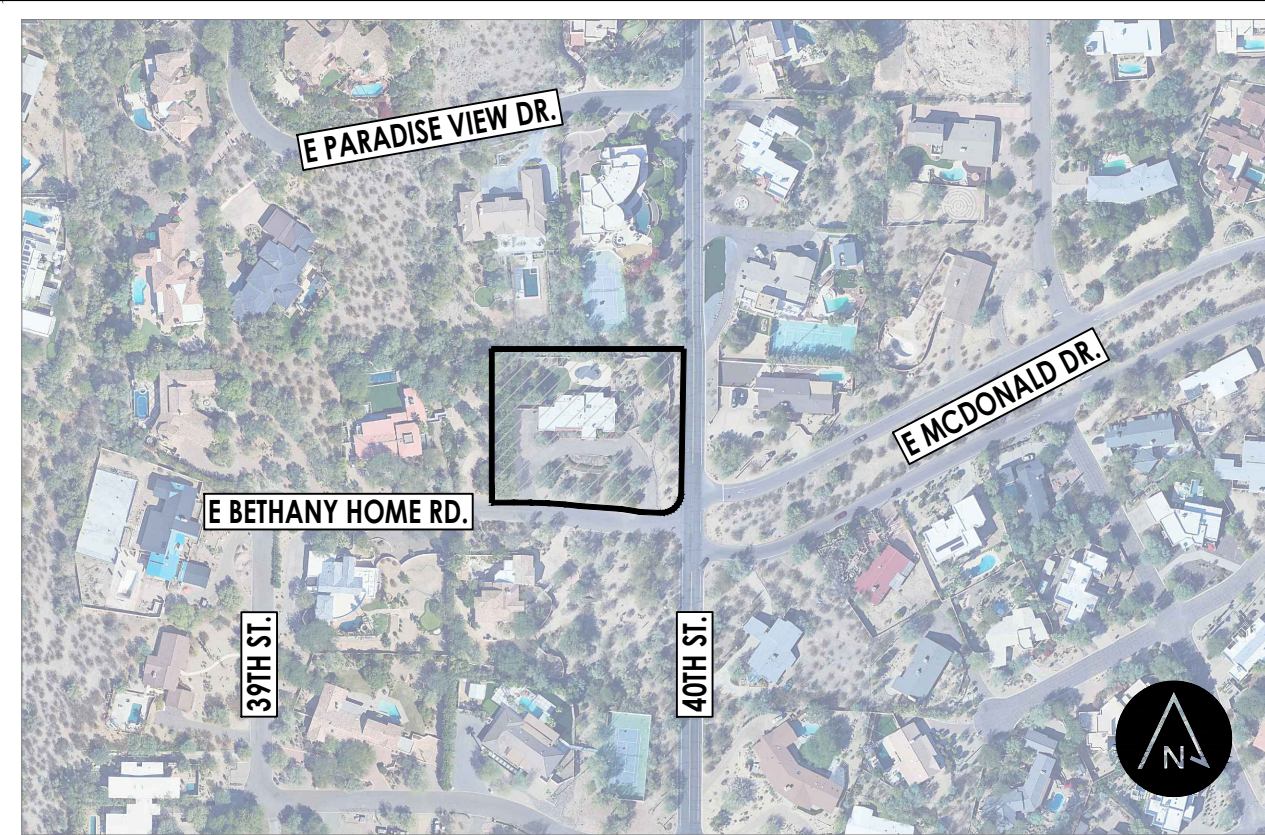
WOLFSWINKEL RESIDENCE  
LANDSCAPE CONSTRUCTION DOCUMENTS

VICINITY MAP:



SCALE: NTS

SITE MAP:



SCALE: NTS

TOWN OF PARADISE VALLEY NOTES:

CIVIL NOTES:

- NO CERTIFICATE OF OCCUPANCY SHALL BE ISSUED UNTIL ALL HILLSIDE STIPULATIONS AND ALL TOWN CODE REQUIREMENTS ARE COMPLIED INCLUDING, BUT NOT LIMITED TO LANDSCAPING, GROUND RESTORATION, FIRE FLOW, FIRE SAFETY AND ALL ONSITE AND OFFSITE IMPROVEMENTS.
- ALL OUTDOOR LIGHTING SHALL BE IN CONFORMANCE WITH ARTICLE XXII OF THE TOWN ZONING ORDINANCE.
- ALL EXCESS FILL MATERIAL SHALL BE REMOVED FROM THE SITE WITH NO NEW SPILL SLOPES.
- THE USE OF HYDRAULIC RAM HAMMERS, OR OTHER HEAVY EQUIPMENT USED TO CUT THROUGH ROCK, INCLUDING MACHINERY WITH AUDIBLE BACK UP WARNING DEVICES SHALL BE LIMITED TO USE BETWEEN THE HOURS OF 7:00 AM OR SUNRISE, WHICHEVER IS LATER, AND 4:00 PM OR SUNSET, WHICHEVER IS EARLIER, MONDAY THROUGH FRIDAY, WITH LIMITED WORK ON SATURDAY AND NO WORK ON SUNDAY OR LEGAL HOLIDAYS. RAM HAMMERS AND OTHER HEAVY EQUIPMENT CANNOT BE USED ON SATURDAYS WITHOUT A WAIVER FORM THE TOWN MANAGER.
- CONSTRUCTION STAKING AND / OR FENCING SHALL BE PLACED AROUND THE CONSTRUCTION SITE SO AS TO PROTECT THE UNDISTURBED NATURAL AREA. THE FOLLOWING NOTE TO BE ADDED TO GRADING AND DRAINAGE AND ANY CIVIL PLANS: "CONSTRUCTION / DISTURBANCE STAKING TO REMAIN IN PLACE FOR THE DURATION OF THE PROJECT. ANY DAMAGE OR REMOVAL WILL REQUIRE RESTAKING."
- ALL RETAINING WALLS SHALL NOT EXTEND MORE THAN 6 INCHES ABOVE THE MATERIAL THEY RETAIN (WITH EXCEPTION OF DRIVEWAY RETAINING WALLS IN ACCORDANCE WITH 2207.VL16).

ARCHITECTURAL NOTES:

- ALL EXTERIOR MATERIAL PALETTE SHALL BE IN ACCORDANCE WITH SECTION 2207.II.D.
- ALL EXTERIOR LIGHTING SHALL COMPLY WITH SECTION 2208.

DEMOLITION GRADING PLAN NOTES:

- ALL EXCESS FILL MATERIAL SHALL BE REMOVED FROM THE SITE WITH NO NEW SPILL SLOPES.
- THE USE OF HYDRAULIC RAM HAMMERS, OR OTHER HEAVY EQUIPMENT USED TO CUT THROUGH ROCK, INCLUDING MACHINERY WITH AUDIBLE BACK UP WARNING DEVICES SHALL BE LIMITED TO USE BETWEEN THE HOURS OF 7:00 AM OR SUNRISE, WHICHEVER IS LATER, AND 4:00 PM OR SUNSET, WHICHEVER IS EARLIER, MONDAY THROUGH FRIDAY, WITH LIMITED WORK ON SATURDAY AND NO WORK ON SUNDAY OR LEGAL HOLIDAYS. RAM HAMMERS AND OTHER HEAVY EQUIPMENT CANNOT BE USED ON SATURDAYS WITHOUT A WAIVER FROM THE TOWN MANAGER.
- CONSTRUCTION STAKING AND / OR FENCING SHALL BE PLACED AROUND THE CONSTRUCTION SITE SO AS TO PROTECT THE UNDISTURBED NATURAL AREA.

PROJECT LEAD:

LANDSCAPE ARCHITECT | PLANNER:

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480-609-0009

CONSULTANT TEAM:

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CIVIL ENGINEER:

LDG ENGINEERING  
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602-889-1984

ARCHITECT:

MATTHEW THOMAS ARCHITECTURE  
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602-301-3618

INTERIOR DESIGNER:

NOMAD DESIGN  
15875 N GREENWAY HAYDEN LOOP #109  
SCOTTSDALE, AZ 85260  
480-687-7028

SHEET INDEX:

COVER SHEET	L0.0
MATERIAL SCHEDULE	L0.1
MATERIAL BOARD	L0.2
LAYOUT PLANS	L2.1
PLANTING PLANS	L3.1
LIGHTING PLANS	L5.1
HARDSCAPE DETAILS	L6.1-L6.3
PLANTING DETAILS	L7.1
PLANTING SPECIFICATIONS	L8.1
IRRIGATION SPECIFICATIONS	L8.2

WOLFSWINKEL RESIDENCE  
LANDSCAPE CONSTRUCTION DOCUMENTS  
3924 E BETHONY HOME ROAD  
PARADISE VALLEY, AZ 85253

REVISIONS:

△	
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△	

PROJECT#:

WWH003

ISSUED FOR:

REVIEW

DRAWN BY:

TEAM

SCALE:

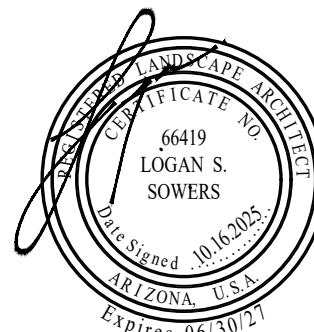
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PLOT DATE:

10/15/2025

DRAWING:

COVER SHEET



SHEET#:

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REFERENCE NOTE / MATERIALS SCHEDULE:

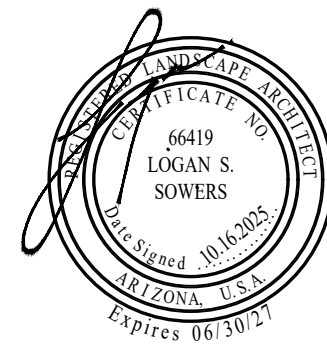
CODE	DESCRIPTION	DETAIL	PROVIDED BY:	MANUFACTURER:	PRODUCT / LINE:	SIZE:	COLOR:	FINISH / PATTERN:	COMMENTS	SUBMITTALS:
PEDESTRIAN										
01-01-01	CONCRETE - STANDARD SIDEWALK	1/L6.1	CONTRACTOR		CONCRETE	4" THICK STANDARD CONCRETE	STANDARD	BROOM FINISH WITH TROWELED EDGE		X
01-01-02	CONCRETE - ACID WASH FINISH	3/L6.1	CONTRACTOR	DAVIS COLORS	INTEGRAL COLOR CONCRETE	4" THICK STANDARD CONCRETE	SIERRA 61078	ACID WASH		X
01-01-03	BRICK PAVER	2/L6.1	CONTRACTOR	MCNEAR BRICK	SANDMOLD SERIES	STANDARD	COTSWOLD	BANDING - SOLDIER COURSE; FIELD - HERRINGBONE		X
01-01-04	FLAGSTONE PAVER		CONTRACTOR					RANDOM W/ 1/2" JOINTS MAX		X
01-01-05	CANTERRA STONE PAVER		CONTRACTOR	DE SANATA	CANTERA STONE	12" X 12"	CHOCOLATE	STACKED BOND		X
01-01-06	FEATURE CANTERA STONE AND TILE		CONTRACTOR	DE SANTANA; ECO EARTH	CANTERA STONE; GLAZED LAVA STONE TILE	CANTERA - 12" X 12", TILE - 4" X 4"	CANTERA - NEGRA, TILE - HALLEY GLAZED LAVA STONE	DUTCH PATTERN - REFER TO PLANS		X
01-01-07	GARDEN DECOMPOSED GRANITE		CONTRACTOR							X
01-01-08	RIVER ROCK - OUTDOOR SHOWER		TO BE SELECTED BY INTERIOR DESIGNER							
VEHICULAR										
01-02-01	CONCRETE - ACID WASH FINISH		CONTRACTOR	DAVIS COLORS	INTEGRAL COLORED CONCRETE	6" THICK STANDARD CONCRETE	SIERRA 61078	ACID WASH FINISH		X
01-02-02	CONCRETE PAVERS	2/L6.1	CONTRACTOR	BELGARD	MEGA - BERGERAC	3-PIECE, 80 MM THICK	VICTORIAN	3 PIECE RANDOM		X
LANDSCAPE										
01-03-01	STEEL LANDSCAPE HEADER	6/L6.1	CONTRACTOR		STEEL HEADER	1/4"x6" STEEL BAR	STANDARD			X
CODE	DESCRIPTION	DETAIL	PROVIDED BY:	MANUFACTURER	PRODUCT / LINE:	SIZE:	COLOR:	FINISH / PATTERN:	SUBMIT FOR APPROVAL:	DESCRIPTION
02 VERTICAL-WORK										
02-01-01	RAISED PLANTER - ENTRY WALKWAY	13/L6.1	CONTRACTOR	DC RANCH	DC COBBLE	STANDARD	STANDARD	RANDOM	X	
02-01-02	SMALL RAISED PLANTER	9/L6.1	CONTRACTOR	DC RANCH	DC COBBLE	STANDARD	STANDARD	VENEER FINISH, RANDOM STACKING	X	STACK PATTERN TO MATCH ARCHITECTURE
02-01-03	RAISED PLANTER - GARDEN		CONTRACTOR	CUSTOM	RAISED WOOD GARDEN BED PLANTER	2'-0" TALL	CONTRACTOR TO SUBMIT STAIN SAMPLES FOR APPROVAL	STAIN	X	
02-01-04	VEHICULAR GATE POSTS	11/L6.1	CONTRACTOR	CUSTOM	STONE VENEER GATE POST	7'-0" TALL	DC COBBLE	VENEER FINISH, RANDOM STACKING	X	STACK PATTERN TO MATCH ARCHITECTURE
02-01-05	PRIVACY WALL - 6'-0"		CONTRACTOR		WALLS	8X8X16 CMU BLOCK; 2" CONCRETE CAP	TO MATCH HOUSE COLOR; CONCRETE CAP - DAVIS COLOR SIERRA 61078	STUCCO AND PAINT FINISH	X	
02-01-06	FEATURE WALL		CONTRACTOR	TILE - CEMENT TILE SHOP	CMU BLOCK WALL WITH TILE VENEER AND CONCRETE CAP	5'-0" TALL, 8"x8"x16" CMU BLOCK; TILE - 8"x8"; CONCRETE CAP - 2"	STUCCO COLOR - TO MATCH ARCHITECTURE; CEMENT TILE - LOURDES; CAP - DAVIS COLOR SIERRA 61078	TILE VENEER, STACKED PATTERN	X	
02-01-07	RETAINING WALL		CONTRACTOR		WALL	VARIABLES: 8"x8"x16" CMU BLOCK WITH 2" CONCRETE CAP	TO MATCH ARCHITECTURE; CONCRETE CAP - DAVIS COLOR SIERRA 61078	STUCCO AND PAINT FINISH		
02-01-08	SHORT RETAINING WALL	14/L6.1	CONTRACTOR		WALLS	8"x8"x16" BLOCK WITH 2" CONCRETE CAP	TO MATCH ARCHITECTURE; CONCRETE CAP - DAVIS COLOR SIERRA 61078	STUCCO AND PAINT		
02-01-09	SHORT WALL WITH VIEW FENCE		CONTRACTOR	CUSTOM	HALF WALL, HALF POOL FENCE	FENCE HEIGHT - 6' MINIMUM PLUS WALL BASE; WALL - 8"x8"x16" CMU BLOCK; CONCRETE CAP - 2"	WALL - TO MATCH ARCHITECTURE, FENCE - UMBRA GRAY RAL 7022; CONCRETE CAP - DAVIS COLOR SIERRA 61078	WALL - STUCCO AND PAINT FINISH; FENCE - POWDER COAT	X	
02-01-10	BANCO SEATING - BUILT INTO WALL		CONTRACTOR	CUSTOM	WALL SEAT	8"x8"x16" CMU BLOCK	TO MATCH ARCHITECTURE	STUCCO AND PAINT FINISH		
02-01-11	OUTDOOR KITCHEN ISLAND		REFER TO DRAWINGS BY ARCHITECT						X	
02-01-12	POOL EQUIPMENT ENCLOSURE		CONTRACTOR	CUSTOM	CMU BLOCK WALL	8"x8"x16" BLOCK WITH 2" CONCRETE CAP	TO MATCH HOUSE COLOR; CONCRETE CAP - SIERRA 61078	STUCCO AND PAINT FINISH	X	
FENCES										
02-02-01	POOL FENCE		CONTRACTOR	CUSTOM	STEEL VIEW FENCE	6'-0"	RAL 7022 UMBRA GREY	POWDER COAT FINISH	X	
GATES										
02-03-01	VEHICULAR GATE	7/L6.2	CONTRACTOR	CUSTOM	STEEL GATE	6'-0" TALL	RAL7022 - UMBRA GRAY	POWDER COAT	X	
02-03-02	PEDESTRIAN GATE	9/L6.2	CONTRACTOR	CUSTOM	STEEL GATE	6'-0" TALL	RAL7022 - UMBRA GRAY	POWDER COAT	X	
STRUCTURES										
02-05-01	SHADE STRUCTURE	4/L6.2	CONTRACTOR	CUSTOM	WOOD AND METAL STRUCTURE	REFER TO DETAILS	WOOD - CONTRACTOR TO SUBMIT STAIN COLOR FOR APPROVAL; STONE VENEER - DC COBBLE	WOOD - STAIN FINISH; STEEL - RAL 7022 UMBRA GRAY; STONE - RANDOM STACK	X	
02-05-10	SAUNA STRUCTURE AND COLD PLUNGE	15/L6.1	BY OTHERS							
02-05-11	BRICK STEPS WITH TILE RISER	7/L6.1	CONTRACTOR	MCNEAR BRICK; CEMENT TILE SHOP	BRICK PAVER; TILE RISER	6X6 TILE	ATLAS III	SOLDIER COURSE	X	
02-05-12	WALKWAY BRIDGE		CONTRACTOR	CUSTOM					X	
CODE	DESCRIPTION	DETAIL	PROVIDED BY:	MANUFACTURER:	PRODUCT / LINE:	SIZE:	COLOR:	FINISH / PATTERN:	SUBMIT FOR APPROVAL:	
03 LANDSCAPE-WORK										
03-01-01	PLANTING AREA		CONTRACTOR							
GRASS										
03-02-01	ARTIFICIAL TURF	5/L6.1	CONTRACTOR	TO SUBMIT SAMPLES FOR APPROVAL					X	
CODE	DESCRIPTION	DETAIL	SUPPLIER	MANUFACTURER	MODEL	FINISH/COLOR	PLASTER	STEP TILE	NOTES	
07 WATER ELEMENTS										
07-01-01	WATER FEATURE - COURTYARD	7/L6.3	CONTRACTOR	CUSTOM	CUSTOM					
07-01-02	WATER FEATURE - BACKYARD		CONTRACTOR	DE SANTANA	CUSTOM	NATURAL STONE FFINISH	NA	NA		
POOL / SPA										
07-02-01	POOL	4/L6.3	POOL CONTRACTOR	PEBBLETEC	PEBBLE FINA	WATERLINE TILE - ZIA TILE JADE 4X4 SQUARE ZELLIGE	PEBBLE FINA - STEEL GREY	ZIA TILE JADE 4X4 SQUARE ZELLIGE		
07-02-03	SPA	6/L6.3	POOL CONTRACTOR	PEBBLETEC	PEBBLE FINA	WATERLINE TILE - ZIA TILE JADE 4X4 SQUARE ZELLIGE	PEBBLE FINA - STEEL GREY	ZIA TILE JADE 4X4 SQUARE ZELLIGE		
07-02-04	OUTDOOR SHOWER		BY OTHERS							
CODE	DESCRIPTION	DETAIL	PROVIDED BY:	MANUFACTURER:	PRODUCT / LINE:	SIZE:	COLOR:	FINISH / PATTERN:	SUBMITTALS REQ.:	
08 SITE FURNITURE-FIXTURES-EQUIPMENT										
08-02-01	MISC, POTS	8/L6.1	TBD						X	

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WOLFSWINKEL RESIDENCE  
LANDSCAPE CONSTRUCTION DOCUMENTS  
3924 E BETHONY HOME ROAD  
PARADISE VALLEY, AZ 85253

REVISIONS:  
  
PROJECT#: WWH003  
ISSUED FOR: REVIEW  
DRAWN BY: TEAM  
SCALE: NTS  
PLOT DATE: 10/15/2025  
DRAWING: MATERIAL SCHEDULE





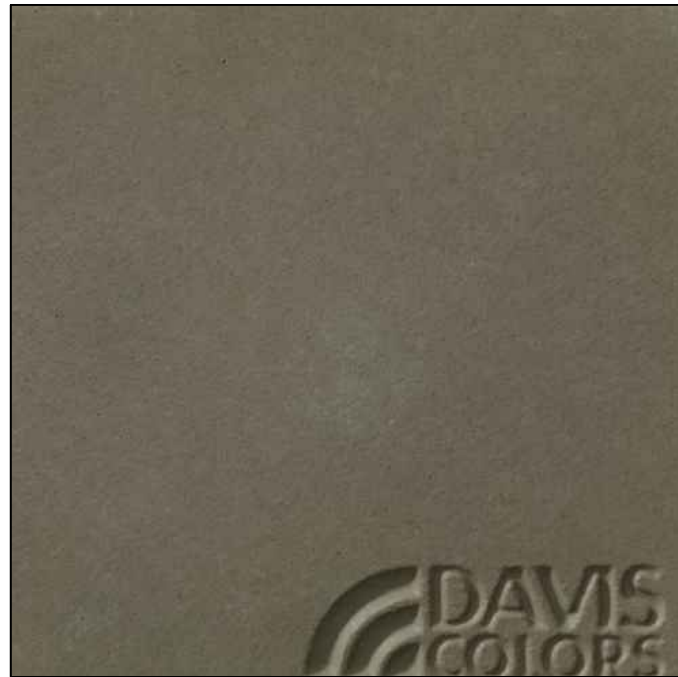
MATERIALS BOARD

DRIVEWAY PAVER



- 3 PIECE CONCRETE PAVER
- BELGARD , MEGA BERGERAC
- COLOR: VICTORIAN
- **LVR: 20**

DRIVEWAY BANDING AND CONCRETE SIDEWALKS



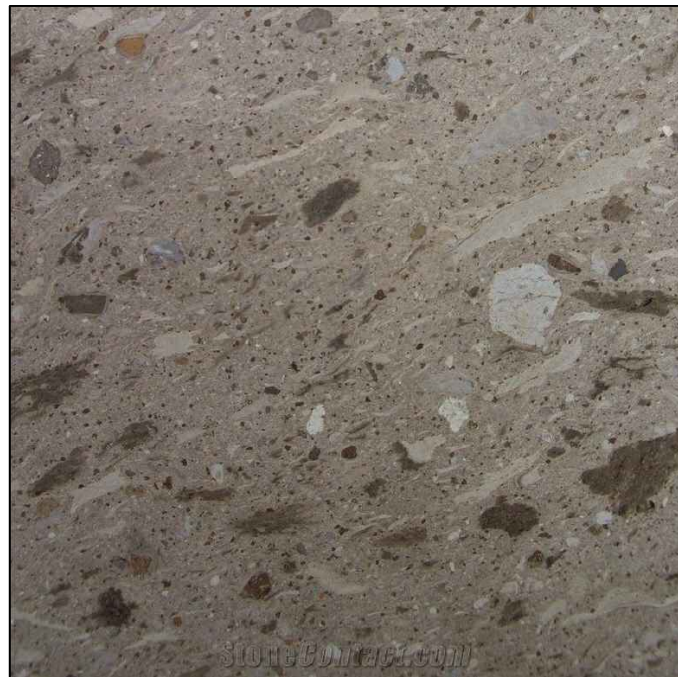
- ACID WASH FINISH
- DAVIS COLORS: SIERRA 61078
- **LVR: 20**

BRICK PAVER



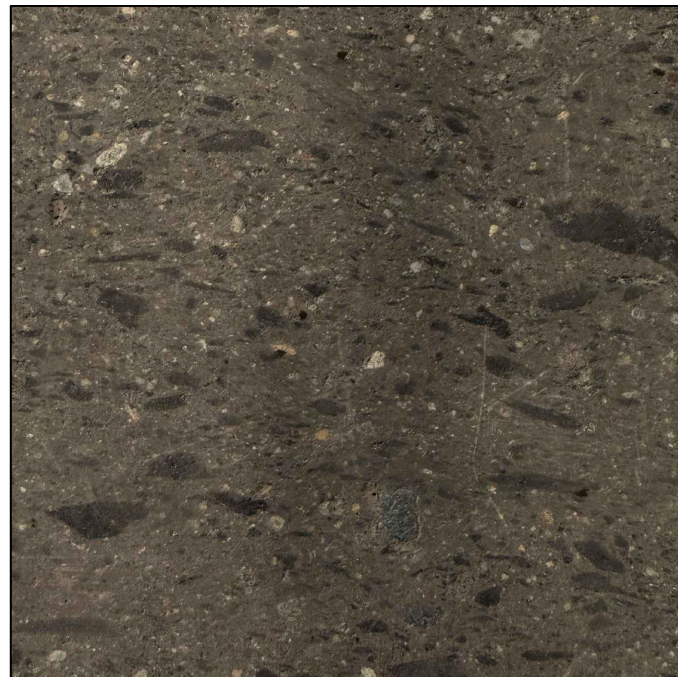
- MCNEAR BRICK
- COLOR: COTSWOLD
- **LVR: 19**

STONE PAVER A



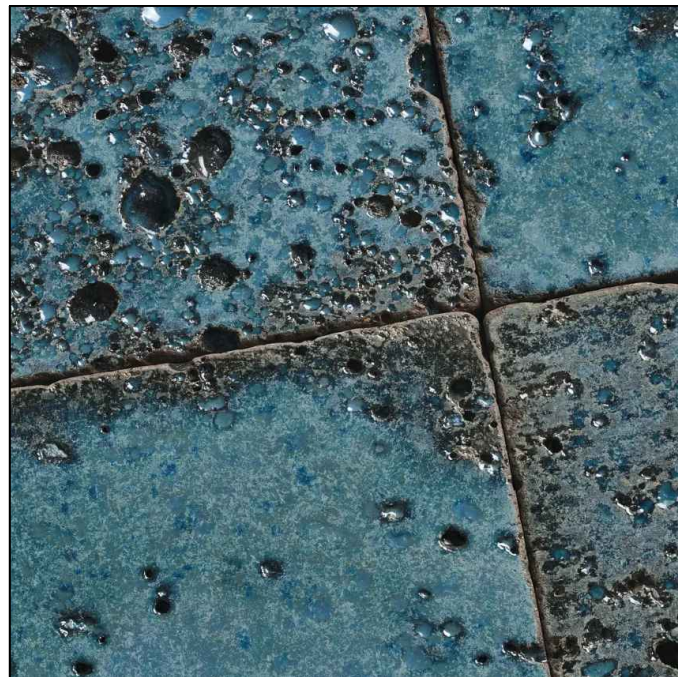
- CANTERA STONE PAVER
- COLOR: CHOCOLATE
- **LVR: 23**

STONE PAVER B



- CANTERA STONE PAVER
- COLOR: NEGRA
- **LVR: 20**

ACCENT TILE A



- 4" X 4" ACCENT TILE WITH CANTERA STONE
- ECO OUTDOOR -- HALLEY GLAZED LAVA STONE
- **LVR: 19**

ACCENT TILE B



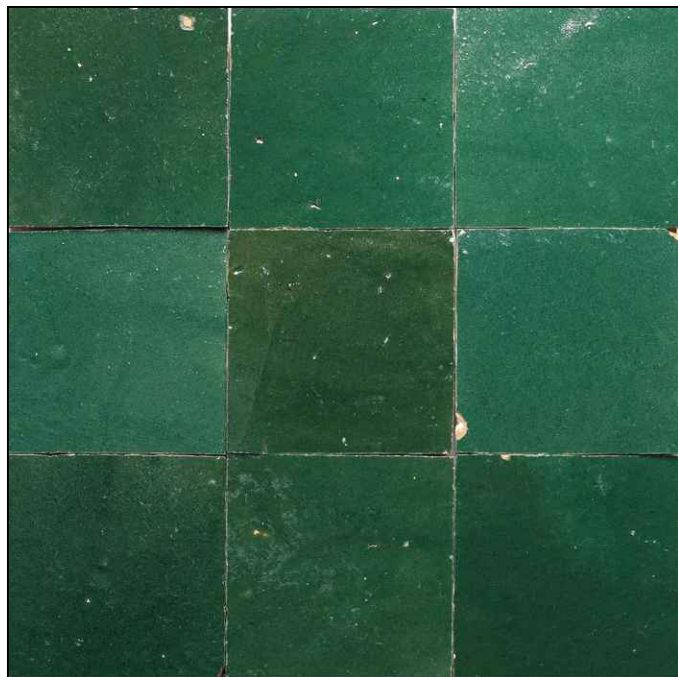
- STEP RISERS AND WATER FEATURE ACCENTS
- 6"x6" CONCRETE TILE
- CEMENT TILE SHOP
- COLOR: ATLAS iii
- **LVR: 50**

ACCENT TILE C



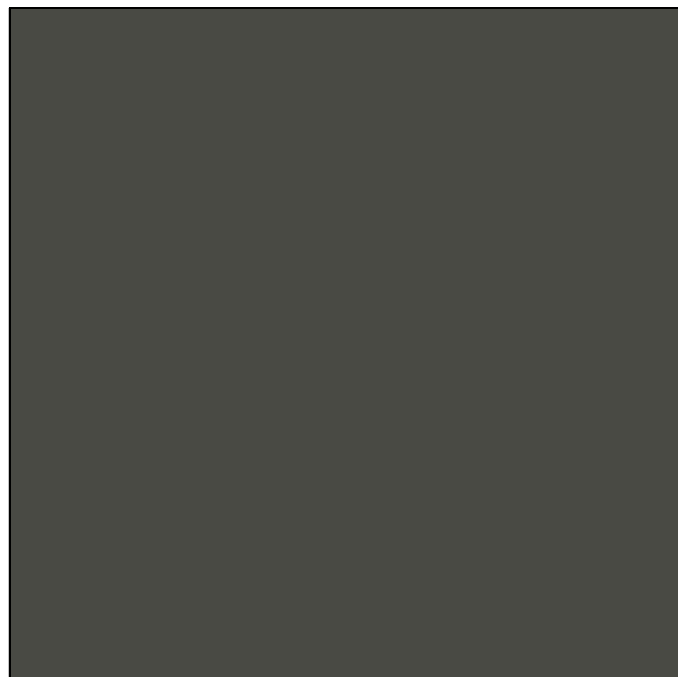
- FEATURE WALL ACCENT TILE VENEER - WILL NOT BE SEEN FROM ROADWAY AT ALL
- 8"x8" CONCRETE TILE
- CEMENT TILE SHOP
- COLOR: LOURDES
- **LVR: 44**

WATERLINE TILE



- 4"x4" ZIA TILE SQUARE ZELLIGE
- COLOR: JADE
- **LVR: 9**

STEEL COLOR



- SHERWIN WILLIAMS PAINT
- COLOR: RAL 7022 UMBRA GRAY
- **LVR: 6.5**





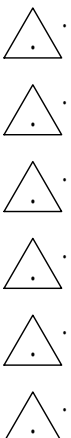
REFERENCE NOTE LEGEND:

CODE	DESCRIPTION	DETAIL
<b>PEDESTRIAN</b>		
01-01-01	CONCRETE - STANDARD SIDEWALK	
01-01-02	CONCRETE - ACID WASH FINISH	
01-01-03	BRICK PAVER	
01-01-04	FLAGSTONE PAVER	
01-01-05	CANTIERRA STONE PAVER	
01-01-06	FEATURE CANTIERRA STONE AND TILE	
01-01-07	GARDEN DECOMPOSED GRANITE	
01-01-08	RIVER ROCK - OUTDOOR SHOWER	
<b>VEHICULAR</b>		
01-02-01	CONCRETE - ACID WASH FINISH	
01-02-02	CONCRETE PAVERS	
<b>LANDSCAPE</b>		
01-03-01	STEEL LANDSCAPE HEADER	
<b>02 VERTICAL-WORK</b>		
02-01-01	RAISED PLANTER - ENTRY WALKWAY	
02-01-02	SMALL RAISED PLANTER	
02-01-03	RAISED PLANTER - GARDEN	
02-01-04	VEHICULAR GATE POSTS	
02-01-05	PRIVACY WALL - 6'-0"	
02-01-06	FEATURE WALL	
02-01-07	RETAINING WALL	
02-01-08	SHORT RETAINING WALL	
02-01-09	SHORT WALL WITH VIEW FENCE	
02-01-10	BANCO SEATING - BUILT INTO WALL	
02-01-11	OUTDOOR KITCHEN ISLAND	
02-01-12	POOL EQUIPMENT ENCLOSURE	
<b>FENCES</b>		
02-02-01	POOL FENCE	
<b>GATES</b>		
02-03-01	VEHICULAR GATE	
02-03-02	PEDESTRIAN GATE	
<b>STRUCTURES</b>		
02-05-01	SHADE STRUCTURE	
02-05-10	SAUNA STRUCTURE AND COLD PLUNGE	
02-05-11	BRICK STEPS WITH TILE RISER	
02-05-12	WALKWAY BRIDGE	
<b>03 LANDSCAPE-WORK</b>		
03-01-01	PLANTING AREA	
<b>GRASS</b>		
03-02-01	TURF	
<b>07 WATER ELEMENTS</b>		
07-01-01	WATER FEATURE - COURTYARD	
07-01-02	WATER FEATURE - BACKYARD	
<b>POOL / SPA</b>		
07-02-01	POOL	
07-02-03	SPA	
07-02-04	OUTDOOR SHOWER	

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WOLFSWINKEL RESIDENCE  
LANDSCAPE CONSTRUCTION DOCUMENTS  
3924 E BETHANY HOME ROAD  
PARADISE VALLEY, AZ 85253

REVISIONS:



PROJECT#: WWH003  
ISSUED FOR: REVIEW  
DRAWN BY: TEAM  
SCALE: 1"=10'-0"  
PLOT DATE: 10/15/2025  
DRAWING: LAYOUT SHEET



SHEET#:

L2.1

PAGE#:

04 OF 12

LAYOUT SHEET  
L2.1





APN 170-01-007



PLANT MATERIALS LEGEND:

TREES   SYMBOL	BOTANICAL / COMMON NAMES	SIZE	QTY
	Casahuate cocalaco 'Smoothie'	48" Box	6
	Smoothie Thornless Casahuate	48" Box	2
	Chilopsis linearis 'Bubba'	48" Box	1
	Bubba Desert Willow	48" Box	8
	Citrus sinensis	60" Box	3
	Sweet Orange	60" Box	6
	Olea europaea 'Swan Hill'	36" Box	2
	Swan Hill Olive		
	Oliveya tesota		
	Desert Ironwood		
	Prosopis glandulosa 'Maverick'		
	Maverick Thornless Honey Mesquite		
	Sophora secundiflora		
	Texas Mountain Laurel		

SHRUBS   SYMBOL	BOTANICAL / COMMON NAMES	SIZE	QTY
	Bougainvillea x Torch Glow	10 Gal.	10
	Torch Glow Bougainvillea	5 Gal.	26
	Bougainvillea gracilis 'Blonde Ambition'	5 Gal.	11
	Blonde Ambition Blue Grama	5 Gal.	3
	Convolvulus cneorum	10 Gal.	3
	Bush Morning Glory	5 Gal.	15
	Dodonaea viscosa	5 Gal.	9
	Hopseed Bush	5 Gal.	14
	Eriocoma laticifolia	5 Gal.	27
	Turpentine Bush	5 Gal.	16
	Justicia spicigera	5 Gal.	68
	Mexican Honeysuckle	5 Gal.	8
	Larrea tridentata	5 Gal.	35
	Creosote Bush	5 Gal.	27
	Leucophyllum frutescens	5 Gal.	16
	Texas Sage	5 Gal.	68
	Leucophyllum frutescens 'Compacta'	5 Gal.	8
	Compact Texas Sage	5 Gal.	35
	Muhlenbergia capillaris 'Lemca'	5 Gal.	7
	Regal Mist® Pink Muhly Grass	5 Gal.	28
	Muhlenbergia rigens	5 Gal.	22
	Deer Grass	5 Gal.	24
	Olea europaea 'Montra'	5 Gal.	82
	Little Olive® Olive	5 Gal.	26
	Penstemon parryi	5 Gal.	38
	Parry's Beardtongue	5 Gal.	11
	Portulacaria afra	5 Gal.	37
	Elephant Bush	1 Gal.	2
	Rosa x 'KORan'	1 Gal.	16
	Iceberg Floribunda Rose	1 Gal.	9
	Rosmarinus officinalis 'Tuscan Blue'	5 Gal.	3
	Tuscan Blue Rosemary	5 Gal.	11
	Ruellia brittoniana	5 Gal.	10
	Mexican Petunia	5 Gal.	7
	Salvia greggii	5 Gal.	11
	Aurum Sage	5 Gal.	10
	Simmondsia chinensis	5 Gal.	7
	Juglans	5 Gal.	7
	Sphaeralcea ambigua	5 Gal.	7
	Desert Globemallow	5 Gal.	7
	Tecoma stans	5 Gal.	7
	Yellow Bells	5 Gal.	7

GROUND COVER   SYMBOL	BOTANICAL / COMMON NAMES	SIZE	QTY
	Lantana montevidensis	1 Gal.	37
	Purple Trailing Lantana	1 Gal.	2
	Lantana montevidensis 'Alba'	1 Gal.	16
	White Trailing Lantana	1 Gal.	9
	Tradescantia pallida 'Pale Purple'	1 Gal.	3
	Fale Puma Purple Trailing Heart	1 Gal.	3
	Verbena rigida	1 Gal.	3
	Sandpaper Verbena	1 Gal.	3

CACTI   SYMBOL	BOTANICAL / COMMON NAMES	SIZE	QTY
	Agave americana	5 Gal.	10
	Century Plant	5 Gal.	7
	Agave weberi	5 Gal.	4
	Weber Agave	5 Gal.	4
	Agave x 'Blue Glow'	1 Gal.	41
	Blue Glow Agave	1 Gal.	52
	Aloe dawsonii	4" Min.	3
	Dave's Aloe	1 Gal.	11
	Aloe x 'Blue Elf'	5 Gal.	29
	Blue Elf Aloe	Bare Root	6
	Aloe x 'Hercules'	1 Gal.	41
	Hercules Aloe	5 Gal.	3
	Asclepias subulata	5 Gal.	9
	Rush Milkweed	5 Gal.	3
	Cameglia gigantea	1 Gal.	2
	Saguaro	1 Gal.	2
	Dasylirion acrostichae	1 Gal.	2
	Toothless Sotol	1 Gal.	2
	Dasylirion wheeleri	1 Gal.	2
	Grey Desert Spoon	1 Gal.	2
	Fouquieria splendens	1 Gal.	2
	Ocotillo	1 Gal.	2
	Hesperaloe parviflora 'Perpa'	1 Gal.	2
	brakeleights® Red Yucca	1 Gal.	2
	Opuntia engelmannii	1 Gal.	2
	Engelmann's Prickly Pear	1 Gal.	2
	Opuntia violacea	1 Gal.	2
	Purple Prickly Pear	1 Gal.	2
	Pachycereus schottii monstrosus	1 Gal.	2
	Totem Pole Cactus	1 Gal.	2
	Pedilanthus bracteatus	1 Gal.	2
	Tall Slipper Plant	1 Gal.	2
	Pedilanthus macrocarpus	1 Gal.	2
	Lady's Slipper	1 Gal.	2

**FINISHES |**  
CRIPION / MATERIAL REFERENCE  
Artificial Turf  
Refer to Materials Schedule

**FINISHES |**  
CRIPION / MATERIAL REFERENCE  
Composed Granite (CG) - 2" Depth  
Minus Decomposed Granite. Color to match  
finishing surrounding area in color and size in all  
finishing areas inside of walls.

**FINISHES |**  
CRIPION / MATERIAL REFERENCE  
Desert Cobble: The top 6" of desert soil is to be  
excavated and stockpiled for re-vegetation areas.  
Tractor to mix and spread cobble mix on site of  
finishing the character of the native surrounding  
area. 2" Depth. Supplemental Cobble to be D.C.  
Desert Cobble. 6" Minus.

**FINISHES |**  
CRIPION / MATERIAL REFERENCE  
Boulders  
Boulder symbols are shown for reference only.  
Size boulders based on tonnage only, but  
include a variety of shapes and sizes. Surface  
select boulders to be selected / tagged by  
Landscape Architect and field located.  
Landscape Contractor to set boulders with  
crane using steel cables. Provide necessary  
crane for weight.

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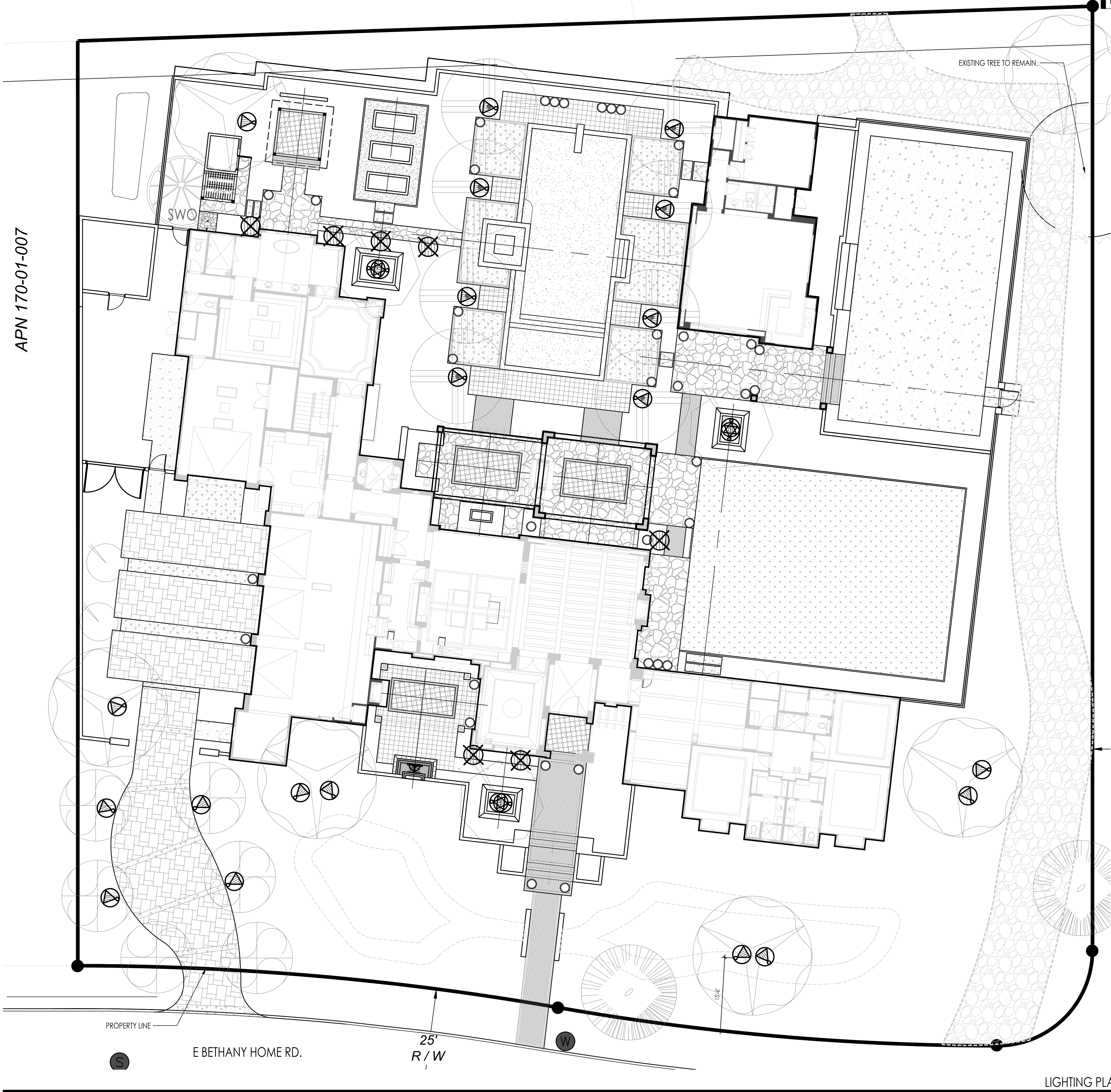
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WOLFSWINKEL RESIDENCE  
LANDSCAPE CONSTRUCTION DOCUMENTS  
3924 E BETHANY HOME ROAD  
PARADISE VALLEY, AZ 85253

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APN 170-01-007



LIGHT FIXTURE SCHEDULE:									
SYMBOL	QTY	MANUFACTURER	MODEL #	COLOR	DESCRIPTION	LAMP	LED	WATAGE	LUMENS
	7	FX LUMINAIRE	M-PL-LED-F8	FLAT BLACK	LOW VOLTAGE PATHLIGHT		LED	1 LED	2.0 W
	25	FX LUMINAIRE	CC-3LED-LS-AB	ANTIQUE BRONZE	LOW VOLTAGE UP LIGHT WITH LONG SHROUD		LED	3 LED	4.2 W
	TBD				LOW VOLTAGE TRANSFORMER [CONTRACTOR TO DETERMINE QUANTITY REQ.]				

- LIGHTING NOTES
- CONTRACTOR SHALL VERIFY ALL SPECIFICATIONS, COLORS, AND FINISHES WITH OWNER PRIOR TO ORDERING OR INSTALLING.
  - LANDSCAPE ARCHITECT TO FIELD APPROVE ALL LIGHTS.

FXLuminaire.

LED Path Lights

PROJECT

CATALOG #

TYPE

NOTES

M-PL Path Light

DESIGNER PLUS

The ultra-modern M-PL path light combines the versatility of die-cast aluminum with minimalist aesthetics to complement a range of contemporary installations.

Quick Facts

- Die-cast aluminum
- Two-layer marine-grade anodization and powder coat finish
- Cree® integrated LEDs
- Color temperature filters

- Compatible with Luxor® technology
- Phase and PWM dimmable
- Input voltage: 10-15V

2 1/4" (58 mm)

3 1/2" (89 mm)

3 1/2" (89 mm)

2 1/2" (64 mm)

1 1/2" (38 mm)

LANDSCAPE LIGHTING

FXLuminaire.

LED Up Lights

PROJECT

CATALOG #

TYPE

NOTES

NP Up Light

DESIGNER PLUS

Expertly engineered with 45° or 60° shroud options to illuminate a variety of spaces in 3, 6, or 9 LED. An RGBW version is also available for use with Luxor® ZDC systems.

Quick Facts

- Die-cast aluminum
- Two-layer marine-grade anodization and powder coat finish
- Cree® integrated LEDs
- ProAim™ adjustability

- Tamper-resistant features
- Color temperature filters
- Compatible with Luxor technology
- Phase and PWM dimmable
- Input voltage: 10-15V

2 1/2" (64 mm)

3 1/2" (89 mm)

3 1/2" (89 mm)

2 1/2" (64 mm)

1 1/2" (38 mm)

LANDSCAPE LIGHTING

HILLSIDE OUTDOOR LIGHTING REQUIREMENTS:  
AREA OF LOT: 43,970 S.F.  
ALLOWABLE DISTURBED AREA: (60%) 26,382 S.F.

LANDSCAPE UP-LIGHTING: LIMITED TO ONE (1) FIXTURE PER 1,000 S.F. OF ALLOWABLE DISTURBED AREA.

UP-LIGHTS PERMITTED: 26 LIGHTS  
UP-LIGHTS PROVIDED: 25 LIGHTS

NOTE: ALL OTHER LIGHTING (LUMINAIRE IS CONSIDERED 'SAFETY LIGHTING' USED TO ILLUMINATE VEHICULAR AND PEDESTRIAN CIRCULATION, AND DOES NOT EMIT LIGHT RAYS ABOVE A HORIZONTAL PLANE.

LIGHTING PLAN  
L5.1

0' 10' 20' 30'  
SCALE: 1" = 10'-0"

0' 10' 20' 30'  
SCALE: 1" = 10'-0"

GREEY|PICKETT

7144 E. Stetson Drive, Suite 205  
Scottsdale, Arizona 85251  
P. 480.609.0009 F. 480.609.0009  
WWW.GREEYPICKETT.COM

G|P

WOLFSWINKEL RESIDENCE  
LANDSCAPE CONSTRUCTION DOCUMENTS  
3924 E BETHANY HOME ROAD  
PARADISE VALLEY, AZ 85253

REVISIONS:

PROJECT#: WWH003  
ISSUED FOR: REVIEW  
DRAWN BY: TEAM  
SCALE: 1"=10'-0"  
PLOT DATE: 10/15/2025  
DRAWING: LIGHTING PLAN

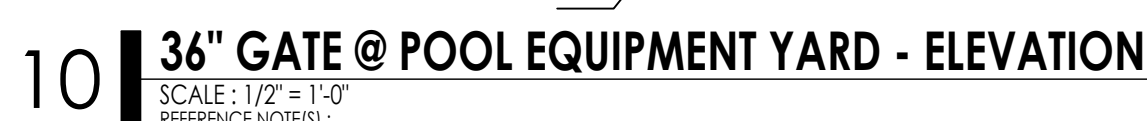
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LOGAN S.  
SOWERS  
REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT  
EXPIRES 06/30/27

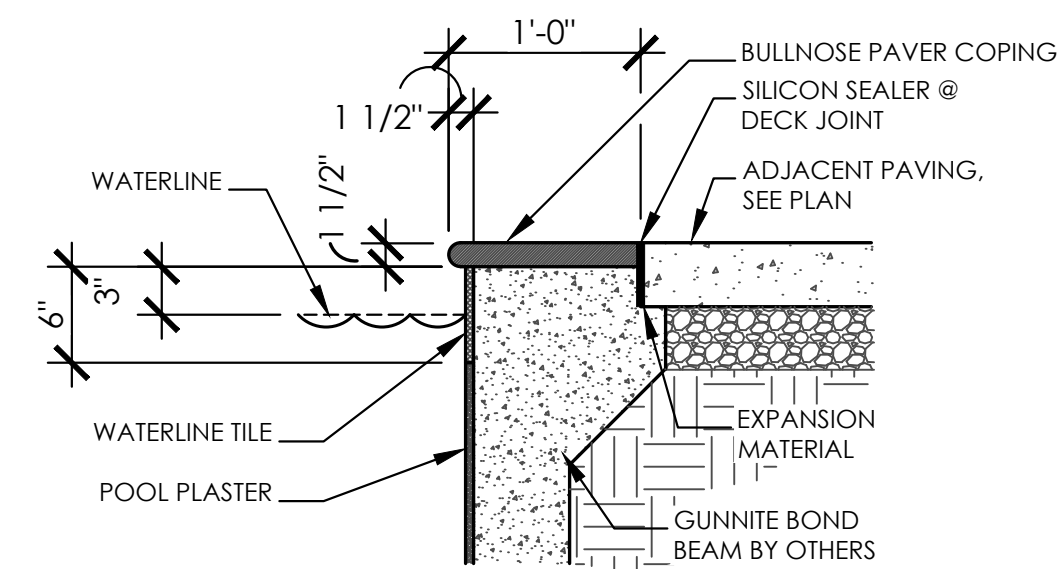
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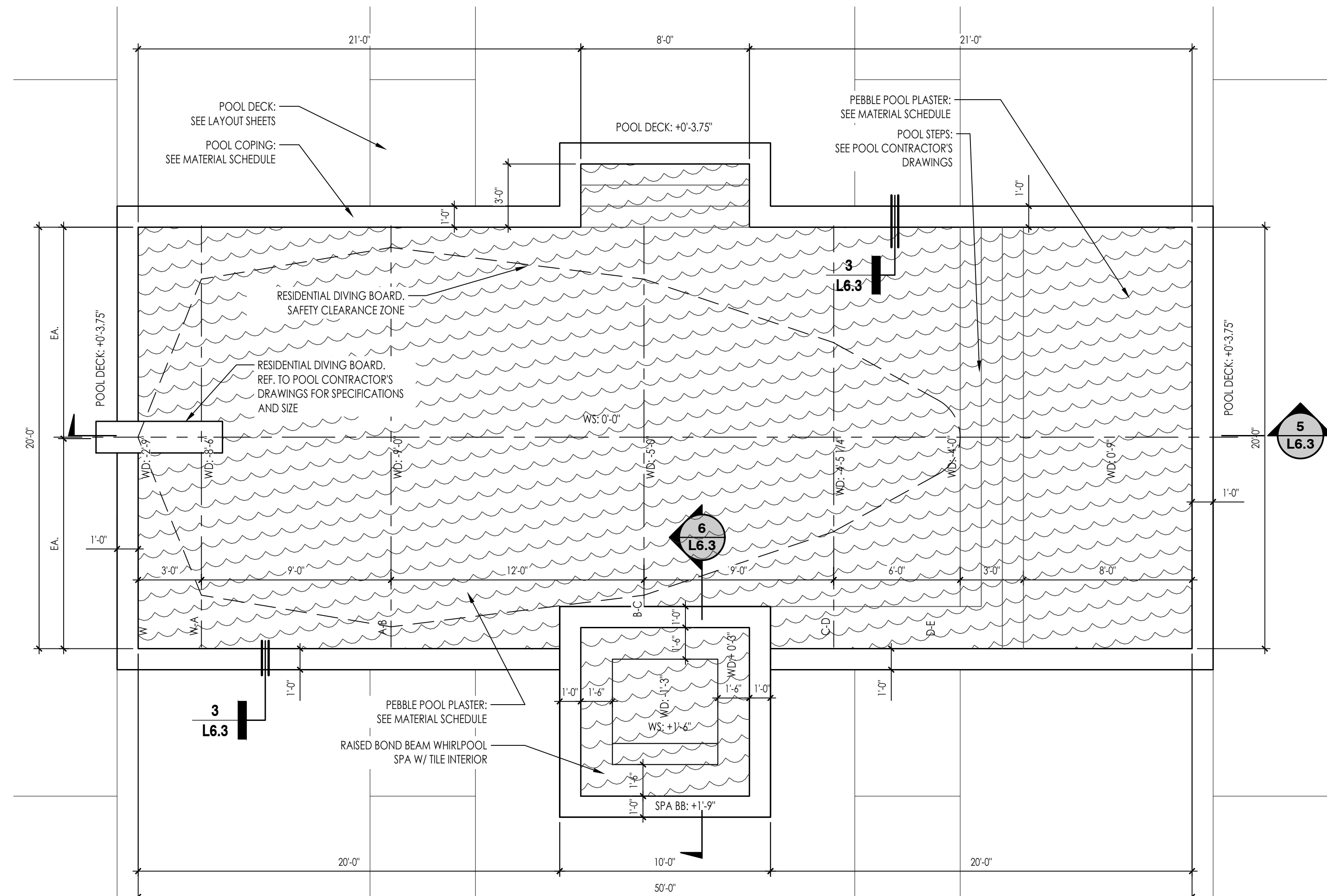




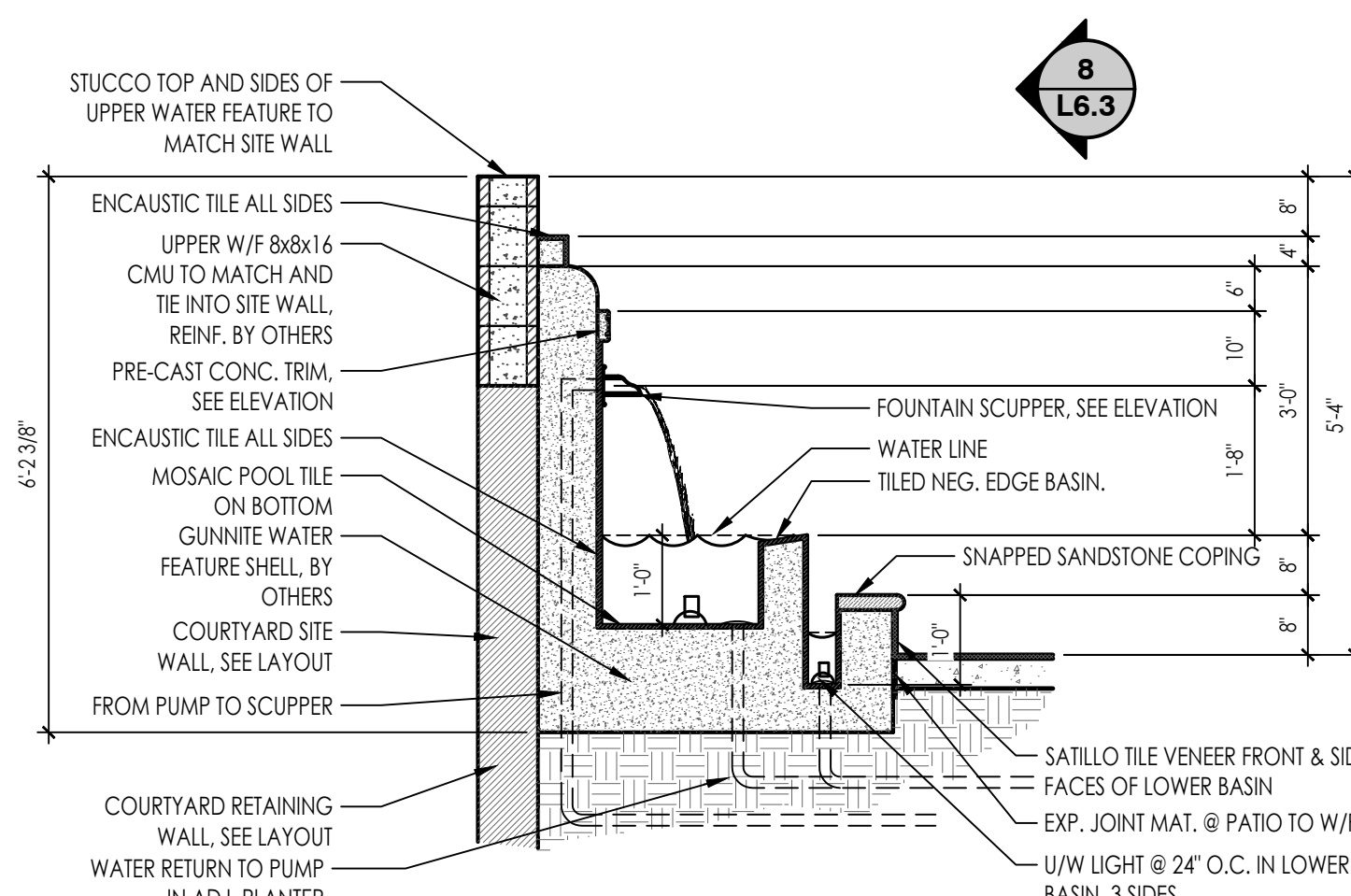




### 3 POOL COPING DETAIL



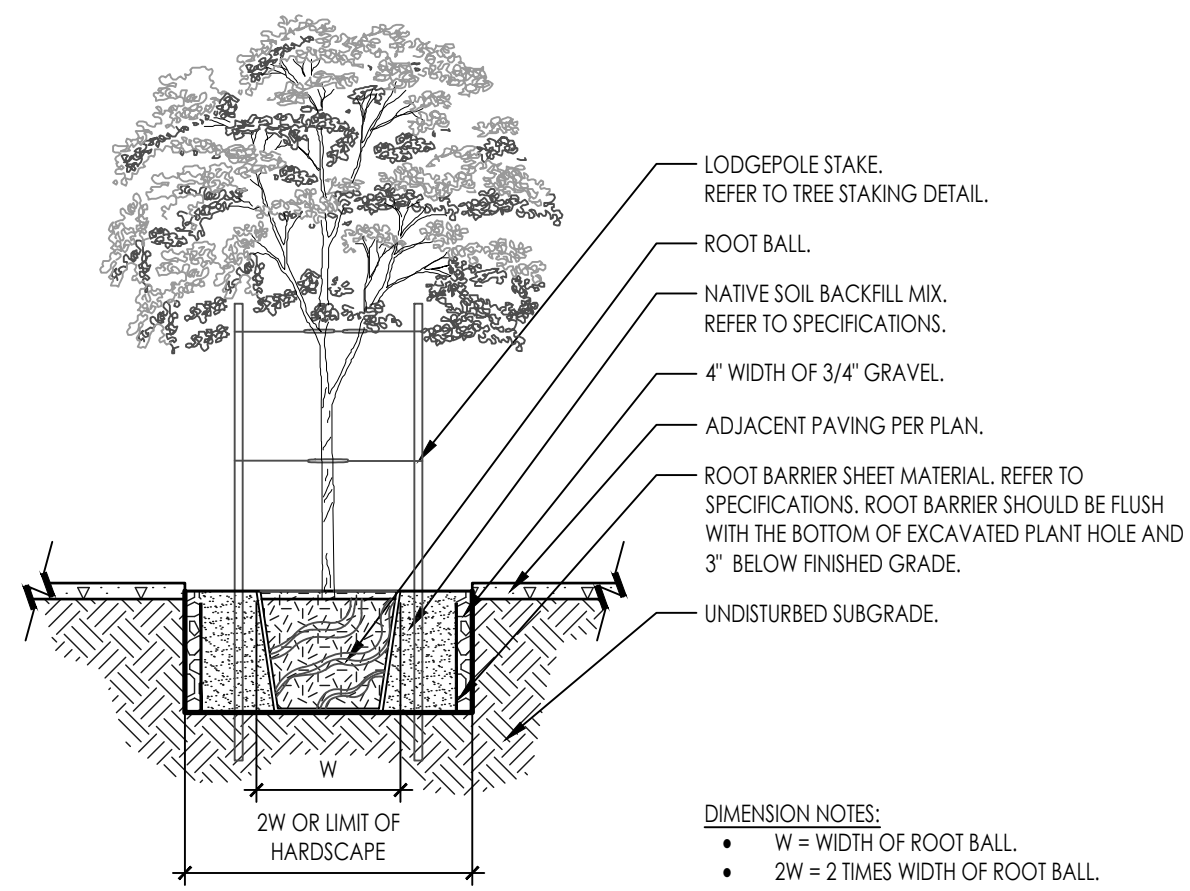
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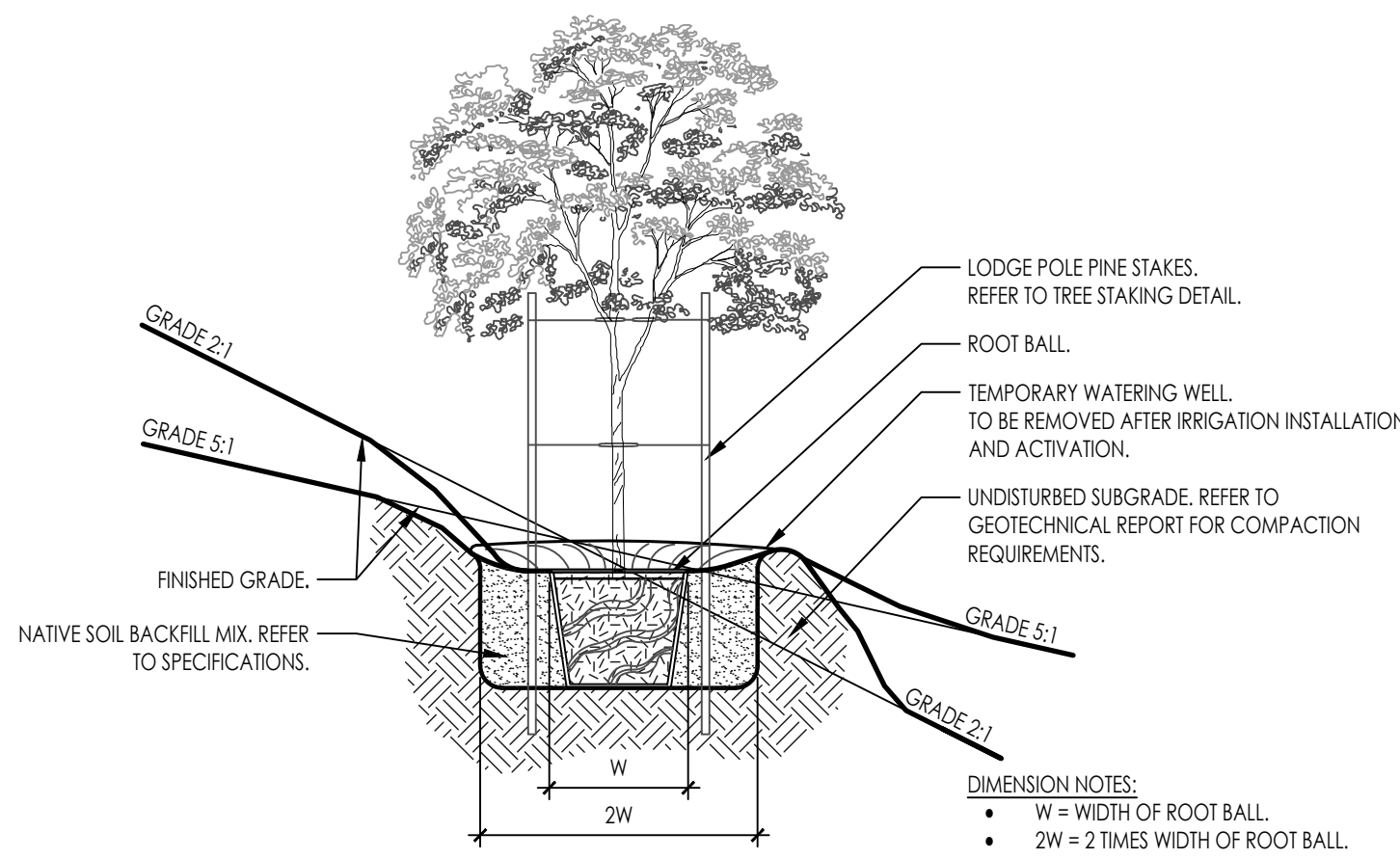
## 7 | COURTYARD WATER FEATURE - PLAN

9 | **COURTYARD WATER FEATURE - SECTION**

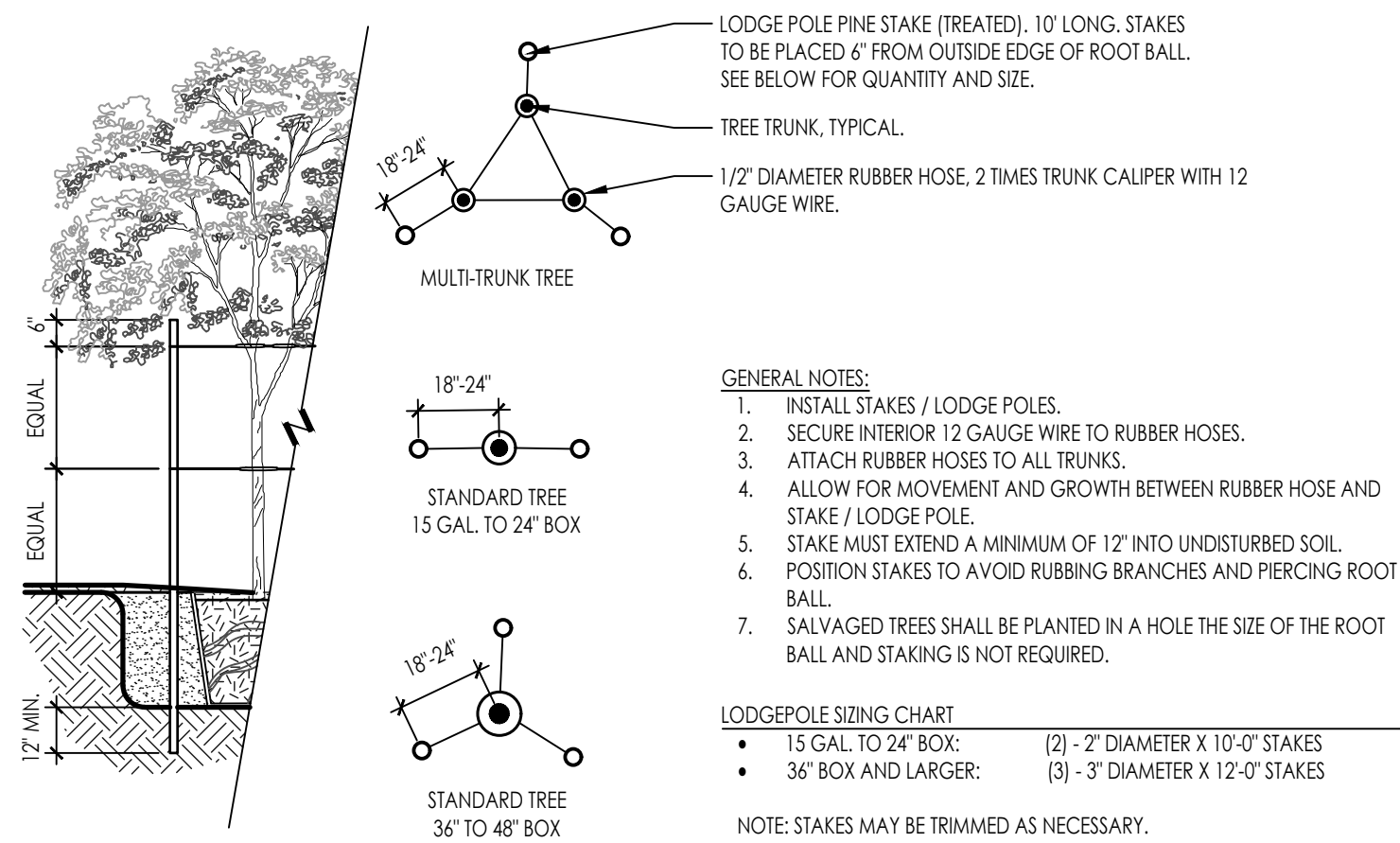




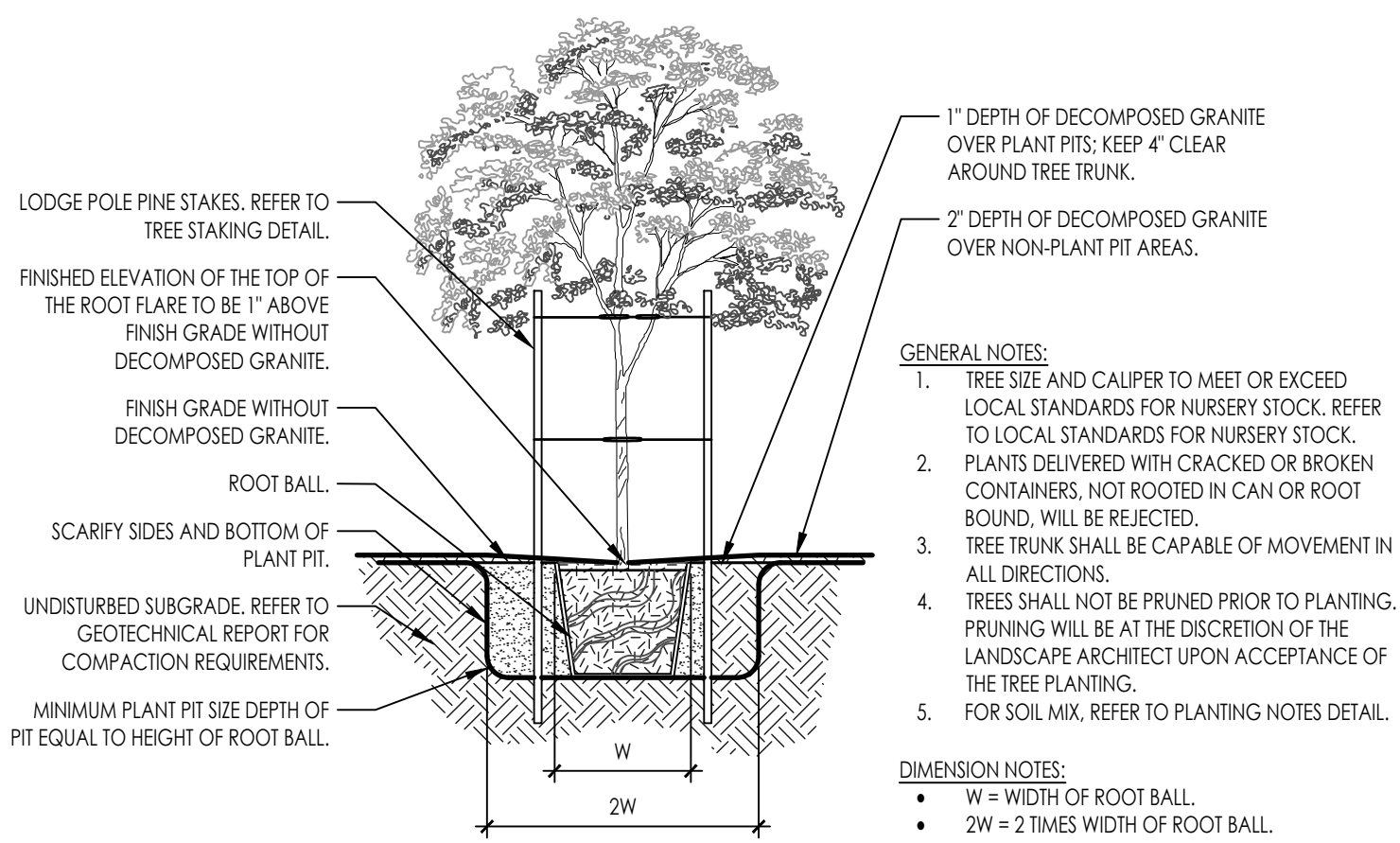
**4 ROOT BARRIER DETAIL**  
SCALE: NTS



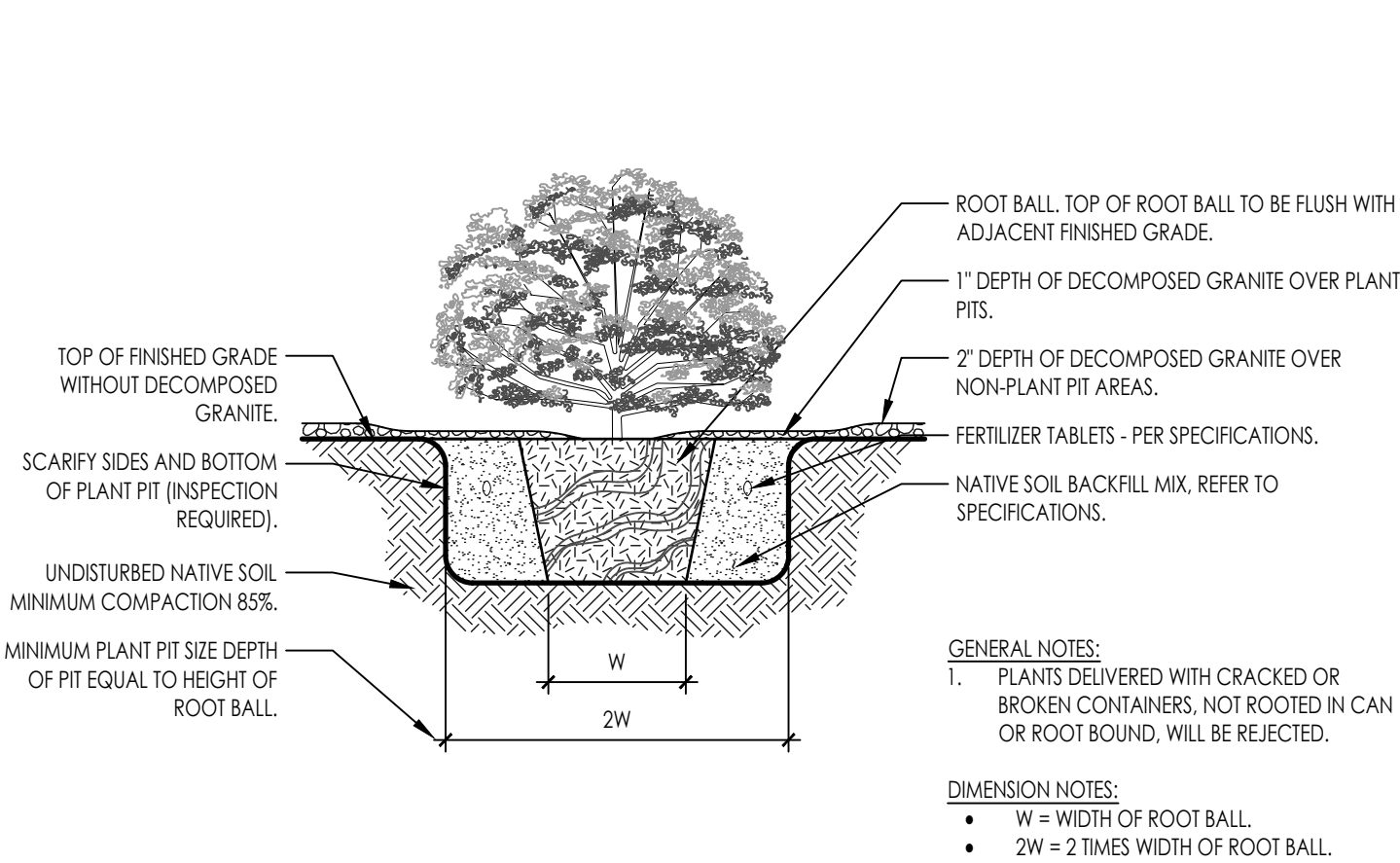
**3 TREE PLANTING ON SLOPE DETAIL**  
SCALE: NTS



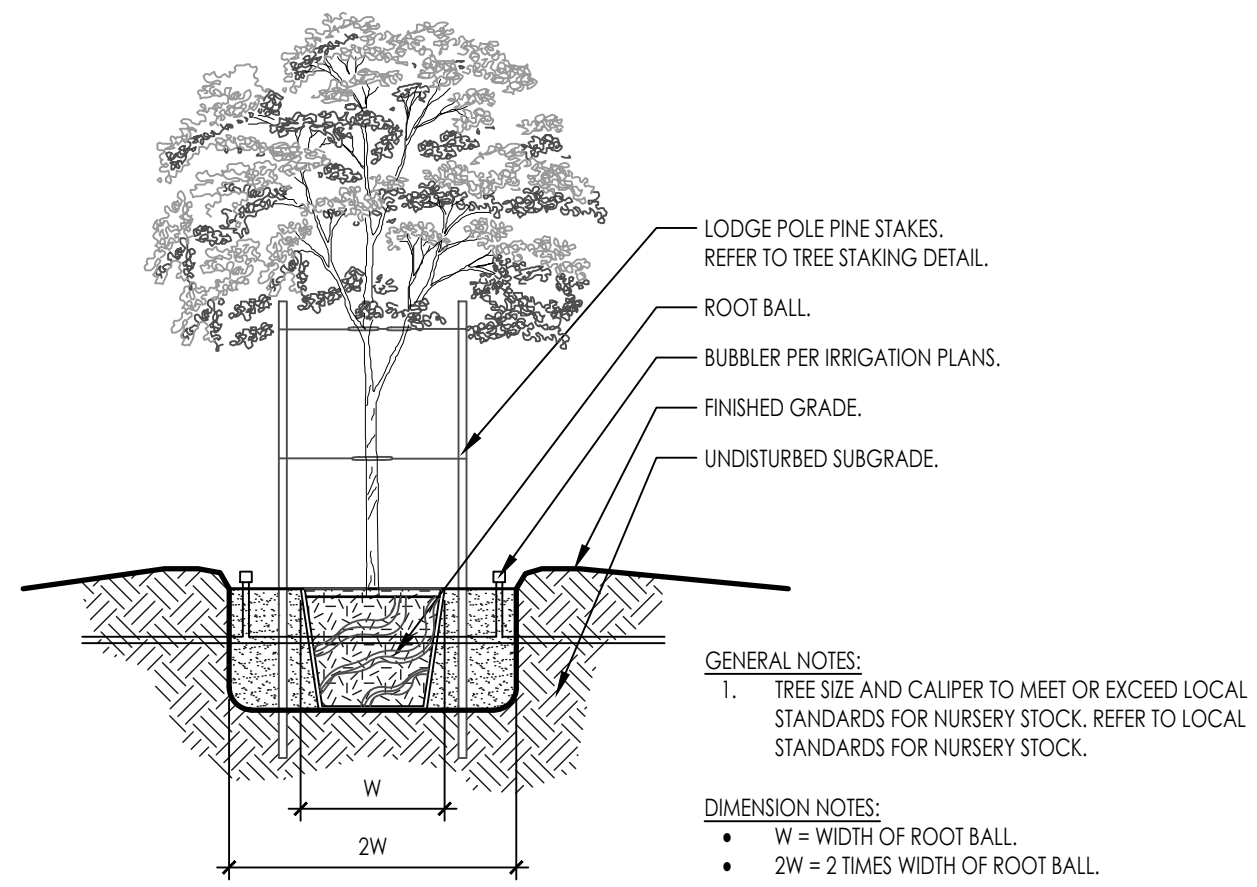
**2 TREE STAKING DETAIL**  
SCALE: NTS



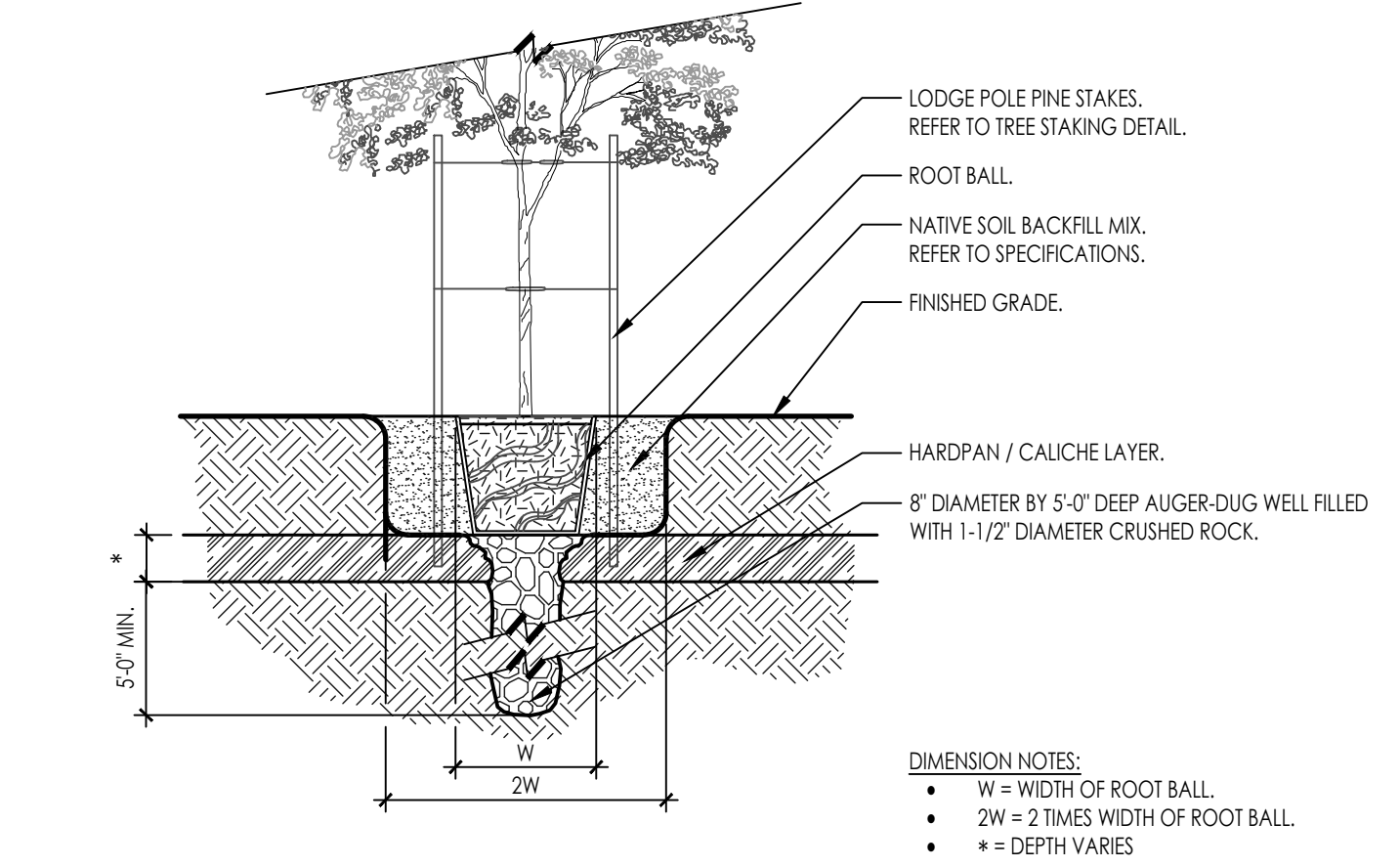
**1 TREE PLANTING DETAIL**  
SCALE: NTS



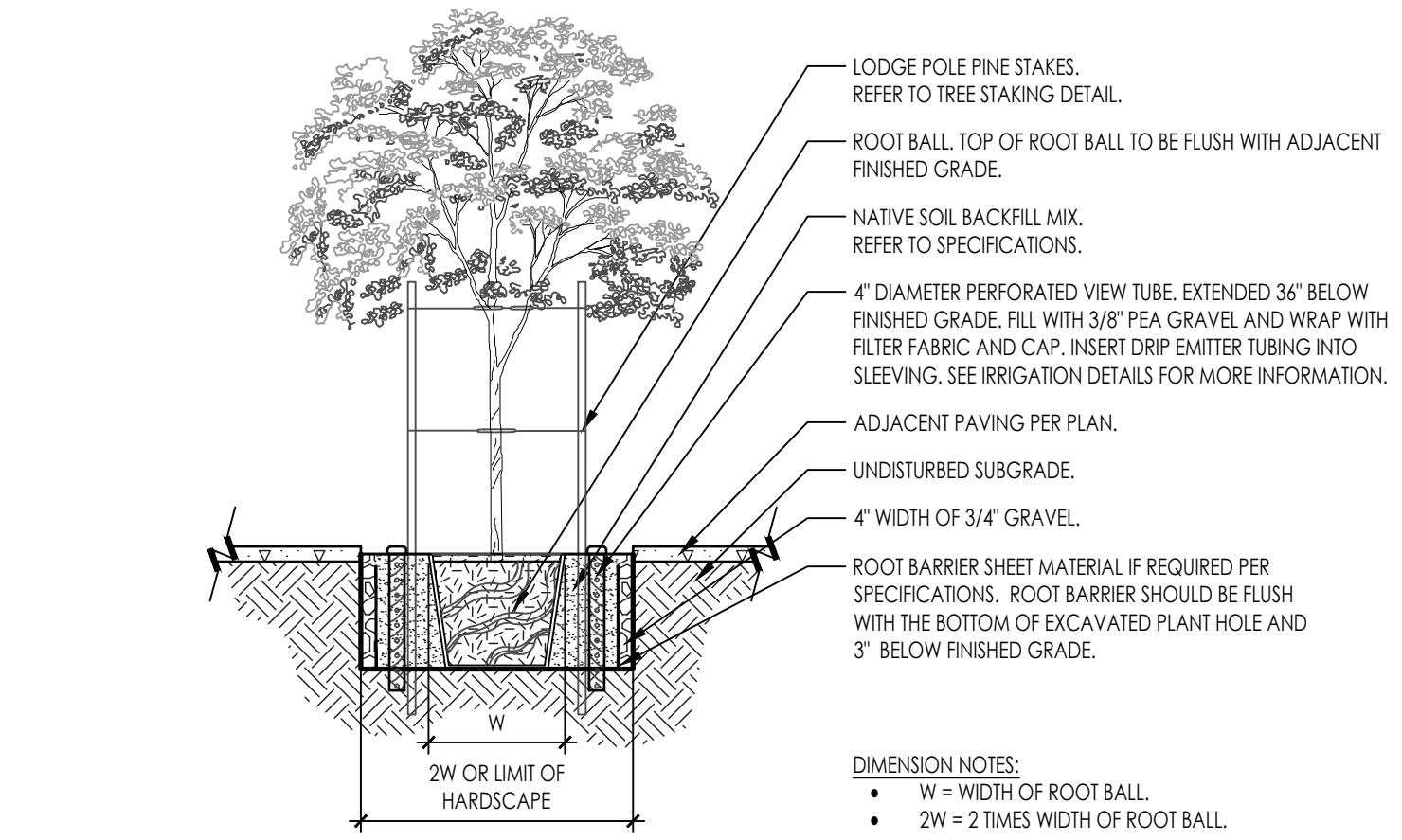
**8 SHRUB PLANTING DETAIL**  
SCALE: NTS



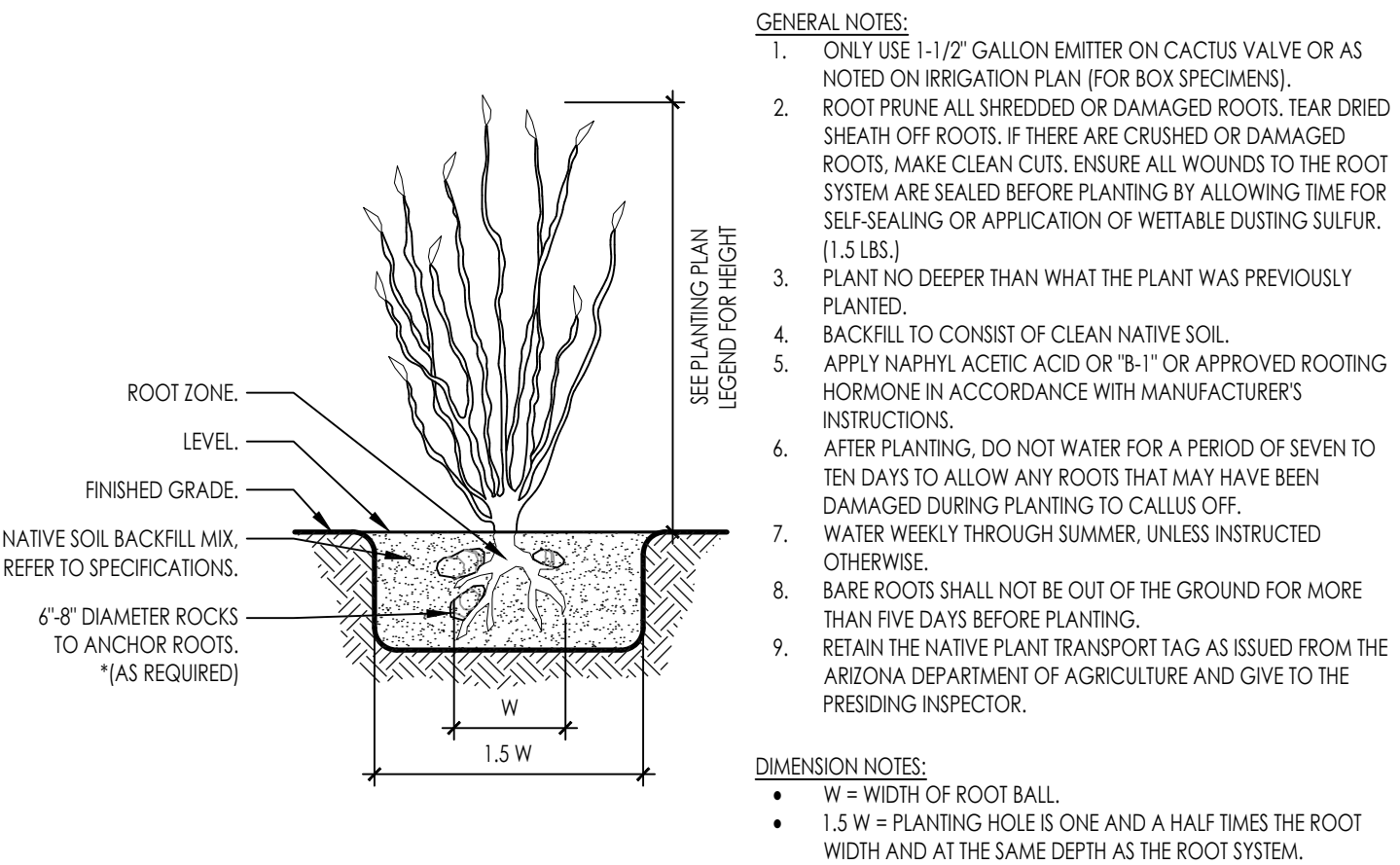
**7 CITRUS PLANTING DETAIL**  
SCALE: NTS



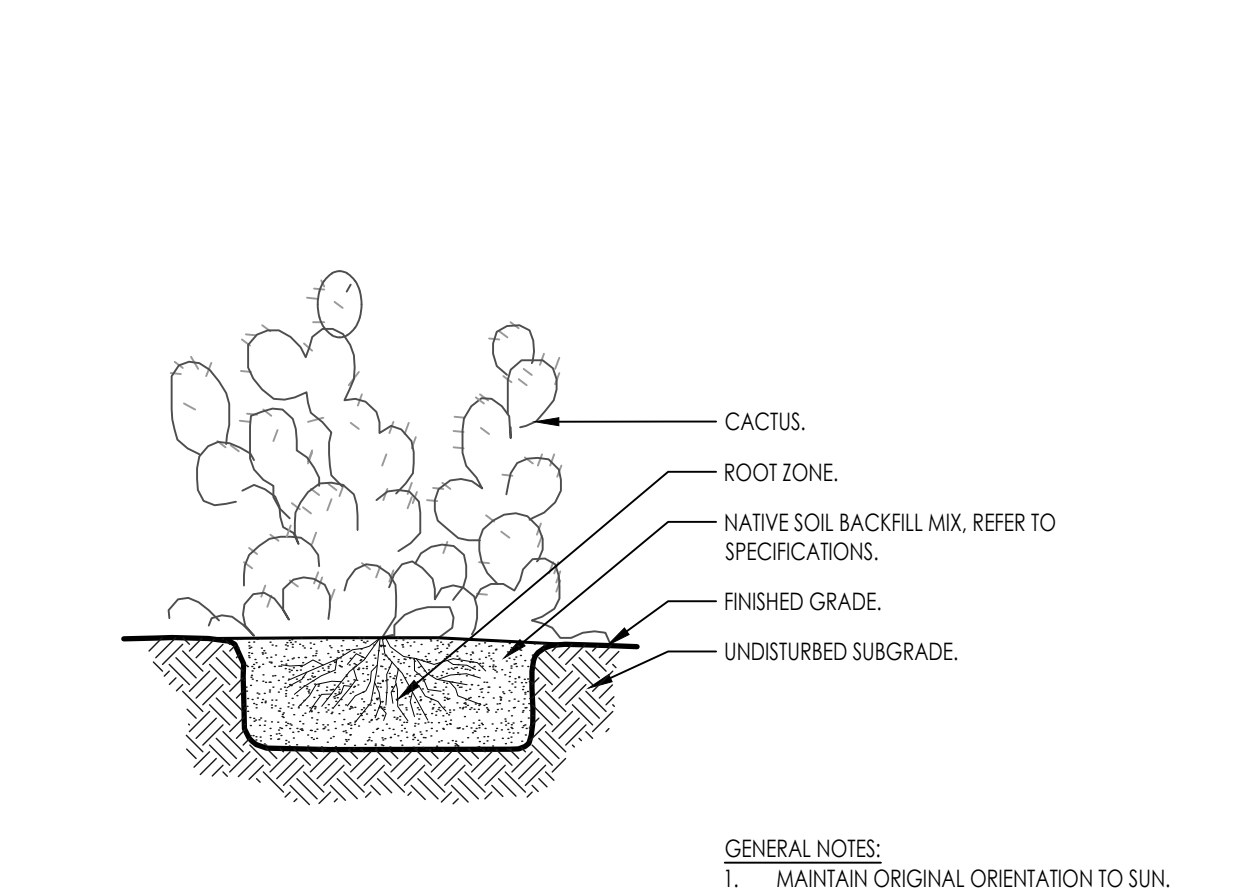
**6 HARDPAN TREE PLANTING DETAIL**  
SCALE: NTS



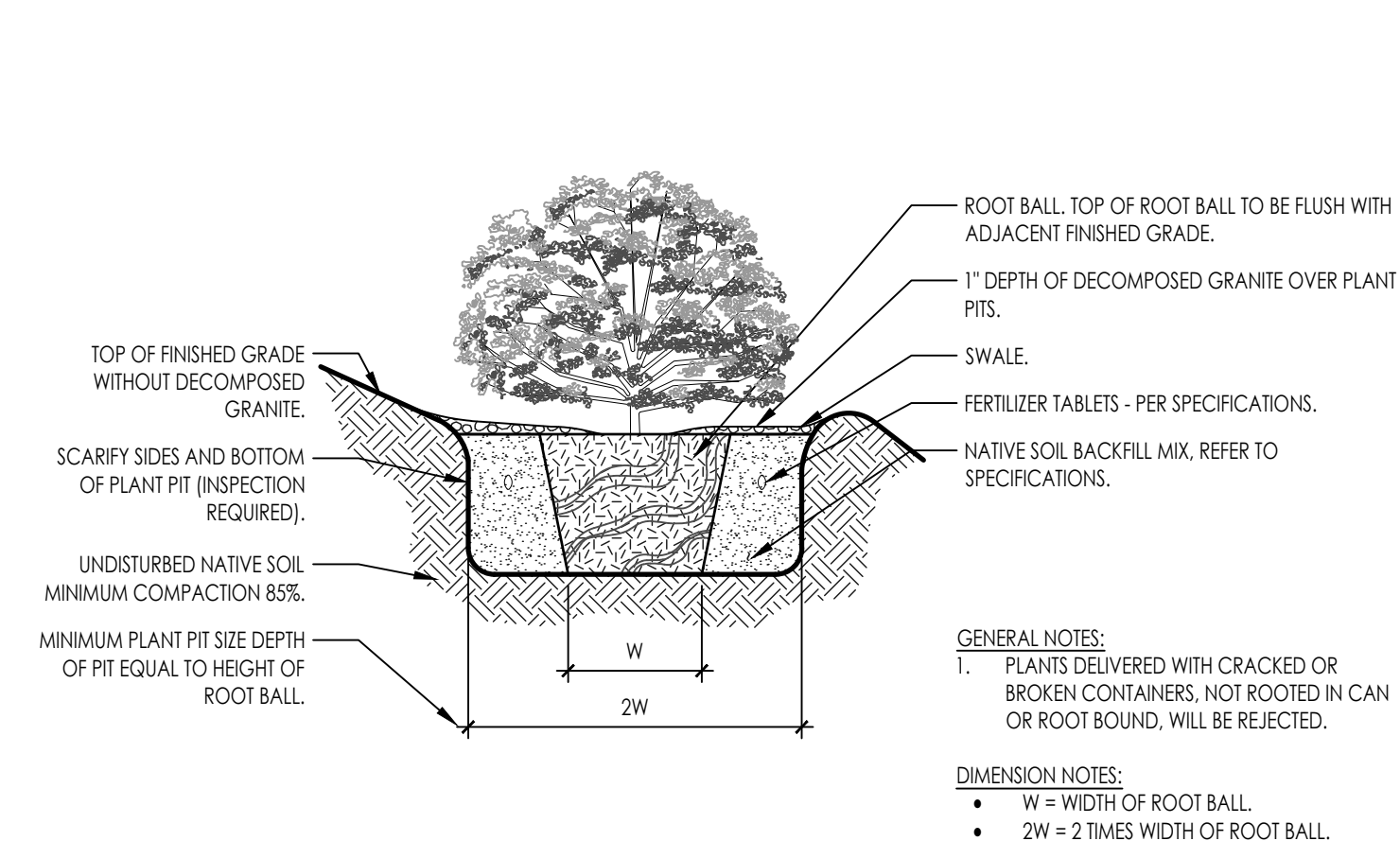
**5 TREE DEEP ROOT WATERING DETAIL**  
SCALE: NTS



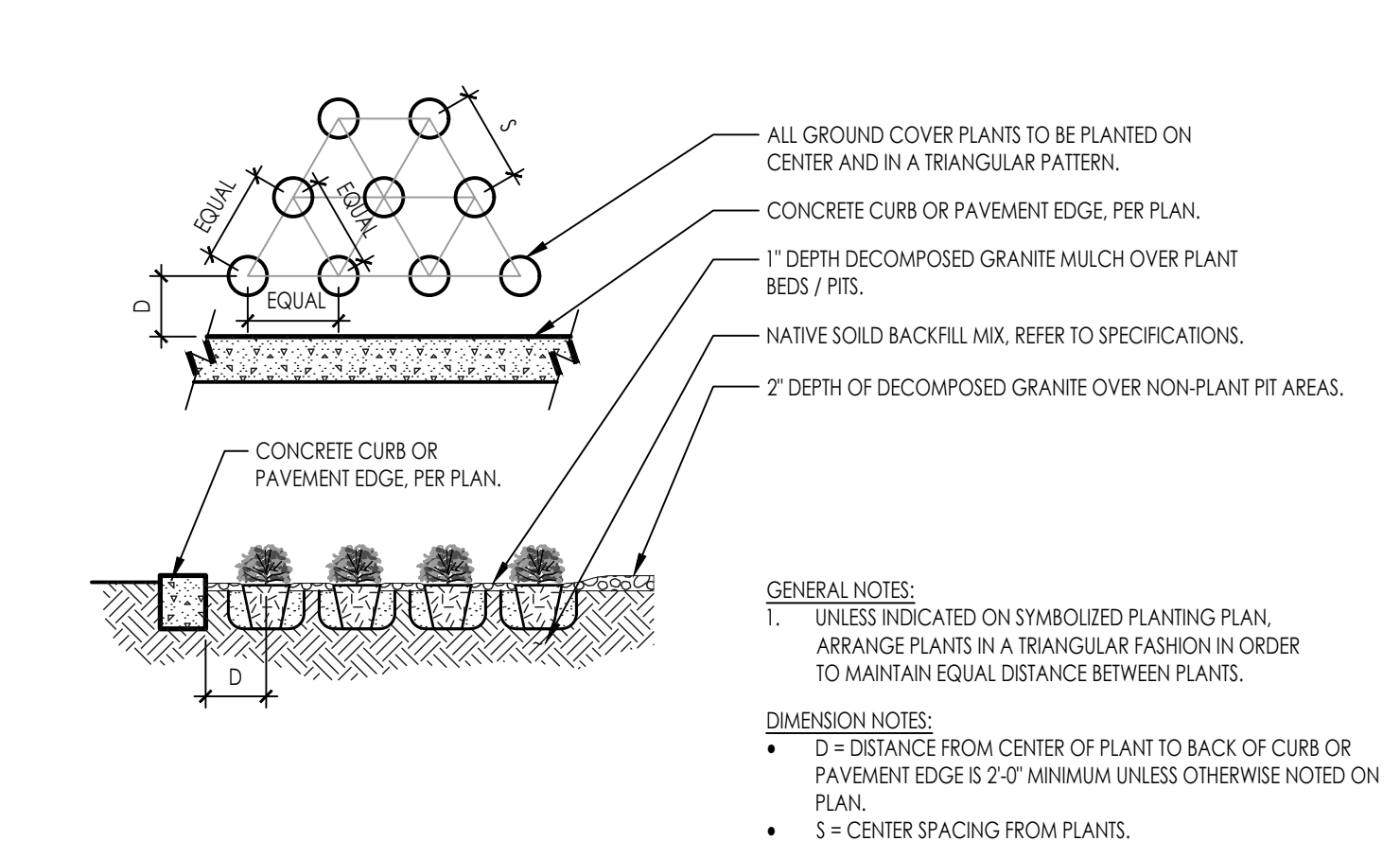
**12 Ocotillo PLANTING DETAIL**  
SCALE: NTS



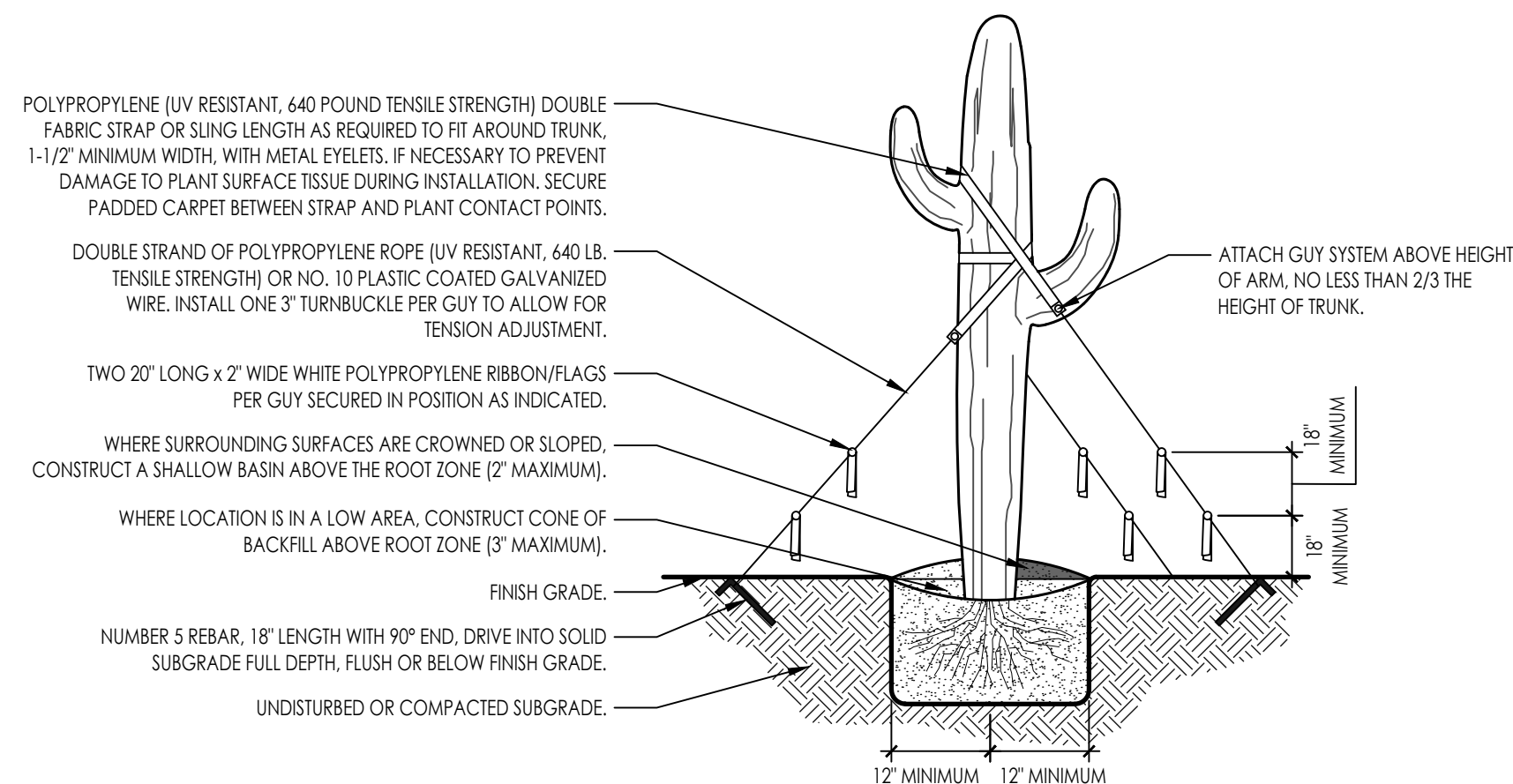
**11 BARE ROOT CACTUS PLANTING DETAIL**  
SCALE: NTS



**10 SHRUB PLANTING ON SLOPE DETAIL**  
SCALE: NTS  
REFERENCE NOTE(S):



**9 PLANT SPACING DETAIL**  
SCALE: NTS



**13 SAGUARO PLANTING DETAIL**  
SCALE: NTS

INSTALLATION PROCEDURE:  
1. CLEANLY CUT AND REMOVE ANY DAMAGED ROOTS. SPRAY ALL ROOT SURFACES WITH AN APPLICATION OF STREPTOMYCIN AND IMMEDIATELY APPLY TO WET SURFACES AN APPLICATION OF DUSTING SULFUR.  
2. EXCAVATE OR AUGER PLANT PIT WITH SOLID VERTICAL SIDES. PROVIDE A MINIMUM 6\"/>



PLANTING SPECIFICATIONS:

PART 1 - GENERAL

1.01 - WORK INCLUDED, BUT NOT LIMITED TO:

- LANDSCAPE FINISH GRADING.
- SOIL PREPARATION
- TREE SUPPORTS
- PLANTING
- WATERING
- MAINTENANCE

DEFINITIONS:

OWNER'S REPRESENTATIVE - AN AUTHORIZED AGENT DETERMINED BY OWNER TO ACT ON THEIR BEHALF. IN SOME CASES THE LANDSCAPE ARCHITECT MAY BE THE OWNER REPRESENTATIVE AS OUTLINED IN THESE SPECS.  
PLANT MATERIAL - ALL TREES, SAGUAROS, OCOTILLOS, PALMS, SHRUBS, CACTI, GROUND COVER, AND OTHER PLANTS.

1.02 - RELATED WORK

CONTRACTOR: MINIMUM 5 YEARS EXPERIENCE IN SUPPLY AND INSTALLATION OF LANDSCAPE MATERIALS. A FOREMAN WITH A MINIMUM OF 5 YEARS EXPERIENCE IN RELATED WORK SHALL BE ON SITE AT ALL TIMES.

1.03 - SOURCE QUALITY CONTROL

- o. PROVIDE CERTIFICATES OF INSPECTION FOR ALL MATERIALS AS REQUIRED BY LAW OR REGULATION.
- b. PACKAGE STANDARD MATERIALS WITH MANUFACTURERS CERTIFIED ANALYSIS. PROVIDE ANALYSIS BY RECOGNIZED LABORATORY MADE IN ACCORDANCE WITH METHODS ESTABLISHED BY THE ASSOCIATION OF OFFICIAL CHEMISTS FOR ALL OTHER MATERIAL.
- c. PROVIDE TREES AND SHRUBS GROWN IN A RECOGNIZED NURSERY IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. PROVIDE HEALTHY, UNDAMAGED, VIGOROUS STOCK GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO CONDITIONS AT PROJECT SITE AND FREE OF DISEASE, INSECTS, EGGS, LARVAE AND DEFECTS SUCH AS SUN-SCALD, KNOTS, INJURIES, ABRASIONS OR DISFIGUREMENTS. PROVIDE TREES AND SHRUBS OF THE SIZES INDICATED. TREES AND SHRUBS OF SIZES LARGER THAN THOSE INDICATED MAY BE USED PROVIDED ROOTS, ROOT BALL, STAKING AND PLANTING PITS ARE INCREASED PROPORTIONATELY.

1.04 - REFERENCE STANDARDS

- o. PROJECT'S CITY / COUNTY / STATE REFERENCED REGULATIONS FOR NURSERY GROWN PLANT MATERIAL, MOST CURRENT EDITION.
- b. STATE OF ARIZONA, ARIZONA NURSERY ASSOCIATION, CONTAINER GROWN TREE GUIDE, MOST CURRENT EDITION.
- c. STATE OF CALIFORNIA, DEPARTMENT OF FOOD AND AGRICULTURE, REGULATIONS FOR NURSERY INSPECTIONS, RULES AND GRADING, MOST CURRENT EDITION.
- d. STATE OF FLORIDA, FLORIDA DEPARTMENT OF AGRICULTURE, GRADES AND STANDARDS FOR NURSERY STOCK, MOST CURRENT EDITION.
- e. STATE OF NEVADA, NEVADA DEPARTMENT OF AGRICULTURE, PLANT HEALTH AND COMPLIANCE NURSERY REGULATIONS, MOST CURRENT EDITION.
- f. STATE OF IDAHO, IDAHO NURSERY AND LANDSCAPE ASSOCIATION, MOST CURRENT EDITION.
- g. ANSI Z60.1 AMERICAN STANDARD FOR NURSERY STOCK, MOST CURRENT EDITION.

1.05 - SAMPLES

SUBMIT THE FOLLOWING MATERIAL SAMPLES TO OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO START OF WORK.

- o. TOPSOIL FOR BACKFILL MIX (TREES AND SHRUBS).
- b. WOOD SHAVINGS/MULCH.
- c. TREE SUPPORTS.
- d. DECOMPOSED GRANITE / MULCH.
- e. BOULDERS.

THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO TAKE AND ANALYZE SAMPLES OF MATERIALS FOR CONFORMITY TO SPECIFICATION AT ANY TIME. FINISH SAMPLES UPON REQUEST BY OWNER'S REPRESENTATIVE. REJECTED MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND REPLACED AT THE CONTRACTOR'S ADDITIONAL EXPENSE.

SUBMIT SAMPLES OF DECOMPOSED GRANITE FOR APPROVAL OF GRADUATION AND COLOR. SAMPLE SHALL BE REPRESENTATIVE OF VARIATIONS WITHIN SIZE AND COLOR TO BE PROVIDED.

1.06 - PRODUCT DATA

SUBMIT TO OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO START OF WORK MANUFACTURERS COMPREHENSIVE PRODUCT DESCRIPTION, INCLUDING SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.

1.07 - CERTIFICATES AND TEST REPORTS

PROVIDE AND PAY FOR ALL MATERIALS TESTING. TESTING AGENCY SHALL BE ACCEPTABLE TO THE LANDSCAPE ARCHITECT. SUBMIT TO OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO START OF WORK 2 COPIES OF CERTIFICATES OF INSPECTION AS REQUIRED BY GOVERNMENTAL AUTHORITIES, AND MANUFACTURERS' VENDORS CERTIFIED ANALYSIS FOR SOIL AMENDMENTS, FERTILIZER MATERIALS, AND CHEMICALS. SUBMIT OTHER DATA SUBSTANTIATION THAT MATERIALS COMPLY WITH SPECIFIED REQUIREMENTS. CERTIFICATES ARE REQUIRED TO DETERMINE THE QUALITY AND QUANTITY OF ALL SPECIFIED SOIL AMENDMENTS.

MATERIALS CERTIFICATION TO BE SUBMITTED INCLUDE, BUT ARE NOT LIMITED TO: TOPSOIL SOURCE AND NUTRIENT ANALYSIS, MULCH, FERTILIZERS/SOIL AMENDMENTS/CHEMICALS. TEST REPRESENTATIVE MATERIAL SAMPLES PROPOSED FOR USE. PROVIDE THE FOLLOWING DATA:

- o. TOPSOIL AND PLANTING BACKFILL.
- b. SOIL PH.
- c. PARTICLE SIZE, PERCENTAGE SOIL TEXTURE.
- d. PERCENTAGE ORGANIC MATERIAL.
- e. PERCOLATION RATE.
- f. NUTRIENT LEVEL ANALYSIS.
- g. ALL MACRO, SECONDARY AND MICRO NUTRIENT SALINITY.
- h. ESP.
- i. FREE LIME.

RECOMMENDATIONS ON TYPE AND QUANTITY OF AMENDMENTS REQUIRED TO BRING LEVELS INTO ACCEPTABLE RANGES AS DETAILED IN PART 2 - PRODUCTS OF MATERIALS OF THESE SPECIFICATIONS.

SEPARATE RECOMMENDATIONS TO BE SUBMITTED FOR EACH CROP. CROP TO BE IDENTIFIED AS:

- o. IRRIGATED TREES AND SHRUBS.
- b. TURF.

1.08 - MAINTENANCE DATA

SUBMIT TO OWNER'S REPRESENTATIVE 2 COPIES OF TYPEWRITTEN INSTRUCTIONS, PRIOR TO EXPIRATION OF THE INITIAL MAINTENANCE PERIOD, RECOMMENDING PROCEDURES TO BE FOLLOWED BY THE OWNER FOR THE MAINTENANCE OF LANDSCAPE WORK FOR ONE FULL YEAR.

1.09 - PRODUCT DELIVERY, STORAGE AND HANDLING

DELIVER PACKAGED MATERIAL IN CONTAINERS SHOWING WEIGHT, ANALYSIS AND IDENTIFICATION OF MANUFACTURER. PROTECT MATERIALS FROM DETERIORATION AT ALL TIMES.

PROVIDE PROTECTIVE COVERS TO PLANT LIFE AND TREES DURING DELIVERY. DO NOT PRUNE TREES PRIOR TO DELIVERY. DO NOT BEND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO CAUSE DAMAGE OR DESTROY SHAPE. DELIVER MATERIALS AFTER PREPARATION FOR PLANTING HAVE BEEN COMPLETED. PLANT IMMEDIATELY. IF PLANTING IS DELAYED FOR MORE THAN 6 HOURS AFTER DELIVERY, SET PLANT MATERIAL IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST.

DO NOT REMOVE CONTAINER GROWN STOCK INCLUDING GROUND COVER, FROM CONTAINERS UNTIL PLANTING TIME.

1.10 - SITE CONDITIONS

DETERMINE LOCATION OF UNDERGROUND UTILITIES. EXECUTE WORK AS REQUIRED TO PREVENT DAMAGE.

MAINTAIN GRADE STAKES SET BY OTHERS UNTIL DIRECTED OTHERWISE.

PROTECT ALL EXISTING PLANT LIFE NOT SCHEDULED FOR REMOVAL. IF ANY PLANT MATERIAL THAT IS TO REMAIN IS DAMAGED, THE CONTRACTOR, AT HIS EXPENSE, WILL PAY FOR A REPLACEMENT PLANT OF THE SAME SIZE AND SPECIES (TO BE APPROVED BY OWNERS REPRESENTATIVE).

PROTECT EXISTING UTILITIES, PAVING AND OTHER FACILITIES FROM DAMAGE DURING LANDSCAPING OPERATION.

COORDINATE WITH OTHER CONTRACTORS.

1.11 - WARRANTY

SUBMIT WARRANTY TO OWNER'S REPRESENTATIVE.

TREES, PALM TREES, SAGUAROS AND OCOTILLOS:  
WARRANT THAT TREES, PALM TREES, SAGUAROS AND OCOTILLOS WILL BE ALIVE AND IN GOOD HEALTH FOR A PERIOD OF 1 YEAR AFTER ACCEPTANCE EXCEPT FOR DEFECTS RESULTING FROM NEGLECT BY OWNER, ABUSE OR DAMAGE BY OTHERS.

OWNER MUST FOLLOW CONTRACTOR'S MAINTENANCE SCHEDULE AND PROVIDE CURRENT MAINTENANCE LOG TO OWNER'S REPRESENTATIVE.

REMOVE AND REPLACE DEAD, UNHEALTHY OR GIRDLED TREES, PALM TREES, SAGUAROS AND OCOTILLOS THAT LOSE ORIGINAL FORM AND SIZE DURING WARRANTY PERIOD WITH MATERIAL EQUAL TO THAT SPECIFIED. REPLACE ANY MATERIAL WHICH DOES NOT MEET REQUIREMENTS WITHIN FIFTEEN DAYS OF NOTIFICATION. ALL REPLACEMENT TREES, PALM TREES, SAGUAROS AND OCOTILLOS SHALL BE SUBJECT TO AN ADDITIONAL ONE-YEAR MAINTENANCE PERIOD.

SHRUBS AND OTHER PLANTINGS:  
GUARANTEE ALL OTHER PLANTING WILL BE ALIVE AND IN SATISFACTORY CONDITION FOR A PERIOD OF 90 DAYS FROM DATE OF ACCEPTANCE OR WILL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY, STURDY CONDITION DURING THE WARRANTY PERIOD BY THE CONTRACTOR.

ALL REPLACEMENT PLANTS, INCLUDING SHRUBS, CACTI, GROUNDCOVERS, VINES AND PERENNIALS SHALL BE SUBJECT TO AN ADDITIONAL 90-DAY MAINTENANCE PERIOD.

PART 2 - PRODUCTS AND MATERIALS

2.01 - FILL MATERIALS

PROVIDE DRY, LOOSE MATERIAL FOR FILL, BACKFILL, PLANTING BACKFILL AND TOPSOIL FOR PLANTER BEDS. FROZEN OR MUDDY SOILS ARE NOT ACCEPTABLE. SALTS NOT TO EXCEED 1500 PPM, AND MATERIAL SHALL BE FREE OF DEBRIS, NOXIOUS WEEDS, INGREDIENTS OR OBJECTS DETRIMENTAL TO HEALTHY PLANT GROWTH. TOPSOIL: SCREENED, FERTILE, FRABLE, OR FROM WELL DRAINED ARABLE LAND, FREE OF HUT GRASS, REFUSE, ROOTS, HEAVY CLAY, NOXIOUS WEEDS OR ANY MATERIAL TOXIC TO PLANT GROWTH; CONTENTS AS FOLLOWS:

- a. SILT: 20-45 %
- b. CLAY: 15-20 %
- c. SAND: 30-40 %
- d. ORGANIC MATERIAL (NATURAL OR OTHERWISE): 2 % MINIMUM
- e. PH: 7.0-8.3
- f. SOLUBLE SALTS: 1,500 PPM.
- g. NUTRIENTS: ENOUGH TO BRING LEVELS UP TO ACCEPTABLE PLANT GROWTH.

PERCOLATION RATE SHALL BE BETWEEN 3 TO 4 INCHES PER HOUR. EXISTING TOP SOIL MAY BE USED PROVIDED IT MEETS THESE REQUIREMENTS.

2.02 - COMMERCIAL GRADE FERTILIZERS

AGRI-SUL, DISPER-SUL - USE ONLY FOR SULFUR  
AGRICULTURE GRADE GYPSUM

2.03 - SOIL AMENDMENTS

WOOD SHAVINGS: NITROGEN STABILIZED FIR OR PINE SHAVINGS CONTAINING 0.75% TOTAL NITROGEN AND 0.1 TO 0.15% TOTAL IRON, AND UNDER 60 PPM TOTAL MANGANESE. COMPOSTED, LEACHED AND ACED FOR A MINIMUM OF 10 TO 12 MONTHS; PH FACTOR, 4.0 TO 4.5. NO SOIL AMENDMENTS ARE REQUIRED FOR SALVAGED PLANT MATERIAL AND CACTI UNLESS OTHERWISE SPECIFIED.

2.04 - TREE SUPPORTS

TREE STAKES: COPPER NAPHTHENATE IMPREGNATED LODGE POLE 10 FEET IN LENGTH FOR 5 GALLON AND 15 GALLON, AND 12 FEET IN LENGTH FOR 24-INCH BOX AND LARGER. NO TREE STAKES ARE REQUIRED FOR SALVAGED PLANT MATERIAL.

TREE TIES: PROVIDE A MINIMUM OF TWO PER TREE; NO. 10 GAUGE, PLIABLE, ZINC COATED IRON WIRE. COVER WIRE WITH HOSE. COVER AS SPECIED, WHERE IT CONTACTS TREE.

HOSE COVERING: 1/2-INCH MINIMUM DIAMETER; 2-PLY REINFORCED RUBBER, NEW GARDEN HOSE.

TREE GUARDS: "ARBORGARD" BY DEEP ROOT, OR EQUAL.

TREE GUYS: MINIMUM 3 PER TREE; NO. 10 GALVANIZED WIRE. COVER WIRE WITH HOSE WHERE IT CONTACTS TREE FOR 24, 30 AND 36 BOX TREES.

ANCHORS (DEADMEN): 2-INCH X 4-INCH X 3 FEET LONG; CONSTRUCTION GRADE REDWOOD.

SIGNALS (FLAGS): FOR GUY WIRES, 1/2-INCH DIAMETER, WHITE OR ORANGE PLASTIC TUBING 5 FEET LONG OVER EACH GUY USED.

2.05 - HERBICIDES

PRE-EMERGENT AND CONTACT HERBICIDES:  
PRE-EMERGENT HERBICIDE SHALL BE SURFLAN AS MANUFACTURED BY DOW/ELANCO CHEMICAL COMPANY.  
CONTACT HERBICIDE SHALL BE ROUND-UP AS MANUFACTURED BY MONSANTO.

2.06 - PLANTING MATERIAL

- PLANT MATERIAL: HEALTHY, SHAPELY AND WELL ROOTED. ROOTS SHALL SHOW NO EVIDENCE OF HAVING BEEN RESTRICTED OR DEFORMED AT ANY TIME. ALL PLANTS SHALL BE REPRESENTATIVE OF THEIR NORMAL SPECIES AND VARIETY. THEY SHALL HAVE NORMALLY DEVELOPED BRANCH SYSTEMS. PLANTS SHALL BE FREE FROM DISFIGURING KNOTS, SUN SCALD INJURIES AND ABRASIONS OF BARK. PLANTS NOT MEETING THESE REQUIREMENTS SHALL BE CONSIDERED DEFECTIVE AND SHALL BE REPLACED IMMEDIATELY. ALL PLANTS SHALL BE TRUE TO NAME AND SHALL BE TAGGED, ONE OF EACH VARIETY. ALL PLANT MATERIAL SHALL BE GROWN IN NURSERIES INSPECTED BY THE STATE DEPARTMENT OF AGRICULTURE UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE.

- PROVIDE 'SPECIMEN' PLANTS WITH A SPECIAL HEIGHT, SHAPE OR CHARACTER. TAG AT THE SOURCE OF SUPPLY PRIOR TO NOTIFYING LANDSCAPE ARCHITECT FOR INSPECTION. THE LANDSCAPE ARCHITECT SHALL INSPECT SELECTIONS AT SOURCE OF SUPPLY FOR SUITABILITY AND ADAPTABILITY TO SELECTED LOCATION. WHEN SPECIMEN PLANTS CANNOT BE PURCHASED LOCALLY, PROVIDE SUFFICIENT PHOTOGRAPHS OF PROPOSED MATERIAL FOR APPROVAL.

- PLANTS MAY BE INSPECTED AND APPROVED AT PLACE OF GROWTH FOR COMPLIANCE WITH SPECIFICATION REQUIREMENTS FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION UPON DELIVERY AT THE SITE OR DURING THE PROGRESS OF THE WORK.

2.07 - TURF SOD

AS NOTED ON PLANS.

2.08 - DECOMPOSED GRANITE / MULCH

DECOMPOSED GRANITE COVERAGE SHALL BE A MINIMUM 2-INCH THICKNESS UNLESS NOTED OTHERWISE ON PLANS. DECOMPOSED GRANITE SHALL BE THE SIZE AND COLOR AS SPECIFIED ON PLANS, AND SHALL BE TAKEN FROM A SINGLE QUARRY.  
MULCH MUST BE 3-INCHES DEEP, UNLESS OTHERWISE NOTED. IN ALL PLANTING AREAS, KEEP THE MULCH AWAY FROM DIRECT CONTACT OF STEMS FROM PLANTS AND TREES TO PREVENT ROT AND PESTS. MULCH SHALL BE THE SIZE AND COLOR AS SPECIFIED ON PLANS, AND SHALL BE ORDERED FROM A SINGLE SOURCE.

2.09 - BOULDERS

BOULDERS ARE TO BE SURFACE SELECT OR AS NOTED ON THE PLANS. BOULDER SIZE AS NOTED ON THE PLANS AND APPROVED BY THE OWNER'S REPRESENTATIVE. BOULDERS ARE TO BE HARVESTED, DELIVERED AND PLACED IN A MANNER TO AVOID MARKING, SCRAPING OR DAMAGING THE NATURAL CONDITION OF THE BOULDER. ALL SCARRED BOULDERS ARE TO BE TREATED WITH PERMEON (OR EQUAL) TO PROVIDE A NATURAL APPEARANCE OF THE DESERT VARNISH. CONTRACTOR TO PROVIDE SAMPLES OF FINAL PRODUCT CONDITION FOR APPROVAL.

2.09 - SEED MIXTURE

AS NOTED ON PLANS, CONTRACTOR TO VERIFY PROVIDERS SPECIFICATION TO ACHIEVE INTENDED APPEARANCE.

PART 3 - EXECUTION

3.01 - GENERAL

INSTALL IN ACCORDANCE WITH THE METHODS, TECHNIQUES AND SPECIFICATIONS OF EACH REPRESENTATIVE MANUFACTURER. IF A CONFLICT OCCURS BETWEEN MANUFACTURERS AND THESE SPECIFICATIONS, CONSULT WITH OWNER'S REPRESENTATIVE FOR A DECISION.

DO NOT BEGIN PLANTING UNTIL THE IRRIGATION SYSTEM IS COMPLETELY INSTALLED, IS ADJUSTED FOR FULL COVERAGE AND IS COMPLETELY OPERATIONAL.

3.02 - BACKFILL, IMPORTED FILL OR ARTIFICIAL SOIL AND GRAVEL

INSPECT THE INTEGRITY OF ALL DAMP-PROOFING AND WATER-PROOFING MEMBRANES WHICH OCCUR OVER, ON OR AGAINST ANY CONSTRUCTION TO BE FULLY OR PARTIALLY CONCEALED BY EARTHWORK PRIOR TO THE PLACEMENT OF ANY IMPORTED SOIL, BACKFILL, GRAVEL FILL OR SUB-BASE.

CORRECT DEFECTS PRIOR TO PROCEEDING WITH THE WORK.

3.03 - TOPSOIL

IMPORT ADDITIONAL TOPSOIL ONLY AS REQUIRED TO BRING PLANTING AREAS UP TO FINISH GRADE. SPREAD AND CULTIVATE SOIL SO THAT NO SETTLING TAKES PLACE AT ANY TIME.

3.04 - LANDSCAPE FINE GRADING

ALLOW FOR THE ADDITION OF SOIL AMENDMENTS, CONDITIONERS AND ANY SPECIFIED TOP DRESSING WHEN DETERMINING AND EXECUTING FINISH GRADE.

SET FINISH GRADE 1-1/2 INCHES BELOW ADJACENT PAVING, CURB AND HEADERS FOR SHRUBS AND GROUND COVER BEDS AND AREAS OR AS REQUIRED FOR INSTALLATION OF DECOMPOSED GRANITE, MULCH, OR TURF SOD.

AT ALL PLANTING AREAS, MAKE ENTIRE AREA SMOOTH AND EVEN TO FINISH GRADE. CULTIVATE ALL AREAS SO THAT THERE ARE NO BUMPS OR HOLLOWAYS, AND THE AREA DRAINS AS GRADE AND MAINTAIN ALL FLOW LINES. DESIGNATED OR NOT, TO ALLOW FREE FLOW OF SURFACE WATER. CULTIVATE ENTIRE AREA TO A DEPTH OF 6 INCHES MINIMUM AND REMOVE ALL ROCK IN EXCESS OF 1-1/2 INCHES DIAMETER. ALL BUILDING RUBBLE, BUILDING CONSTRUCTION MATERIAL, WASTE AND ANY OTHER MATERIAL THAT WILL IMPAIR SATISFACTORY GROWTH.

3.05 - DECOMPOSED GRANITE / MULCH

DECOMPOSED GRANITE - PLACE 2-INCHES UNLESS OTHERWISE NOTED, IN ALL PLANTING AREAS. DECOMPOSED GRANITE SHALL EXTEND BELOW ALL PLANT MATERIAL. DECOMPOSED GRANITE FINISH GRADE 1-1/2-INCH BELOW ADJACENT PAVING, CURBS, AND HEADERS.

MULCH - PLACE 3-INCHES UNLESS OTHERWISE NOTED, IN ALL PLANTING AREAS. KEEP THE MULCH AWAY FROM DIRECT CONTACT OF STEMS FROM PLANTS AND TREES TO PREVENT ROT AND PESTS. MULCH FINISH GRADE 2-1/2-INCH BELOW ADJACENT PAVING, CURBS, AND HEADERS.

3.06 - HERBICIDE APPLICATION

APPLY PRE-EMERGENT HERBICIDES IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

APPLY CONTACT HERBICIDES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. PRIOR TO APPLICATION, MOISTEN AREAS FOR FOURTEEN DAYS TO ENCOURAGE WEED GERMINATION AND GROWTH. APPLY BEFORE WEEDS ATTAIN A HEIGHT OF 6 INCHES. REMOVE TALLER WEEDS MANUALLY.

AREAS TO BE LANDSCAPED SHALL BE MAINTAINED IN A WEED-FREE CONDITION AT ALL TIMES DURING CONSTRUCTION AND MAINTENANCE PERIOD.

DO NOT APPLY PRE-EMERGENT HERBICIDES AT LOCATIONS OF REVEGETATION SEEDING. THE CONTRACTOR SHALL MANUALLY REMOVE INVASIVE WEEDS WITHIN THESE AREAS.

3.07 - TREE SUPPORT

GUYED TREES: GUY TREES AS SHOWN IMMEDIATELY AFTER PLANTING AS SHOWN ON THE DRAWINGS.  
STAKED TREES: STAKE TREES AS SHOWN ON THE DRAWINGS WITHIN 48-HOURS OF PLANTING.

TREE SUPPORTS SHALL BE INSTALLED TO PREVENT LODGING, YET ALLOW FOR TRUNK MOVEMENT. HOSES THAT ENCIRCLE TRUNKS SHALL BE LARGE ENOUGH TO ALLOW FOR NORMAL GROWTH OF THE TRUNK DURING THE FIRST YEAR WITHOUT GIRDLING.

3.08 - TREES, SHRUBS, AND VINES

LAYOUT LOCATIONS WITH STAKES OR GYPSUM. COORDINATE WITH OWNER'S REPRESENTATIVE TO ASSURE APPROPRIATE LOCATION, PRIOR TO INSTALLATION.

TEST DRAINAGE OF PLANT BEDS AND PITS BY FILLING WITH WATER. NOTIFY OWNER'S REPRESENTATIVE OF AREAS WHERE WATER IS RETAINED MORE THAN 24 HOURS.

WHERE ROCK, UNDERGROUND CONSTRUCTION OR OTHER DETRIMENTAL CONDITIONS ARE ENCOUNTERED AT PLANT PITS, OWNER'S REPRESENTATIVE MAY SELECT ALTERNATE LOCATION.

DO NOT EXPOSE ROOTS TO AIR EXCEPT DURING TRANSPLANTING. SET UP OF PLANTS AT SAME LEVEL WHEN PLANTED AS IN THE CONTAINER. CUT PLANT CONTAINERS ON 2 SIDES WITHOUT INJURING ROOT BALL AND CAREFULLY REMOVE PLANT. DO NOT CUT CONTAINER WITH SPADE. DAMAGED PLANTS WILL BE REJECTED.

DIG PITS WITH PERPENDICULAR SIDES TO A MINIMUM OF 2 TO 3 TIMES THE WIDTH (SEE DETAILS) OF THE ROOT BALL FOR CONTAINERIZED TREES AND SHRUBS. DIG PITS ONLY AS DEEP AS THE ROOT BALL TO PREVENT SETTLING OF THE TREE OR SHRUB.

PLACE ROOT BALL OF VINES AS CLOSE TO STRUCTURE OR SUPPORT SYSTEM AS POSSIBLE. IF ROOT BALL CANT BE PLACED CLOSER THAN 1/2" NOTIFY OWNER'S REPRESENTATIVE OF SITUATION FOR INSPECTION AND REMEDY.

TIE VINES TO TRELLIS SUPPORTS IF APPLICABLE WITH GREEN PLANT TAPE AND REMOVE ANY STAKING SUPPLIED WITH PLANT MATERIAL.

PLANTING MIXTURE: ONE PART WOOD SHAVINGS TWO PARTS EXCAVATED SOIL AMENDED TO MEET STANDARDS IN PART 2.

MIX THOROUGHLY OUTSIDE THE HOLE BEFORE START OF BACKFILLING.

TREE GUARD: INSTALL TREE GUARD ON ALL TREES LOCATED IN TURF AREAS PER MANUFACTURER'S RECOMMENDATIONS.

3.09 - BACKFILLING

BACKFILL PLANT PITS AND FORM SHALLOW BASIN AROUND THE PLANT TO HOLD ENOUGH WATER TO SATURATE THE ROOT BALL AND BACKFILL (ONLY FORM BASINS IF SPECIFIED ON DETAIL). WATER PLANTS IMMEDIATELY AFTER PLANTING AND ALLOW BACKFILL TO SETTLE IN PLANT PIT. DO NOT WATER SAGUAROS AFTER PLANTING. DO NOT RAISE BASIN RIM ABOVE SURROUNDING GRADE.

PUDDLE PLANTING MIXTURE WHEN PIT IS 2/3 FULL OF PLANT MIX. CONTINUE BACK FILLING TO WITHIN 1 INCH OF SURROUNDING GRADE.

FINISH GRADE TO 2 INCHES BELOW HEADERS OR CONCRETE WORK.

TOP DRESS PLANTING AREAS WITH 2 INCHES OF TOP DRESSING AFTER PLANTING.

TREAT ALL PLANTING AREAS WITH A PRE-EMERGENT. REFER TO MANUFACTURES RECOMMENDATIONS.

3.10 - GROUND COVER

AT TIME OF TRANSPLANTING, SOIL IN FLATS SHALL BE SUFFICIENT SO AS NOT TO FALL APART WHEN LIFTING PLANTS. PLANT EACH PLANT WITH ITS PROPORTIONATE AMOUNT OF THE FLAT SOIL IN A MANNER THAT WILL ENSURE A MINIMUM DISTURBANCE TO THE ROOT STRUCTURE.

PLANT FLAT MATERIAL SUFFICIENTLY DEEP TO COVER ALL ROOTS. FIRMLY TAMP THE EARTH AROUND EACH PLANT TO FORCE OUT LARGE AIR POCKETS.

3.11 - TURF SOD

SOIL PREPARATION: PROVIDE SOIL WITH AN ORGANIC MATTER CONTENT OF 25-PERCENT TO 30-PERCENT. CULTIVATE ENTIRE AREA TO A DEPTH OF 6" MINIMUM AND REMOVE ALL ROCK IN EXCESS OF 1 1/2". ALL BUILDING RUBBLE, BUILDING CONSTRUCTION MATERIAL WASTE AND ANY OTHER MATERIAL THAT WILL IMPAIR SATISFACTORY GROWTH, THIS TOP 6" MUST MEET THE TOPSOIL REQUIREMENTS NOTED IN SECTION 2.01.

SOIL AMENDMENTS: PRIOR TO ROTOILLING, APPLY GYPSUM AT A RATE OF 100 LBS. PER 1,000 SF. PHOSPHATE AT A RATE OF 2 LBS. PER 1,000 SF., AND SOIL SULFUR AT 5 LBS PER 1,000 SF. ROTOILL TO SOIL.

INSTALL SOD ALONG THE STRAIGHTEST EDGE OF TURF AREA. STAGGER JOINTS IN A BRICK-LIKE PATTERN. AVOID GAPS AND OVERLAPPING. PLACE SOD DIAGONALLY ACROSS, TO AVOID SLIDING. WATER SOD AT LEAST EVERY 30 MIN. DURING INSTALLATION, FINISH BY WATERING LIGHTLY AND ROLL IN TWO DIRECTIONS W/SOD ROLLER.

3.12 - WATERING

WATER ALL PLANTS IMMEDIATELY AFTER PLANTING, EXCEPT FOR SAGUAROS, WITH HOSE IN PLANTING HOLE UNTIL MATERIAL ABOUT THE ROOTS IS COMPLETELY SATURATED FROM THE BOTTOM OF THE HOLE TO THE TOP OF THE GROUND TO AVOID DRYING OUT UNTIL THE ENTIRE PLANTED AREA IS THOROUGHLY WATERED AND THE SOIL SOAKED TO THE FULL DEPTH OF EACH PLANT HOLE. WATER STREAM SHALL NOT CAUSE DAMAGE TO PLANTING HOLE OR PLANT. KEEP EXPOSED ROOTS WET BY MEANS OF MOIST SAWDUST, PEAT MOSS OR BURLAP AT ALL TIMES DURING PLANTING OPERATION. REPEAT WATERING AS OFTEN AS NECESSARY TO KEEP THE GROUND MOIST BUT NOT SOAKED, WELL BELOW THE ROOT SYSTEM OF THE PLANTS.

3.13 - CLEAN UP

KEEP ALL AREAS CLEAN AND ORDERLY DURING AND AFTER EXECUTION OF WORK. BURNING OF TRASH IS NOT PERMITTED.

3.14 - ADJUSTMENT

PRUNE EACH TREE AND SHRUB TO PRESERVE THE NATURAL CHARACTER OF THE PLANT PER AMERICAN STANDARDS FOR NURSERY STOCK, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSEYMEN. PRUNE ONLY AS DIRECTED BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT TO REMOVE DEADWOOD, SUCKERS, OR BROKEN OR BADLY BRUISED BRANCHES. REPLACE ALL PLANTS DAMAGED BY EXCESSIVE PRUNING, PLANTING OPERATIONS OR CONSTRUCTION DAMAGE.

3.15 - MAINTENANCE PERIOD

WHEN THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT DETERMINE THE WORK TO BE SUBSTANTIALLY COMPLETE IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT, CONTRACTOR WILL BE ADVISED, IN WRITING, THAT THE MAINTENANCE PERIOD IS TO BEGIN.

LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF LANDSCAPED AREAS FOR A PERIOD OF 90 DAYS. MAINTENANCE INCLUDES WATERING, TRIMMING, WEEDING AND CULTIVATING OF BEDS.

LANDSCAPE CONTRACTOR, IN ORDER TO PROTECT HIS GUARANTEE, SHALL GIVE TYPEWRITTEN TO OWNER, A COMPLETE MAINTENANCE INSTRUCTION BOOKLET ON THE CARE AND FEEDING OF THE LANDSCAPE.

CONTRACTOR SHALL REQUEST, IN WRITING, A FINAL INSPECTION WITH LANDSCAPE ARCHITECT AT THE COMPLETION OF THE MAINTENANCE PERIOD. IF THE OWNER'S REPRESENTATIVE DETERMINES THE WORK IS SATISFACTORY, THE MAINTENANCE PERIOD WILL END ON THE DATE OF THE FINAL INSPECTION. IF THE MAINTENANCE IS UNSATISFACTORY, THE MAINTENANCE PERIOD WILL BE EXTENDED, AT THE CONTRACTORS EXPENSE, UNTIL SUCH TIME AS ALL CORRECTIONS ARE MADE AND THE WORK IS INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT. RETENTION WILL NOT BE RELEASED UNTIL FINAL INSPECTION IS MADE AND APPROVAL ISSUED BY THE OWNER'S REPRESENTATIVE.

3.16 - FIELD QUALITY CONTROL

NOTIFY OWNER'S REPRESENTATIVE OF THE REQUIREMENT FOR INSPECTION AT LEAST 48 HOURS IN ADVANCE. INSPECTIONS ARE REQUIRED, BUT NOT LIMITED TO, THE FOLLOWING:

- INSPECTION AND ACCEPTANCE OF PLANT MATERIAL PRIOR TO SHIPPING.
- AT COMPLETION OF ROUGH GRADE AND BOULDER PLACEMENT
- AT COMPLETION OF LANDSCAPE FINISH GRADING AND SOIL PREPARATION, PRIOR TO PLANTING.
- AT INSTALLATION OF IRRIGATION SYSTEM, PRIOR TO BACKFILLING TRENCHES AND PLANTING.
- DURING INSTALLATION OF SPECIMEN TREE, OR OTHER SPECIMEN PLANT MATERIAL.
- AFTER STAKING LOCATIONS FOR PLANT HOLES, BUT PRIOR TO PLANTING; FOR APPROVAL.
- DURING THE PLANTING PROCESS.
- DURING THE PLACEMENT AND AIMING OF ALL LIGHT FIXTURES.
- AT SUBSTANTIAL COMPLETION OF THE WORK.
- DURING WARRANTY PERIOD TO OBSERVE MAINTENANCE PROCEDURES.
- AT FINAL COMPLETION OF THE WORK.

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REVISIONS:

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PROJECT#:

WWH003

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REVIEW

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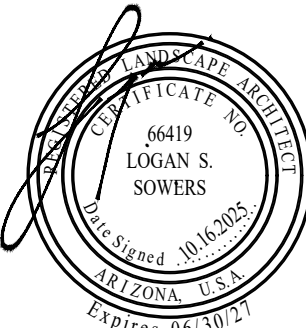
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LANDSCAPE SPECIFICATIONS



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# IRRIGATION SPECIFICATIONS:

## PART 1 - GENERAL

**1.01 - WORK INCLUDED:**  
WORK OF THIS SECTION GENERALLY INCLUDES A PROVISION OF AN UNDERGROUND IRRIGATION SYSTEM INCLUDING THE FOLLOWING:

1. TRINCHING, STOCKPILING EXCAVATION MATERIALS, AND REFILLING TRENCHES. COMPLETE SYSTEMS INCLUDING BUT NOT LIMITED TO PIPING, PUMP STATION, ASSEMBLIES, VALVES, FITTINGS, HEADS, CONTROLLER WIRING, AND FINAL ADJUSTMENTS TO ENSURE EFFICIENT COVERAGE AS DETERMINED BY ARCHITECT.
3. WATER CONNECTIONS.
4. REPLACEMENTS OF UNSATISFACTORY MATERIALS.
5. CLEAN-UP, INSPECTION, AND APPROVAL.
6. TESTS.

## 1.02 - REFERENCES:

PERFORM WORK IN ACCORDANCE WITH REQUIREMENT OF CONDITIONS OF THE CONTRACT AND DIVISION 01 - GENERAL REQUIREMENTS AS WELL AS PROVISIONS OF ALL APPLICABLE LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, CONFORM TO REQUIREMENTS OF REFERENCE INFORMATION LISTED BELOW, EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE SHOWN OR SPECIFIED IN CONTRACT DOCUMENTS.

1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) - SPECIFICATIONS AND TEST METHODS SPECIFICALLY REFERENCED IN THIS SECTION.
2. UNDERWRITERS LABORATORIES (UL) - UL WIRES AND CABLES.

## 1.03 - QUALITY ASSURANCE

INSTALLER QUALIFICATION - INSTALLER SHALL HAVE HAD CONSIDERABLE EXPERIENCE AND DEMONSTRATED PROFICIENCY IN THE INSTALLATION OF IRRIGATION SYSTEMS OF SPECIFIED TYPE(S) IN A NEAT, ORDERLY, AND RESPONSIBLE MANNER IN ACCORDANCE WITH RECOGNIZED STANDARDS OF WORKMANSHIP, TO DEMONSTRATE ABILITY, EXPERIENCE, AND FINANCIAL STABILITY NECESSARY FOR THIS PROJECT. SUBMIT IF REQUESTED BY CONSULTANT, PRIOR TO CONTRACT AWARD THE FOLLOWING:

1. LIST OF 3 PROJECTS COMPLETED IN THE LAST 2 YEARS OF SIMILAR COMPLEXITY TO THIS PROJECT. DESCRIPTION OF PROJECTS SHALL INCLUDE:
  - a. NAME OF PROJECT.
  - b. LOCATION.
  - c. OWNER.
2. BRIEF DESCRIPTION OF WORK AND PROJECT BUDGET.
2. CURRENT COMPANY FINANCIAL STATEMENT.

## SPECIAL REQUIREMENTS:

- a. TOLERANCES - SPECIFIED DEPTHS OF PRESSURE SUPPLY LINES AND LATERALS AND PITCH OF PIPES ARE MINIMUMS. SETTLEMENT OF TRENCHES IS CAUSE FOR REMOVAL OF FINISH GRADE TREATMENT, REFILLING, RECOMPACTION, AND REPAIR OF FINISHED GRADE TREATMENT.
- b. COORDINATION WITH OTHER CONTRACTS - PROTECT, MAINTAIN, AND COORDINATE WORK WITH TASKS UNDER OTHER SECTIONS.
- c. DAMAGE TO OTHER IMPROVEMENTS - CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO GRADING, SOIL PREPARATION, SEEDING, SODDING, OR PLANTING DONE UNDER SECTIONS DURING WORK ASSOCIATED WITH INSTALLATION OF IRRIGATION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- d. WORK INVOLVING SUBSTANTIAL PLUMBING FOR INSTALLATION OF BACKFLOW PREVENTERS, COPPER SERVICE, AND RELATED WORK SHALL BE EXECUTED BY LICENSED AND BONDED PLUMBER(S), PERFORMED IN ACCORDANCE WITH ALL PREVAILING CODES AND REGULATIONS.
- e. WORK INVOLVING CONNECTION TO, INSTALLATION, OR EXTENSION OF 120 VOLT OR GREATER ELECTRICAL SERVICE SHALL BE EXECUTED BY A LICENSED AND BONDED ELECTRICIAN, PERFORMED IN ACCORDANCE WITH ALL PREVAILING CODES AND REGULATIONS.

## 1.04 - SUBMITTALS

PREPARE AND MAKE SUBMITTALS IN ACCORDANCE WITH CONDITIONS OF THE CONTRACT PRIOR TO INSTALLATION.

STAKING, CONSTRUCTION RECORD DRAWINGS, AND PROGRAMMING:

1. IRRIGATION CONSULTANT SHALL STAKE THE LOCATIONS OF ALL SPRINKLERS 25-FEET IN RADIUS OR GREATER WITH THE ASSISTANCE OF THE CONTRACTOR. IRRIGATION CONSULTANT SHALL USE GPS COLLECTION METHOD TO RECORD THE ROTARY SPRINKLERS, MAINLINE ROUTING, ELECTRIC AND GATE VALVES, AND CONTROLLERS; AND PROVIDE PLAN COPY TO CONTRACTOR. CONTRACTOR SHALL DRAW LATERAL PIPING, CONTROLLER STATION NUMBERS, AND ALL OTHER RECORD INFORMATION ON THE FIELD RECORD. AT THE END OF EVERY DAY, REVERSE FIELD RECORD FOR ALL WORK ACCOMPLISHED THAT DAY IN RED INK. THE FIELD RECORD PLAN(S) SHALL BE AVAILABLE AT THE PROJECT SITE FOR REVIEW. UPON COMPLETION OF PROJECT, CONTRACTOR SHALL SUBMIT FIELD RECORD PLAN FOR REVIEW, PRIOR TO FINAL ACCEPTANCE.

RECORD PLANS SHALL BE TO SAME SCALE AND IN THE SAME FORMAT AS DESIGNED PLANS.

2. FOLLOWING APPROVAL OF FIELD RECORD PLAN BY THE ARCHITECT AND CONSULTANT, THE CONTRACTOR SHALL SUBMIT THE FIELD RECORD PLAN WITH ALL CHANGES, ADDITIONS, AND MODIFICATIONS PERFORMED DURING THE PROJECT INSTALLATION TO CONSULTANT/ IRRIGATION CONTRACTOR. CONSULTANT/IRRIGATION CONTRACTOR SHALL CREATE A DIGITAL CONSTRUCTION RECORD FROM THE INFORMATION PROVIDED BY THE CONTRACTOR. THE DIGITAL CONSTRUCTION RECORD FILE SHALL BE GENERATED AS FOLLOWS:
  - a. PDF - CONTRACTOR SHALL CONTRACT WITH CONSULTANT/IRRIGATION CONTRACTOR TO COMBINE ALL FIELD RECORD INFORMATION AND GPS DATA FOR LOCATIONS OF WATER SOURCE(S), MAINLINE ROUTING, VALVES, CONTROLLERS, AND BASIC FEATURES TO CORRESPOND WITH THE SITE PLAN. THIS DIGITAL FILE SHALL BE PLACED INTO SHEET FORM AS REQUIRED, AND PORTABLE DOCUMENT FORMAT (PDF) FILES CREATED AS THE CONSTRUCTION RECORD. CONTRACTOR SHALL CONTACT CONSULTANT/IRRIGATION CONTRACTOR PRIOR TO BID FOR FEES FOR GPS DATA COLLECTION AND CREATION OF DIGITAL CONSTRUCTION RECORD.
  3. IRRIGATION CONSULTANT WILL NOT CERTIFY ANY PAY REQUEST SUBMITTED BY THE CONTRACTOR IF THE FIELD RECORD DRAWINGS ARE NOT CURRENT, AND PROCESSING OF PAY REQUEST WILL NOT OCCUR UNTIL FIELD RECORDS ARE UPDATED.
  4. IRRIGATION CONSULTANT SHALL COLLECT THE FIELD CONTROLLER DATA FOR PROGRAMMING PURPOSES. IF CONTRACTOR IS UNABLE TO COLLECT DATA OR IF THE PROCESS DELAYS PROJECT COMPLETION, CONTRACTOR SHALL CONTACT IRRIGATION CONSULTANT FOR FEES FOR DATA COLLECTION.
  5. PRIOR TO SCHEDULING WALK-THROUGH FOR SUBSTANTIAL COMPLETION, CONTRACTOR IS TO SUBMIT ALL FIELD RECORD INFORMATION TO THE CONSULTANT FOR APPROVAL.
  6. CONTRACTOR SHALL ALSO PROVIDE BOTH A HARD COPY AND ELECTRONIC FORM VERSION OF THE CONTROLLER DATA SHEETS TO THE CONSULTANT. HARD COPY AND ELECTRONIC FORMS SHALL BE PROVIDED TO THE CONTRACTOR BY THE IRRIGATION CONSULTANT.

CONTROLLER CHARTS - DO NOT PREPARE CONTROLLER CHARTS UNTIL CONSTRUCTION RECORD (AS-BUILT) DRAWINGS HAVE BEEN APPROVED BY THE CONSULTANT.

1. PROVIDE CONTROLLER CHART, AUTOMATIC CONTROLLER.
2. CONTROLLER DRAWING MAY BE SAME SIZE REPRODUCTION OF THE RECORD DRAWING, IF SCALE PERMITS FITTING THEM INSIDE THE CONTROLLER DOOR WITHOUT FOLDING DRAWING. IF PHOTO REDUCTION PRINTS ARE REQUIRED, REPRODUCTION TO MAXIMUM SIZE POSSIBLE TO RETAIN FULL LEGIBILITY. CHART MAY ALSO BE CONTROLLER DATA SHEET AS FOR CENTRAL-SATELLITE SYSTEMS, IF APPROVED BY CONSULTANT.
3. CONTROLLER CHART SHALL BE BOND PRINT OF ACTUAL AS-BUILT SYSTEM, SHOWING AREA COVERED BY THAT CONTROLLER; OR CONTROLLER DATA SHEET SHOWING INFORMATION ON EACH STATION, AND WITH COMPLETE DESCRIPTION OF EACH STATION'S LOCATION.
4. IDENTIFY AREA OF COVERAGE OF EACH REMOTE CONTROL VALVE, USING A DISTINCTLY DIFFERENT PASTEL COLOR FOR EACH ZONE. HIGHLIGHT HEADS, LATERAL PIPING, AND CONTROL VALVES.
5. FOLLOWING REVIEW OF CONTROLLER DRAWINGS BY CONSULTANT, HERMETICALLY SEAL EACH CHART BETWEEN TWO LAYERS OF 20 MM THICK CLEAR PLASTIC. CONTROLLER CHART SHALL BE COMPLETED AND APPROVED BY CONSULTANT PRIOR TO FINAL COMPLETION WALK-THROUGH OF IRRIGATION SYSTEM.
7. ATTACH APPROVED CONTROLLER CHART TO INSIDE OF EACH CONTROLLER DOOR USING SELF ADHESIVE VELCRO STRIPS.

CONTROL SYSTEM PROCEDURES:

1. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL SPECIFIED CONTROL EQUIPMENT TO RESULT IN A COMPLETE AND WORKING SYSTEM, WHETHER OR NOT ALL APPURTENANCES ARE SHOWN ON PLANS. SYSTEM SHALL INCLUDE CONTROLLERS, ALL GROUNDING AND SURGE PROTECTION; AND ELECTRICAL CONTROL WIRING.
2. FOLLOWING INSTALLATION OF EACH CONTROLLER, CONTRACTOR SHALL RECORD ALL STATION DATA ON A "DATA SHEET" PROVIDED BY THE CONSULTANT. THIS DATA SHALL INCLUDE THE TYPE AND QUANTITY OF IRRIGATION DEVICES ON EACH STATION, NOZZLE TYPE, ARC, AREA OF CONTROL (TURF, TREES, SHRUBS, ETC.), VALVE SIZE, GPM, LOCATION, ETC., AS SHOWN ON THE DATA SHEET.
3. PRIOR TO FINAL WALK-THROUGH FOR EACH AREA OF THE PROJECT, CONTRACTOR SHALL CONFIRM THAT THE FOLLOWING HAVE BEEN ACCOMPLISHED:
  - a. CONSTRUCTION RECORD DRAWINGS PER 1.04.1.
  - b. DATA SHEETS FOR CONTROLLERS.
  - d. IRRIGATION CONSULTANT SHALL PROVIDE THE FOLLOWING PROGRAMMING SERVICES: IRRIGATION DATA, HYDRAULIC TREE, AND PROGRAMS AND SCHEDULES IN THE IRRIGATION COMPUTER. CONSULTANT SHALL NOT PROVIDE A VISUAL, INTERACTIVE MAP. CONTRACTOR SHALL CONTACT CONSULTANT FOR FEES FOR PROGRAMMING SERVICES PRIOR TO BID.
  5. PRODUCT WARRANTY: WARRANTY INCLUDES THE FOLLOWING:
    - a. MANUFACTURER'S STATED WARRANTIES SHALL APPLY ON ALL PRODUCTS.
    - b. IT SHALL INSURE THAT AN AUTHORIZED REPRESENTATIVE WILL BE AT THE JOB SITE WITHIN 24 HOURS OF NOTIFICATION OF A PRODUCT PROBLEM.
    - c. WARRANTY INCLUDES A ONE-YEAR MINIMUM PRODUCT AND LABOR WARRANTY. IF THE PRODUCT FAILS TO MEET PROJECT SPECIFICATIONS, AND THE MANUFACTURER'S REPRESENTATIVE IS UNABLE TO RESOLVE THE DEFICIENCY, THE PRODUCT WILL BE REPLACED AT NO COST TO THE CLIENT WITH THE PRODUCT OF THEIR CHOICE. THIS INCLUDES CONTRACTOR'S LABOR FOR PRODUCT REPLACEMENT AT THEIR NORMAL HOURLY RATES.

IN THE EVENT OF A PRODUCT PROBLEM, AND THE CONSULTANT IS REQUIRED TO SPEED ADDITIONAL TIME NOT COVERED BY THEIR CONTRACT AS A RESULT OF THIS DEFECT, THEN THE MANUFACTURER WILL REIMBURSE THE CONSULTANT FOR TIME AND MATERIALS AT THEIR NORMAL HOURLY RATES.

## \*PROJECT QUALIFICATIONS:

- a. THE CONSULTANT MUST BE CURRENTLY CERTIFIED AS AN IRRIGATION DESIGNER BY THE IRRIGATION ASSOCIATION, THE AMERICAN SOCIETY OF IRRIGATION CONSULTANTS, OR LICENSED IN THE PROJECT STATE TO PRACTICE LANDSCAPE ARCHITECTURE WHICH INCLUDES IRRIGATION DESIGN.
- b. THE PROJECT MUST CONSIST ENTIRELY OF ONE MANUFACTURER'S PRODUCTS WHERE APPLICABLE (I.E. EXCLUDING PIPE, FITTINGS, & WIRING). IF ANY COMPETITIVE PRODUCTS ARE INSTALLED ON THE PROJECT, THE WARRANTY WILL BE THE STANDARD TRADE WARRANTY AS DELINEATED IN THE MANUFACTURER'S PRODUCT CATALOG.
- c. THE MANUFACTURER'S REPRESENTATIVE MUST BE NOTIFIED IN THE EVENT OF A PRODUCT PROBLEM AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO AN IN-FIELD MEETING.
- d. INSTALLATION MUST BE CERTIFIED BY AUTHORIZED REPRESENTATIVE IN CONFORMANCE TO PLANS.

## OPERATION MANUAL:

- SUBMIT 3 SETS OF OPERATIONS MANUAL TO CONSULTANT FOR APPROVAL, PRIOR TO SCHEDULING THE FINAL COMPLETION WALK-THROUGH. MANUAL IS TO INCLUDE THE FOLLOWING IN A 1 X 3 RING BINDER:
1. INDEX SHEET STATING PROJECT NAME, AND LISTING CONTRACTOR NAME, ADDRESS, PHONE NUMBER, AND CONTACT PERSON. INCLUDE SAME INFORMATION FOR PRIMARY SUB-CONTRACTORS.
  2. MANUFACTURER CUT SHEETS FOR ALL MATERIAL COMPONENTS OF IRRIGATION SYSTEM. HIGHLIGHT OR CIRCLE SPECIFIC MODELS OR ITEMS.

## 1.05 - DELIVERY, STORAGE, AND HANDLING

DELIVER, UNLOAD, STORE AND HANDLE MATERIALS, PACKAGING, BUNDLING, PRODUCTS, IN DRY CONDITIONS, OR A WEATHERPROOF MANNER, TO PREVENT DAMAGE, BREAKAGE, DETERIORATION, INTRUSION IGNITION, AND VANDALISM. DELIVER IN ORIGINAL UNOPENED PACKAGING CONTAINERS PROMINENTLY DISPLAYING MANUFACTURER NAME, VOLUME, QUANTITY, CONTENTS, INSTRUCTIONS, AND CONFORMANCE TO LOCAL, STATE, AND FEDERAL LAW. REMOVE AND REPLACE CRACKED, BROKEN, OR CONTAMINATED ITEMS OR ELEMENTS IMMEDIATELY EXPOSED TO MOISTURE, INCLEMENT WEATHER, SNOW, ICE, TEMPERATURE EXTREMES, FIRE, OR JOB SITE DAMAGE.

HANDLING OF PVC PIPE - EXERCISE CARE IN HANDLING, LOADING AND STORING OF PVC PIPE. ALL PVC PIPE SHALL BE TRANSPORTED IN A VEHICLE WHICH ALLOWS THE ENTIRE LENGTH OF PIPE TO LIE FLAT SO AS NOT TO SUBJECT IT TO UNDUE BENDING OR CONCENTRATED EXTERNAL LOADS. ALL SECTIONS OF PIPE THAT HAVE BEEN DENTED OR DAMAGED SHALL BE DISCARDED, AND IF INSTALLED, SHALL BE REMOVED AND REPLACED WITH NEW PIPING.

## 1.06 - JOBSITE CONDITIONS

PROTECTION OF PROPERTY:

1. PRESERVE AND PROTECT ALL TREES, PLANTS, MONUMENTS, STRUCTURES, AND PAVED AREAS FROM DAMAGE DUE TO WORK IN THIS SECTION. IN THE EVENT DAMAGE DOES OCCUR, ALL DAMAGE TO INANIMATE ITEMS SHALL BE COMPLETELY REPAIRED OR REPLACED IN THE SATISFACTION OF THE OWNER. ALL INJURIES TO LIVING PLANTS SHALL BE REPAIRED BY THE OWNER, AND ALL COSTS OF SUCH REPAIRS SHALL BE CHARGED TO AND PAID BY THE CONTRACTOR.
2. PROTECT BUILDINGS, WALKS, WALLS, AND OTHER PROPERTY FROM DAMAGE. FLARE AND BARRICADE OPEN DITCHES, DAMAGE CAUSED TO ASPHALT, CONCRETE OR OTHER BUILDING MATERIAL SURFACES SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. RESTORE DISTURBED AREAS TO ORIGINAL CONDITION.

## EXISTING TREES:

1. ALL TRENCING OR OTHER WORK UNDER LIMB SPREAD OF ANY AND ALL EVERGREENS OR LOW BRANCHING DECIDUOUS MATERIALS SHALL BE DONE BY HAND OR BY OTHER METHODS SO AS TO PREVENT DAMAGE TO LIMBS OR BRANCHES.
2. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES, AND TREE ROOTS. EXCAVATION IN AREAS WHERE 2 INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. ROOTS 2 INCHES AND LARGER IN DIAMETER, EXCEPT DIRECTLY IN THE PATH OF PIPE CONDUIT, SHALL BE TUNNELED UNDER AND SHALL BE HEAVILY WRAPPED WITH BURLAP TO PREVENT SCABBING OR EXCESSIVE DRIVING, WHERE A TRENCING MACHINE IS OPERATED CLOSE TO TREES HAVING ROOTS SMALLER THAN 2 INCHES IN DIAMETER, THE WALL OF THE TRENCH ADJACENT TO THE TREE SHALL BE HAND TRIMMED, MAKING CLEAN CUTS THROUGH ROOTS. ROOTS 1 INCH AND LARGER IN DIAMETER SHALL BE PAINTED WITH TWO COATES OF "TREE SEAL". TRENCHES ADJACENT TO TREES SHALL BE CLOSED WITHIN 24 HOURS, AND WHEN THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH MOISTENED BURLAP OR CANVAS.

## PROTECTION AND REPAIR OF UNDERGROUND LINES:

1. REQUEST PROPER UTILITY COMPANY TO STAKE EXACT LOCATION (INCLUDING DEPTH) OF ALL UNDERGROUND UTILITIES. TAKE WHATEVER PRECAUTIONS NECESSARY TO PROTECT THESE UNDERGROUND LINES FROM DAMAGE. IN THE EVENT DAMAGE DOES OCCUR, ALL DAMAGES SHALL BE REPAIRED BY CONTRACTOR UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE.

REPLACEMENT OF PAVING AND CURBS - WHERE TRENCHES AND LINES CROSS EXISTING ROADWAYS, PATHS, CURBING, ETC., DAMAGE TO THESE SHALL BE KEPT TO A MINIMUM AND SHALL BE RESTORED TO ORIGINAL CONDITION.

## 1.07 - WARRANTY/GUARANTEE

CONTRACTOR SHALL WARRANT MATERIALS AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. CONTRACTOR SHALL GUARANTEE WORKMANSHIP FOR SIMILAR PERIOD. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL WARRANTY ITEMS WITH THE MANUFACTURER/DISTRIBUTOR.

SETTLING OF BACKFILLED TRENCHES WHICH MAY OCCUR DURING GUARANTEE PERIOD SHALL BE REPAIRED BY CONTRACTOR AT NO EXPENSE TO THE OWNER, INCLUDING COMPLETE RESTORATION OF DAMAGED PROPERTY.

EXPENSES DUE TO VANDALISM BEFORE SUBSTANTIAL COMPLETION SHALL BE BORNE BY CONTRACTOR.

OWNER OR REPRESENTATIVE INFORMATION COMPANY WILL MAINTAIN TURF AND PLANTING AREAS DURING WARRANTY PERIOD, SO AS NOT TO HAMPER PROPER OPERATION OF THE IRRIGATION SYSTEM.

## 1.08 - MAINTENANCE

- FURNISH THE FOLLOWING MAINTENANCE ITEMS TO OWNER PRIOR TO FINAL ACCEPTANCE:
1. 2 SETS OF SPECIAL TOOLS REQUIRED FOR MOVING, DISASSEMBLING, AND ADJUSTING EACH TYPE OF SPRINKLER HEAD AND VALVE SUPPLIED ON THIS PROJECT.
  2. 2 KEYS FOR EACH AUTOMATIC CONTROLLER.
  3. 3 QUICK COUPLER KEYS AND MATCHING HOSE SWIVELS.

## 1.09 - EXTRA STOCK

IN ADDITION TO INSTALLED SYSTEM FURNISH THE FOLLOWING ITEMS TO OWNER:

1. 4 PER 100 INSTALLED DRIP EMITTERS OF EACH TYPE USED.
2. 2 POP-UP HEADS OF EACH TYPE USED.

## PART 2 - PRODUCTS

## 2.01 - MATERIALS

GENERAL PRINC:

NOTE: ALL PIPING FOR RECLAIMED WATER SYSTEMS SHALL BE PURPLE COLORED, OR WRAPPED WITH RECLAIMED "SOCK" OR RECLAIMED MARKING TAPE, AND MAIN LINES SHALL HAVE DETECTABLE RECLAIMED MARKING TAPE IN TRENCH 12" ABOVE TOP OF PIPE.

1. PRESSURE SUPPLY LINES (DOWNSTREAM OF PUMP STATION) - CLASS 200 PVC, SOLVENT WELD BELLED END FOR 2-1/2" AND SMALLER, AND RUBBER-RING JOINT FOR 3" AND LARGER WITH DUCTILE IRON FITTINGS AND TAPS WITH CONCRETE THRUST BLOCKS.
2. NON-PRESSURE LINES - CLASS 200 PVC, SOLVENT WELD BELLED END.
3. DRIP PIPING - F CLASS 315 PVC, SOLVENT WELD UNLESS OTHERWISE SPECIFIED ON PLANS.
4. EMITTER TUBING - BY EMITTER MANUFACTURER.

PLASTIC PIPE AND FITTINGS:

## IDENTIFICATION MARKINGS:

- a. ALL PIPE TO BE IDENTIFIED WITH FOLLOWING INDELEBIL MARKINGS:
  - 1) MANUFACTURER'S NAME.
  - 2) NOMINAL PIPE SIZE.
  - 3) SCHEDULE OR CLASS.
  - 4) PRESSURE RATING.
  - 5) NSF (NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL.
  - 6) DATE OF EXTRUSION.
- b. ALL FITTINGS INCLUDING VALVE TAPS FOR RUBBER-RING PIPE SHALL BE CAST OR DUCTILE IRON, RUBBER-RING JOINT FOR PVC, DUCTILE IRON FITTINGS SHALL HAVE THE FOLLOWING CHARACTERISTICS:
  - 1) ALL DUCTILE IRON FITTINGS AND JOINT RESTRAINTS SHALL HAVE A FUSION BONDED EPOXY COATING ON INTERIOR AND EXTERIOR OF THE PRODUCT SURFACE. AVERAGE OF 10-12MM THICKNESS. EPOXY COATING SHALL CONFORM TO THE REQUIREMENTS OF CSA 2245.20-20 AND NSF 61 FOR WATER SERVICES. TAR/BITUMINOUS COATING WILL NOT BE APPROVED.
  - 2) ALL DUCTILE IRON PIPE FITTINGS, JOINT RESTRAINTS, LATERAL ISOLATION VALVES AND MAINLINE ISOLATION GATE VALVES SHALL BE OF THE SAME MANUFACTURE WHICH OFFERS A 10-YEAR WARRANTY ON PRODUCTS AND REPLACEMENT LABOR COSTS. PRIOR TO INSTALLATION, MANUFACTURER SHALL PROVIDE DOCUMENTATION STATING THE ABOVE WARRANTY INFORMATION.

2. SOLVENT WELD PIPE - MANUFACTURED FROM VIRGIN POLYVINYL CHLORIDE (PVC) COMPOUND IN ACCORDANCE WITH ASTM D2241 AND ASTM D1784: CELL CLASSIFICATION 1224S-8, TYPE 1, GRADE 1.
- o. FITTINGS - STANDARD WEIGHT, SCHEDULE 40, INJECTION MOLDED PVC; COMPLYING WITH ASTM D1784 AND D2466, CELL CLASSIFICATION 12454-8.
  - 1) THREADS - INJECTION MOLDED TYPE (WHERE REQUIRED).
  - 2) TEES AND ELBS - SIDE GATED.
- b. THREADED NIPPLES - ASTM D2464, SCHEDULE 80 WITH MOLDED THREADS.
- c. JOINT CEMENT AND PRIMER - TYPE AS RECOMMENDED BY MANUFACTURER OF PIPE AND FITTINGS.

## LOW PRESSURE / VOLUME SYSTEMS

1. EMITTERS AS INDICATED ON DRAWINGS.
2. DRIP PIPING - MANUFACTURED OF POLYVINYL CHLORIDE COMPOUND CONFORMING TO ASTM D2241 AND ASTM D1784, TYPE 1, GRADE 1.
3. FITTINGS - SCHEDULE 40 PVC, OR AS RECOMMENDED BY PIPE MANUFACTURER.
4. DRIP VALVE ASSEMBLY - TYPE AND SIZE SHOWN ON DRAWINGS.
- o. WYE STRAINER - PLASTIC/FIBERGLASS CONSTRUCTION WITH 150 MESH NYLON SCREEN AND BLOW OUT ASSEMBLY.
- b. CONTROL VALVE 2-WAY, SOLENOID PLOT OPERATED TYPE MADE OF SYNTHETIC, NON-CORROSIVE MATERIAL; DIAPHRAGM-ACTIVATED AND SLOW CLOSING.
- c. PRESSURE REGULATOR - PLASTIC/FIBERGLASS CONSTRUCTION, PRESET TYPE WITH PRESET SETTING PER DRAWINGS.

## COPPER PIPE AND FITTINGS:

1. COPPER PIPE - TYPE K HARD TEMPERED.
2. FITTINGS - WROUGHT COPPER, SOLDER JOINT TYPE.
3. JOINS - SOLDERED WITH SOLDER, 45% SILVER, 15% COPPER, 16% ZINC, AND 24% CADMIUM AND SOLIDS AT 1125 F AND LIQUIDS AT 1145 F.

## BRASS PIPE AND FITTINGS:

1. BRASS PIPE - 85% RED BRASS, MSI SCHEDULE 40 SCREWED PIPE.
2. FITTINGS - MEDIUM BRASS, SCREWED 125 POUND CLASS.

QUICK COUPLING VALVES - BRASS TWO-PIECE BODY DESIGNED FOR WORKING PRESSURE OF 150 PSI, OPERABLE WITH QUICK COUPLER. EQUIP QUICK COUPLER WITH LOCKING RUBBER COVER (PURPLE FOR RECLAIMED WATER IF SPECIFIED).

## VALVE BOXES:

NOTE: ALL BOX COVERS FOR RECLAIMED WATER SYSTEMS SHALL BE PURPLE COLORED, AND MARKED FOR RECLAIMED. OTHERWISE, VALVE BOX COLOR TO BE SELECTED BASED UPON A REVIEW OF THE LOCATION AND ADJACENT MATERIAL BY OWNER AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

1. DRIP LINE BLOW-OUT STUBS, AND WIRE STUB BOX - CARSON #910-12
2. 1-INCH THROUGH 2-INCH CONTROL VALVES - CARSON #1419-138.
3. DRIP VALVE ASSEMBLIES - CARSON #1419-138.
4. CONTROL WIRING SPICES - CARSON #910-12.
5. MAIN LINE GATE VALVES - CARSON #910-12.
6. AIR-RELIEF VALVES - CARSON #1419-138.
7. MANUAL DRAIN VALVES - CARSON #1419-138.
8. PRESSURE REDUCING VALVES - AS SHOWN ON DETAIL.

## ELECTRICAL CONTROL WIRING:

1. LOW VOLTAGE:
  - a. ELECTRICAL CONTROL WIRE - AWG IF UL APPROVED NO. 14 GAUGE DIRECT-BURIAL COPPER WIRE FOR 2-WIRE DECODER-BASED SYSTEM COMMUNICATION CABLE WIRING WITH GROUNDING EVERY 1000' IN 1" SCH 40 PVC CONDUIT WITH SEALER AT OPENINGS IN VALVE BOXES AND CONTROLLERS.
  - b. WIRE COLORS:
    - 1) COMMUNICATION CABLE: BLUE FOR FIRST CONTROL LEG ON CONTROLLER.
    - 2) COMMUNICATION CABLE: RED FOR SECOND CONTROL LEG ON CONTROLLER.
    - 3) OTHER COLORS FOR MORE CONTROL LEGS.
    - 3) FUTURE WIRES - SAME AS CONTROL AND COMMON WIRE (LABELLED AT TERMINATIONS), STUB FOR FUTURE, AT EACH EXTREME END.
  - c. IF MULTIPLE CONTROLLERS ARE UTILIZED, AND WIRE PATHS OF DIFFERENT CONTROLLERS CROSS EACH OTHER, BOTH COMMON AND CONTROL WIRES FROM EACH CONTROLLER SHALL BE DIFFERENT COLORS APPROVED BY CONSULTANT.
  - d. WIRE CONNECTIONS FOR ALL VALVE AND SOLENOID LOCATIONS SHALL BE UL 4860 APPROVED DIRECT-BURY WIRE CONNECTORS FOR WET / DAMP LOCATIONS, RATED UP TO 600 VOLTS, AS MANUFACTURED BY RAIN BIRD MODEL DB SERIES WIRE CONNECTOR, OR APPROVED SIMILAR DRY SPICE METHOD. WIRE CONNECTORS SHALL PROVIDE STRAIN RELIEF AND HAVE THE WIRE NUT / SPRING INTEGRATED INTO THE HOUSING. ALL 24-VOLT WIRE SPICES SHALL CONFORM TO NATIONAL ELECTRIC CODE (NEC) STANDARDS AND ALL STATE, LOCAL AND FEDERAL CODES.
2. HIGH VOLTAGE - TYPE REQUIRED BY LOCAL CODES AND ORDINANCES, OF PROPER SIZE TO ACCOMMODATE NEEDS OF EQUIPMENT SERVICED.

- SPRINKLER HEADS - AS SHOWN ON DRAWINGS. PURPLE CAPS OR NOZZLES FOR RECLAIMED WATER USE.
- ELECTRIC CONTROL VALVES - AS NOTED ON DRAWINGS. PURPLE HANDLES FOR RECLAIMED WATER USE. INSTALL PRESSURE REGULATING DEVICES WHERE SPECIFIED ON

PLANS.

- PIPE BEDDING MATERIAL - CONSTRUCTION GRADE SAND APPROVED BY CONSULTANT.
- AUTOMATIC CONTROLLER - AS SHOWN ON DRAWINGS.
- MANUAL DRAIN VALVE - AS SHOWN ON DRAWINGS.
- AIR-RELIEF VALVE - AS SHOWN ON DRAWINGS.
- PRESSURE REDUCING VALVE - AS SHOWN ON DRAWINGS.
- PUMP STATION - ASH SHOWN ON DRAWINGS.

## PART 3 - EXECUTION

## 3.01 INSPECTION

EXAMINE AREAS AND CONDITIONS UNDER WHICH WORK OF THIS SECTION IS TO BE PERFORMED, DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

GRADING OPERATIONS, WITH THE EXCEPTION OF FINAL GRADING, SHALL BE COMPLETED AND APPROVED BY OWNER PRIOR TO STAKING OR INSTALLATION OF ANY PORTION OF IRRIGATION SYSTEM EXCEPT SLEEVING.

## 3.02 PREPARATION

STAKING SHALL OCCUR AS FOLLOWS:

1. FOR ALL PROJECTS WITH ROTARY SPRINKLERS SPACED AT TWENTY-FIVE FEET (25') OR GREATER, THE IRRIGATION CONSULTANT SHALL LAY OUT THE SPRINKLERS USING WIRE FLAGS WITH ASSISTANCE FROM CONTRACTOR. CONTRACTOR SHALL CONTACT CONSULTANT PRIOR TO BID FOR CONSULTANT'S STAKING FEES. FOR ALL PROJECTS OR AREA SEGMENTS WITH SPARKER SPRINKLERS, CONTRACTOR SHALL LAY OUT SPRINKLERS USING CONSULTANT'S STAKING SERVICE.
2. MARK WITH POWDERED LIME OR MARKING PAINT ROUTING OF PRESSURE SUPPLY LINES, AND FLAG HEADS AND CONTROL VALVE LOCATIONS FOR FIRST SERIES OF ZONES AS DIRECTED BY CONSULTANT. CONTACT CONSULTANT A MINIMUM OF 48 HOURS IN ADVANCE AND REQUEST A REVIEW OF STAKING. CONSULTANT WILL REVIEW STAKING AND DIRECT CHANGES IF REQUIRED. STAKING REVIEW DOES NOT RELIEVE INSTALLER FROM COVERAGE PROBLEMS DUE TO IMPROPER PLACEMENT OF HEADS AFTER STAKING.

INSTALL SLEEVING UNDER ALL ASPHALT PAVING AND CONCRETE WALKS, PRIOR TO THE INSTALLATION OF CONCRETE CURBS OR OPERATIONS, TO ACCOMMODATE PIPING AND WIRING. COMPACT BACKFILL AROUND SLEEVES TO 95% STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D1557.

TRENCHING - TRENCH EXCAVATION SHALL FOLLOW, AS MUCH AS POSSIBLE, LAYOUT SHOWN ON DRAWINGS. DIG TRENCHES STRAIGHT, AND SUPPORT THE PIPE CONTINUOUSLY ON THE BOTTOM OF TRENCH. TRENCH BOTTOM SHALL BE CLEAN AND SMOOTH WITH ALL ROCK AND ORGANIC DEBRIS REMOVED. PRESSURE SUPPLY LINE TRENCHES SHALL BE OVER-EXCAVATED AS REQUIRED TO ALLOW FOR BEDDING MATERIAL. TRENCH DEPTH SHALL BE UNIFORM AS REQUIRED TO MEET MINIMUM DEPTH REQUIREMENTS FOR THE TYPE OF PIPING BEING INSTALLED.

- a. CLEARANCES:
  1. PIPING SMALLER THAN 3 INCHES - TRENCHES SHALL HAVE A MINIMUM WIDTH OF 7 INCHES, 12 INCHES FOR 3" AND LARGER PIPE.
  - b. LINE CLEARANCE - PROVIDE NOT LESS THAN 4 INCHES OF CLEARANCE BETWEEN EACH LINE, AND NOT LESS THAN 12 INCHES OF CLEARANCE BETWEEN LINES OF OTHER TRADES.
  - c. FOR RECLAIMED WATER SYSTEMS, 2-FOOT VERTICAL (BELOW) AND 4-FOOT HORIZONTAL SEPARATIONS FROM POTABLE LINES ARE REQUIRED PER INDUSTRY STANDARDS.
2. PIPE AND WIRE DEPTH:
  - a. PRESSURE SUPPLY PIPING - 24 INCHES FROM TOP OF PIPE (30 INCHES WHERE 6" AND LARGER PIPE IS ON PROJECT).
  - b. NON-PRESSURE PIPING - 12 INCHES FROM TOP OF PIPE.
  - c. CONTROL WIRING - SIDE AND BOTTOM OF PRESSURE SUPPLY LINE.
  - d. DRIP PIPING - 12 INCHES FROM TOP OF PIPE.
  - e. EMITTER TUBING - 12 INCHES FROM TOP OF POPE (NON SLOPE PLANTINGS), 4 INCHES FROM THE TOP OF PIPE (SLOPES 2:1 OR GREATER).
3. BORING WILL BE PERMITTED ONLY WHERE PIPE MUST PASS UNDER OBSTRUCTION(S) WHICH CANNOT BE REMOVED, AND MUST BE APPROVED BY THE IRRIGATION CONSULTANT IF NOT SPECIFICALLY INDICATED ON CONSTRUCTION DRAWINGS. FINAL DENSITY OF BACKFILL SHALL MATCH THAT OF SURROUNDING SOIL. USE OF SLEEVES OF SUITABLE DIAMETER IS ACCEPTABLE IF INSTALLED FIRST BY JACKING OR BORING, AND PIPE LAID THROUGH SLEEVES. OBSERVE SAME PRECAUTIONS AS THOUGH PIPE WERE INSTALLED IN OPEN TRENCH.

## 3.03 INSTALLATION

LOCATE OTHER EQUIPMENT AS NEAR AS POSSIBLE TO LOCATION DESIGNATED ON CONSTRUCTION DRAWINGS. DEVIATIONS SHALL BE APPROVED BY CONSULTANT PRIOR TO INSTALLATION.

## PVC PIPING:

1. SNAKE PIPE IN TRENCH AS MUCH AS POSSIBLE TO ALLOW FOR EXPANSION AND CONTRACTION.
2. WHEN PIPE LAYING IS NOT IN PROGRESS, OR AT END OF EACH DAY, CLOSE PIPE ENDS WITH TIGHT PLUG OR CAP. (PERFORM WORK IN ACCORDANCE WITH GOOD PRACTICES PREVAILING IN PIPING TRADES).
3. COORDINATE PRESSURE SUPPLY LINE INSTALLATION WITH REQUIRED BEDDING OPERATIONS. CONCRETE THRUST BLOCKS OR STEEL JOINT RESTRAINTS SHALL BE UTILIZED FOR ALL RUBBER-RING JOINT FITTINGS PER INDUSTRY STANDARDS. IN SANDY SOIL, MECHANICAL JOINT FITTINGS SHALL BE USED WITH THRUST BLOCKS.
4. STAKE ALL ABOVE-GRADE PVC PIPING PER DETAILS.
5. USE 45-DEGREE ELBS WHEN MAKING PERPENDICULAR CROSSINGS OF ABOVE-GRADE PVC PIPING, TO DEPRESS BOTTOM PIPE.
6. LAY PIPE AND MAKE ALL PLASTIC-TO-PLASTIC JOINTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

## DRIP PIPING:

1. INSTALL FITTING CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS.
2. USE THREADED RISERS AND SCH. 40 OR SCH. 80 FITTINGS PER DETAILS WHEN MAKING CONNECTIONS IN DRIP PIPING FOR EMITTERS AND FITTINGS.
3. INSTALL DRIP LINE BLOW-OUT STUBS AT ALL DEAD ENDS OF DRIP PIPING. ANY DEVIATIONS FROM DRIP PIPE ROUTING SHOWN ON DRAWINGS MUST BE APPROVED BY CONSULTANT PRIOR TO INSTALLATION.
- 4.

## CONTROL WIRING

1. LOW VOLTAGE WIRING:
  - a. BURY CONTROL WIRING BETWEEN CONTROLLER AND ELECTRIC VALVES IN PRESSURE SUPPLY LINE TRENCHES, WITH WIRES CONSISTENTLY LOCATED BELOW AND TO ONE SIDE OF PIPE, ON TOP OF INITIAL PIPE BEDDING, OR IN SEPARATE TRENCHES.
  - b. BUNDLE ALL 24-VOLT WIRES AT 10-FOOT INTERVALS WITH ELECTRICAL OR DUCT TAPE.
  - c. PROVIDE AN EXPANSION LOOP AT PRESSURE SUPPLY LINE ANGLE FITTINGS. EVERY ELECTRIC CONTROL VALVE LOCATION (IN VALVE BOX), AND AT MINIMUM 500 FEET INTERVALS, FORM EXPANSION LOOP BY WRAPPING WIRE AT LEAST 8 TIMES AROUND A 1-INCH PIPE AND WITHDRAWING PIPE.
  - d. MAKE SPICES AND ELECTRIC CONTROL VALVE CONNECTIONS USING SURESPICE SK 12-14 CONNECTORS OR SIMILAR DRY SPICE METHOD.
  - e. INSTALL CONTROL WIRE SPICES NOT OCCURRING AT CONTROL VALVE IN A SEPARATE SPICE VALVE BOX.
  - f. INSTALL ONE CONTROL WIRE FOR EACH CONTROL VALVE.
  - g. RUN 2 SPARE COMMUNICATION CABLE WIRES FROM CONTROLLER PEDESTAL TO LAST ELECTRIC CONTROL VALVE OPERATED BY CONTROLLER ON EACH AND EVERY OF PRESSURE SUPPLY LINE. LABEL SPARE WIRE AS CONTROL AND WIRE STUB BOX. LOOP A MINIMUM OF 24" FROM ALL SPARE WIRES INSIDE EVERY CONTROL VALVE BOX OPERATED BY CONTROLLER.
  - h. RUN ALL FUTURE CONTROL WIRES FROM CONTROLLER PEDESTAL TO POINT INDICATED ON DRAWINGS. COIL A MINIMUM OF TEN (10) FEET AT TERMINATION AND INSTALL IN 10" ROUND VALVE BOX. LABEL ALL WIRES AT TERMINATION.
2. HIGH VOLTAGE WIRING FOR AUTOMATIC CONTROLLER.
- o. PROVIDE 120-VOLT POWER CONNECTION TO AUTOMATIC CONTROLLER.

## AUTOMATIC CONTROLLER:

1. INSTALL CONTROLLER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AS DETAILED AND WHERE SHOWN ON DRAWINGS.
2. CONNECT REMOTE CONTROL VALVES TO CONTROLLER IN NUMERICAL SEQUENCE AS

3. SHOWN ON DRAWINGS.
3. FINAL LOCATION OF CONTROLLER SHALL BE APPROVED BY CONSULTANT PRIOR TO INSTALLATION.
4. EACH CONTROLLER SHALL HAVE A DEDICATED SEPARATE GROUND WIRE AND SURGE PROTECTION.
5. ABOVE-GROUND CONDUIT SHALL BE RIGID GALVANIZED WITH APPROPRIATE FITTINGS. BELOW-GROUND CONDUIT SHALL BE SCHEDULED 40 PVC.

## QUICK COUPLER VALVES:

INSTALL QUICK COUPLERS ON DOUBLE SWING-JOINT ASSEMBLIES OF SCHEDULE 80 PVC PIPING; FLUSH TO GRADE. ANGLES NIPPLE RELATIVE TO PRESSURE SUPPLY LINE SHALL BE NO MORE THAN 45 DEGREES AND NO LESS THAN 10 DEGREES. INSTALL QUICK COUPLER AS DETAILED.

DRIP VALVE ASSEMBLIES - INSTALL DRIP EMITTERS AS DETAILED.

## VALVE BOXES:

1. INSTALL ONE VALVE BOX FOR EACH TYPE OF VALVE INSTALLED AS DETAILED FLUSH WITH GRADE FOR ALL SODDED AREAS, AND ABOVE-GRADE FOR ALL SEEDED AREAS.
2. VALVE BOX EXTENSIONS ARE NOT ACCEPTABLE, EXCEPT FOR MASTER VALVE AND FLOW SENSOR.
3. INSTALL GRAVEL SUMP AFTER COMPACTION OF ALL TRENCHES. VALVE BOX TO REST ON GRAVEL SUMP. PLACE FINAL PORTION OF GRAVEL INSIDE VALVE BOX AFTER VALVE BOX IS BACKFILLED AND COMPACTED.
4. INSTALL "CHRISTY" STAINLESS STEEL OR 2.5" X 5" PLASTIC VALVE LABEL TAGS FOR EACH VALVE BOX (1-800-236-4553). ENTIRE CONTROLLER AND STATION NUMBER SHALL BE PRINTED ON EACH TAG. LETTER AND NUMBER SIZE SHALL BE NO SMALLER THAN 1/2 INCH AND NO GRE



TOWN OF PARADISE VALLEY NOTES

- GRADING SHALL BE IN CONFORMANCE WITH 2018 IBC.
- PRIOR TO FIRST FOOTING INSPECTION OF ANY TYPE, ALL PROPERTY PINS SHALL BE PLACED BY A REGISTERED LAND SURVEYOR OF THE STATE OF ARIZONA, AND PROPERTY LINES MUST BE PHYSICALLY IDENTIFIED PRIOR TO INSPECTION.
- WHERE EXCAVATION IS TO OCCUR THE TOP 4" OF EXCAVATED NATIVE SOIL SHALL REMAIN ON THE SITE AND SHALL BE REUSED IN A MANNER THAT TAKES ADVANTAGE OF THE NATURAL SOIL SEED BANK IT CONTAINS.
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) SPECIFICATIONS AND STANDARD DETAILS.
- ALL EXTERIOR SITE LIGHTING SHALL COMPLY WITH REQUIREMENTS OF SECTION 2208 OF THE TOWN OF PARADISE VALLEY ZONING ORDINANCES FOR FUTURE TYPE, LOCATION, HEIGHT, WATTAGE BASED UPON FIXTURES INSTALLED.
- A DUST CONTROL PLAN MEETING THE REQUIREMENTS OF RULE 310 OF THE MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS, AS AMENDED, IS REQUIRED.
- 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.
- EAVE PROJECTIONS INTO REQUIRED SETBACKS ARE LIMITED TO A MAXIMUM OF 24" PURSUANT TO SECTION 1008 OF THE TOWN OF PARADISE VALLEY ZONING ORDINANCES.
- ALL STRUCTURES AND LANDSCAPING WITHIN THE SIGHT VISIBILITY TRIANGLE SHALL HAVE A 2 FOOT MAXIMUM HEIGHT.
- ALL NEW AND EXISTING ELECTRICAL SERVICE TO BE BURIED UNDERGROUND PER THE TOWN OF PARADISE VALLEY STANDARDS.
- POOL, SPA, BARBECUE AND ANY PROPOSED STRUCTURES OVER 8 INCHES ABOVE GRADE REQUIRE SEPARATE PERMIT APPLICATIONS.
- POOLS SHALL BE CONSTRUCTED BY SEPARATE PERMIT AND SECURED FROM UNWANTED ACCESS PER SECTION 5-2-2 OF THE TOWN OF PARADISE VALLEY ORDINANCES.
- A SETBACK CERTIFICATION IS REQUIRED AND MUST BE GIVEN TO TOWN INSPECTOR AT STEM WALL INSPECTION.
- MAIL BOX TO COMPLY WITH THE TOWN OF PARADISE VALLEY STANDARDS FOR MAIL BOXES IN THE R.O.W. FOR HEIGHT, WIDTH AND BREAK AWAY FEATURES.
- ALL PATIOS, WALKS, AND DRIVES TO SLOPE AWAY FROM BUILDING AND GARAGES AT A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS SPECIFIED OTHERWISE. ALL LAWN AREAS ADJOINING WALKS OR SLABS WILL BE GRADED TO 2" BELOW THE TOP OF SLAB. TYPICAL FINISHED GRADE AROUND PERIMETER OF BUILDING IS MINUS 6" BELOW FINISHED FLOOR UNLESS SPECIFIED OTHERWISE.
- ALL MATERIAL TO BE UNDER SLABS AND WALKS SHALL BE COMPACTED TO NOT LESS THAN 95% PER ASTM D698.
- SOILS COMPACTION TEST RESULTS MUST BE SUBMITTED TO THE TOWN ENGINEER'S OFFICE FOR BUILDING PAIDS THAT HAVE ONE (1) FOOT OR MORE OF FILL MATERIAL INDICATED. THIS INFORMATION MUST BE SUPPLIED PRIOR TO REQUEST FOR FINAL INSPECTION.
- TRENCH BED SHALL BE FREE OF ROCKS AND DEBRIS.
- FINISHED FLOOR ELEVATION CERTIFICATION IS REQUIRED AND SHALL BE PROVIDED TO TOWN INSPECTOR PRIOR TO STRIP AND SHEAR INSPECTION.
- REGULATION II RULE 20-3 OF THE MARICOPA COUNTY HEALTH DEPARTMENT, BUREAU OF AIR POLLUTION CONTROL SHALL BE OBSERVED AND ENFORCED.
- ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION COVERED BY THIS PLAN SHALL BE IN ACCORDANCE WITH THE M.A.G. STANDARD SPECIFICATIONS AND DETAILS AND CURRENT SUPPLEMENTS THEREOF PER THE LOCAL CITY OR TOWN UNLESS SPECIFIED OTHERWISE IN THESE PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENTS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH ALL REQUIRED STANDARD SPECIFICATIONS, DETAILS AND SUPPLEMENTS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
- THE CONTRACTOR IS TO COMPLY WITH ALL LOCAL STATE, AND FEDERAL LAWS AND REGULATIONS APPLICABLE TO THE CONSTRUCTION COVERED BY THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE ALL WORK COVERED BY THIS PLAN.
- ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION.
- THE TOWN ONLY APPROVES THE SCOPE, NOT THE DETAIL, OF ENGINEERING DESIGNS; THEREFORE, IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE TOWN.
- THE APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS; IF AN ENCROACHMENT PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS, THE PLANS MUST BE RESUBMITTED TO THE TOWN FOR RE-APPROVAL.
- A PUBLIC WORKS INSPECTOR WILL INSPECT ALL WORKS WITHIN THE TOWN OF PARADISE VALLEY RIGHTS-OF-WAY AND IN EASEMENTS. NOTIFICATION INSPECTION SERVICES 24 HOURS PRIOR TO BEGINNING CONSTRUCTION BY CALLING 480-312-5750.
- WHENEVER EXCAVATION IS NECESSARY, CALL THE BLUE STAKE CENTER, 602-263-1100, TWO WORKING DAYS BEFORE EXCAVATION BEGINS. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES IS IDENTIFIED FOR THE PROJECT. CALL "COLLECT" IF NECESSARY.
- ENCROACHMENT PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. AN ENCROACHMENT PERMIT WILL BE ISSUED BY THE TOWN ONLY AFTER THE REGISTRANT HAS PAID A BASE FEE PLUS A FEE FOR INSPECTION SERVICES. COPIES OF ALL PERMITS MUST BE RETAINED ON-SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE SUSPENSION OF ALL WORK UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
- ALL EXCAVATION AND GRADING THAT IS NOT IN THE PUBLIC RIGHTS-OF-WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO CHAPTER 70, EXCAVATION AND GRADING, OF THE LATEST EDITION OF THE IBC BY THE ICC. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE TOWN FOR A FEE ESTABLISHED BY THE UNIFORM BUILDING CODE.
- EXCAVATIONS SHALL COMPLY WITH REQUIREMENTS OF OSHA EXCAVATION STANDARDS (29 CFR, PART 1926, SUBPART P). UNDER NO CIRCUMSTANCES WILL THE CONTRACTORS BE ALLOWED TO WORK IN A TRENCH LOCATED WITHIN THE TOWN'S RIGHT-OF-WAY WITHOUT PROPER SHORING OR EXCAVATION METHODS.
- ON DEMOLITION, GRADING, REMODELING AND NEW CONSTRUCTION PROJECTS, PERMITTEE MUST NOTIFY ADJACENT PROPERTY OWNERS REGARDING THE NATURE OF THE PROJECT, THE TIME PERIOD FOR CONSTRUCTION, AND ANY UNUSUAL ACTIVITIES THAT MAY CAUSE DISRUPTION OF THE NORMAL COURSE OF TRAFFIC DURING CONSTRUCTION.
- ALL PERMITTEES MUST POST A 6 SQUARE FOOT (2'X3') IDENTIFICATION SIGN, MADE OF DURABLE MATERIAL, IN THE FRONT YARD OF SUBJECT PROPERTY AND NOT IN THE TOWN RIGHT-OF-WAY. THE SIGN MAY NOT EXCEED A MAXIMUM OF 6 FEET IN HEIGHT FROM GRADE TO TOP OF THE SIGN. THE SIGN MUST INCLUDE THE PERMITTEE OR COMPANY NAME, PHONE NUMBER, TYPE OF WORK, AND ADDRESS OF PROJECT.
- WHEN DEEMED NECESSARY, A 6-FOOT HIGH CHAIN LINK FENCE MUST BE INSTALLED AROUND THE CONSTRUCTION AREA TO PREVENT ANY POTENTIAL SAFETY HAZARD FOR THE PUBLIC. THE FENCE SHALL BE SETBACK AT LEAST 10 FEET FROM ALL RIGHTS-OF-WAY AND HAVE A 50-FOOT STREET CORNER SITE TRIANGLE WHERE APPLICABLE.
- CLEAR ACCESS FOR NEIGHBORING PROPERTIES AND EMERGENCY VEHICLES MUST BE MAINTAINED AT ALL TIMES. CONSTRUCTION RELATED VEHICLES MUST BE LEGALLY PARKED ONLY ON ONE SIDE OF THE STREET OR JOB SITE PROPERTY. IF A STAGING AREA IS NEEDED ON A PROPERTY OTHER THAN THE CONSTRUCTION SITE FOR CONSTRUCTION SUPPLIES AND EQUIPMENT, THE PERMITTEE MUST OBTAIN PROPERTY OWNER AND TOWN APPROVAL FIRST AND MUST INFORM THE ADJACENT PROPERTY OWNERS OF THE LOCATION OF STAGING AREA, AND TIME AND HOURS DURING THE DAY THE AREA WILL BE USED.
- EXCEPT AS OUTLINED IN ITEM 4, ALL CONSTRUCTION DEBRIS AND EQUIPMENT MUST BE CONTAINED ON SITE AT ALL TIMES. CONTRACTOR AND PROPERTY OWNER MUST MAINTAIN THE JOB SITE FREE OF LITTER AND UNSIGHTLY MATERIALS AT ALL TIMES. CONSTRUCTION MATERIALS ARE PROHIBITED IN THE TOWN RIGHT-OF-WAY OR NEAR ADJACENT PROPERTIES.
- BUILDING CONSTRUCTION MUST NOT START SOONER THAN SUNRISE AND MUST STOP NO LATER THAN SUNSET. ALSO, ORDINANCE #561 IMPOSES RESTRICTIONS ON CONSTRUCTION WORK ON SATURDAYS, SUNDAYS AND MAJOR BUSINESS HOLIDAYS. HILLSIDE PROJECTS MAY HAVE ADDITIONAL RESTRICTIONS. EQUIPMENT WITH AUDIBLE REVERSE DIRECTION WARNINGS MUST NOT BE OPERATED PRIOR TO 7:00 A.M.
- THE USE AND OPERATION OF FUEL-FIRED GENERATORS ON ANY CONSTRUCTION SITE, NEW, EXISTING OR REMODELING, IS PROHIBITED UNLESS DUE TO A HARDSHIP TOWN APPROVAL IS OBTAINED.
- THE CONTRACTOR AND PROPERTY OWNER WILL BE LIABLE FOR ANY DAMAGE DONE TO ANY PUBLIC PROPERTY AS A RESULT OF ANY CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES. NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL AFFECTED RIGHTS-OF-WAY ARE CLEANED AND/OR REPAIRED TO THEIR ORIGINAL CONDITION AND UNTIL ANY AND ALL DAMAGES TO AFFECTED PROPERTIES ARE RESTORED TO ORIGINAL CONDITION, OR UNTIL SUCH TIME THAT A WRITTEN, SIGNED AND LEGALLY BINDING AGREEMENT HAS BEEN REACHED BY THE PARTIES INVOLVED TO REMEDY ANY VIOLATION WITHIN A REASONABLE TIME PERIOD, AND UNTIL ALL REQUIRED FEES ARE PAID IN FULL.
- THE NATURAL FLOW OF RAINWATER AND OTHER SURFACE DRAINAGE FROM THE PROPERTY MAY NOT BE ALTERED IN ANY WAY.
- A KEY SWITCH SHALL BE REQUIRED ON ALL NEW AND EXISTING ELECTRIC ENTRY CONTROL GATES. THE KEY SWITCH SHALL BE INSTALLED IN A LOCATION ON THE GATE CONTROL PANEL THAT IS READILY VISIBLE AND ACCESSIBLE. KNOX BOX ORDER FORMS ARE AVAILABLE AT THE PARADISE VALLEY BUILDING DEPARTMENT.
- ALL EQUIPMENT OF ALL TRADES ON OR AFFECTING THE JOB MUST BE CLEANED ONLY IN A PRE-DETERMINED AND DESIGNATED AREA. DEBRIS AND RUNOFF FROM SAID AREA MAY NOT EXTEND BEYOND THE BUILDING AREA.
- PROPERTY OWNER, BUILDER, OR GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR CONTROLLING DUST FROM THE SITE AT ALL TIMES. ALL MEANS NECESSARY SHALL BE USED BY THE BUILDER OR GENERAL CONTRACTOR TO CONTROL THE EXISTENCE OF DUST CAUSED BY ANY EARTHWORK, SPRAY APPLICATION OF MATERIALS, OR OTHER DUST-CAUSING PRACTICES REQUIRED BY THE CONSTRUCTION PROCESS.
- AN INSPECTION FEE WILL BE CHARGED IF THE INSPECTION IS REQUIRED AS A RESULT OF A CODE VIOLATION.
- FOR DEMOLITION INSPECTION OWNER OR PERMITTEE SHALL NOTIFY OSHA FOR ASBESTOS INSPECTION. ALL DEMOLITIONS AND ALL RENOVATION ACTIVITIES THAT WILL DISTURB FRABLE ASBESTOS CONTAINING MATERIALS MUST BE REPORTED TO THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT.

ENGINEERS NOTES

- MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION INCLUDING LATEST REVISION AND CURRENT SUPPLEMENTS THEREOF PER THE LOCAL TOWN OR CITY) ARE INCORPORATED INTO THIS PLAN IN THEIR ENTIRETY.
- ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION COVERED BY THIS PLAN SHALL BE IN ACCORDANCE WITH THE M.A.G. STANDARD SPECIFICATIONS AND DETAILS AND CURRENT SUPPLEMENTS THEREOF PER THE LOCAL CITY OR TOWN UNLESS SPECIFIED OTHERWISE IN THESE PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENTS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH ALL REQUIRED STANDARD SPECIFICATIONS, DETAILS AND SUPPLEMENTS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
- GRADING SHALL BE IN CONFORMANCE WITH 2018 IBC SEC. 1803 AND APPENDIX J.
- 5% MINIMUM SLOPE AWAY FROM BUILDING FOR A MINIMUM 10', U.N.O.
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) SPECIFICATIONS AND STANDARD DETAILS.
- A DUST CONTROL PLAN MEETING THE REQUIREMENTS OF RULE 310 OF THE MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS, AS AMENDED, IS REQUIRED.
- 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.
- 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.
- ALL STRUCTURES AND LANDSCAPING WITHIN THE SIGHT VISIBILITY TRIANGLE SHALL HAVE A 2 FOOT MAXIMUM HEIGHT.
- ALL PATIOS, WALKS, AND DRIVES TO SLOPE AWAY FROM BUILDING AND GARAGES AT A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS SPECIFIED OTHERWISE. ALL LAWN AREAS ADJOINING WALKS OR SLABS WILL BE GRADED TO 2" BELOW THE TOP OF SLAB. TYPICAL FINISHED GRADE AROUND PERIMETER OF BUILDING IS MINUS 6" BELOW FINISHED FLOOR UNLESS SPECIFIED OTHERWISE.
- ALL MATERIAL TO BE UNDER SLABS AND WALKS SHALL BE COMPACTED TO NOT LESS THAN 95% PER ASTM D698.
- THE MATERIALS AND SITE CONDITIONS DEPICTED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO ERROR AND OMISSION. CONTRACTORS SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE ALL WORK COVERED BY THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE.
- A REASONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES IN THE CONSTRUCTION AREA, THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THEIR CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL CALL 48 HOURS IN ADVANCE FOR BLUE STAKE (1-800-STAKE-IT) PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION AFFECTING UTILITIES AND THE COORDINATION OF ANY NECESSARY UTILITY RELOCATION WORK.
- ALL PAVING, GRADING, EXCAVATION, TRENCHING, PIPE BEDDING, CUT, FILL AND BACKFILL SHALL COMPLY WITH THE RECOMMENDATIONS SET FORTH IN THE SOILS (GEOTECHNICAL) REPORT FOR THIS PROJECT IN ADDITION TO THE REFERENCED REQUIRED SPECIFICATIONS AND DETAILS.
- THE CONTRACTOR IS TO VERIFY THE LOCATION AND THE ELEVATIONS OF ALL EXISTING UTILITIES AT POINTS OF TIE-IN PRIOR TO COMMENCING ANY NEW CONSTRUCTION. SHOULD ANY LOCATION OR ELEVATION DIFFER FROM THAT SHOWN ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S AGENT.
- CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND SITE LAYOUT WITH ARCHITECTURE'S FINAL SITE PLAN AND FINAL BUILDING DIMENSIONS BEFORE STARTING WORK. REPORT DISCREPANCIES TO OWNER'S AGENT.
- COORDINATION BETWEEN ALL PARTIES IS ESSENTIAL PART OF CONTRACT.
- CONTRACTOR IS RESPONSIBLE FOR PROJECT AND SITE CONDITIONS, AND TO WORK WITH WEATHER CONDITIONS AS THE PROJECT SITE MAY BE LOCATED IN A FLOOD PRONE AREA AND SUBJECT TO FLOODING AND ITS HAZARDS.
- THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE 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, CONDITION, OR PAVEMENT CROSS-SLOPE DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIGN INTENT REFLECTED ON THESE PLANS NOT ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE UTILITY CROSSINGS AT CULVERT CROSSINGS BEFORE STARTING WORK ON CULVERT. COORDINATE WITH OWNER REPRESENTATIVE. VERIFY UTILITY LINES AND/OR CONDUITS ARE IN PLACE BEFORE STARTING CULVERT WORK.
- ALL ON-SITE UTILITIES PER OTHERS.
- THIS PROJECT REQUIRES A REGULAR ONGOING MAINTENANCE PROGRAM FOR THE DESIGNED DRAINAGE SYSTEM(S) TO PRESERVE THE DESIGN INTEGRITY AND THE ABILITY TO PERFORM ITS OPERATIONAL INTENT. FAILURE TO PROVIDE MAINTENANCE WILL JEOPARDIZE THE DRAINAGE SYSTEM(S) PERFORMANCE AND MAY LEAD TO IT'S INABILITY TO PERFORM PROPERLY AND/OR CAUSE DAMAGE ELSEWHERE IN THE PROJECT.
- IF A DISCREPANCY IS FOUND BETWEEN ENGINEER'S PLAN OR SURVEYOR'S STAKING AND THE ARCHITECTURAL PLAN, ENGINEER SHALL BE NOTIFIED IMMEDIATELY. FAILURE TO NOTIFY ENGINEER SHALL NEGATE ENGINEER'S LIABILITY.
- ALL DISTURBED AREAS ARE TO BE ROPED AND ROPING MUST MATCH PLAN.
- VEGETATION OUTSIDE OF CONSTRUCTION AREA TO REMAIN.
- AREAS OUTSIDE THE WALL AND CUT AND FILL SLOPES SHALL BE REVEGETATED WITH SIMILAR PLANT TYPES AND DENSITIES FOUND ON THE SITE. REVEGETATION SHALL BE COMPLETED PRIOR TO OCCUPANCY AND THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
- MECHANICAL EQUIPMENT SHALL BE SCREENED TO A MINIMUM OF ONE FOOT ABOVE TOP OF EQUIPMENT.
- ANY FUTURE IMPROVEMENTS SHOWN HEREON SHALL REQUIRE A SEPARATE PERMIT.
- ANY POINTS OF DRAINAGE CONCENTRATION SHOULD BE PROTECTED AGAINST EROSION WITH NATIVE STONE.
- THIS PLAN IS DESIGNED TO SHOW SITE GRADING AND DRAINAGE CONTRACTOR SHALL USE THE ARCHITECTURAL SITE PLAN TO DETERMINE FINAL HOUSE, WALL, STEP, ETC., LOCATIONS AND ELEVATIONS.
- ALL DRAINAGE FACILITIES TO BE MAINTAINED BY HOMEOWNER.
- SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR SITE AND RETAINING WALLS LAYOUT, DIMENSIONS, AND DETAILS.
- TOP OF FOOTING ELEVATIONS SHOWN IN PLAN ARE APPROXIMATE ONLY. ACTUAL TOP OF FOOTINGS TO BE DETERMINED AT TIME OF CONSTRUCTION AND TO BE A MINIMUM OF SIX INCHES BELOW EXISTING NATURAL GRADE OR FINISHED GRADE, WHICHEVER IS LOWER (TYPICAL).
- REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING LAYOUT, DIMENSIONS AND ELEVATIONS.
- REFER TO STRUCTURAL DRAWINGS, DETAILS AND CALCULATIONS FOR ALL PROPOSED RETAINING WALLS.
- FOR CHANGE IN ELEVATION THAT ARE GREATER THAN 30", PROVIDE 36" HIGH QUADRAIRLS FOR TOTAL OF 42" FALL PROTECTION BARRIER U.N.O.
- CONTRACTOR TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURE - 5% MIN SLOPE FOR FIRST 10 FEET, U.N.O.
- ALL WATER AND SEWER LINES AND CONNECTIONS MUST BE INSTALLED PER IPC 2018, MAG AND TOWN OF PARADISE VALLEY SUPPLEMENT TO MAG.
- WATERPROOF ALL EXTERIOR WALLS 18" ABOVE FINISH GRADE-(BITUTHENE@ 3000 HC MEMBRANE W/ GRACE PROTECTION 03 OR APPROVED EQUAL).
- ALL PIPES AND FITTINGS SHALL BE INSTALLED PER MANUFACTURE'S SPECIFICATIONS AND DETAILS.
- ABANDONMENT OF EXISTING AND INSTALLATION OF NEW SEPTIC SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT RULES AND STANDARDS, AND WILL REQUIRE SEPARATE PERMIT.
- COORDINATE RIPRAP COLOR WITH LANDSCAPE PLANS AND DETAILS.
- VERIFY AND COORDINATE WITH LANDSCAPE PLANS FINAL LOCATION AND GRATE TYPE OF SPECIFIED AREA DRAINS AND TRENCH DRAINS.
- VERIFY AND COORDINATE WITH ARCHITECTURAL AND LANDSCAPE PLANS LOCATION AND HEIGHT OF ALL SITE WALLS.
- DISTURBED AREA: TOTAL ACRES = 1.009 ACRES > 1 ACRE; NPDES PERMIT IS REQUIRED.
- REFER TO ARCHITECTURAL PLANS AND DETAILS FOR DEMOLITION AND REMOVAL OF ANY EXISTING BUILDING STRUCTURES, SITE WALLS, POOL AND PAVEMENT ETC.
- REFER TO GEOTECHNICAL REPORT FOR SPECIFIC RECOMMENDATIONS AND MAXIMUM ALLOWED FILL AND CUT SLOPES.
- THE PROPOSED POOL EQUIPMENT FOR THIS PROJECT SHALL BE EQUIPPED WITH CARTRIDGE FILTER IN ORDER TO AVOID THE BACKWASH.

FIRE SPRINKLER SYSTEM

FIRE SPRINKLER SYSTEM TO BE INSTALLED PER THE REQUIREMENTS OF THE TOWN OF PARADISE VALLEY AND IN ACCORDANCE WITH I.B.C. SECT. 904.2.2 AMD. AND 2018 IFG, SEC. 903.

PRELIMINARY GRADING & DRAINAGE PLAN  
WOLFSWINKEL RESIDENCE  
3924 E BETHANY HOME RD., PARADISE VALLEY, AZ 85253  
LOT 5 - ARROYO HEIGHTS

A SUBDIVISION PLAT RECORDED IN BOOK 110 OF MAPS, PAGE 50, MCR.,  
LOCATED IN A PORTION OF THE NE 1/4 OF THE NE 1/4 OF THE NE 1/4 OF SECTION 13, T.2N, R.3E  
OF THE GILA & SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA

LEGEND	
●	BRASS CAP FLUSH
●	FOUND REBAR OR AS NOTED
○	CALCULATED POINT
---	PROPERTY LINE
---	EASEMENT LINE
---	MONUMENT LINE
WM	WATER METER
○	MAILBOX
○	SEWER MANHOLE
□	TRANSFORMER
---	CATV, PHONE
---	SEWER LINE
---	GAS LINE
---	WATER LINE
---	ELECTRIC LINE
---	TELECOMM. LINE
---	COMM. LINE
---	EXISTING CONTOUR
---	EXIST. DRAINAGE FLOW
---	EXIST. SPOT ELEVATION
---	CITRUS TREE
---	PALO VERDE
---	PROPOSED SPOT ELEVATION
---	PROPOSED CONTOUR
---	EXISTING DISTURBED AREA
---	PROPOSED DISTURBED AREA
---	STORM DRAIN PIPE
---	CATCH BASIN
---	RETAINING WALL
---	EXTENDED STEM
---	TOP OF IRON FENCE
---	TOP OF WALL
---	TOP OF RETAINING WALL
---	FINISH GRADE
---	BOTTOM OF WALL
---	TOP OF FOOTING
---	RIP-RAP
---	HISTORIC CONTOUR

ABBREVIATIONS

BC	BACK OF CURB
BSL	BUILDING SETBACK LINE
EG	EXISTING GRADE
EL	ELEV
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX	EXIST.
FG	FINISH GRADE
G	GUTTER, GAS
MCR	MARICOPA COUNTY RECORDER
P, PWMT	PAVEMENT
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
R/W	RIGHT OF WAY
T	TANGENT, TELEPHONE
W	WEST, WATERLINE
WM	WATER METER

UTILITIES

WATER: CITY OF PHOENIX  
SANITARY SEWER: CITY OF PHOENIX  
ELECTRIC: SRP  
TELEPHONE: CENTURY LINK, COX COMMUNICATIONS  
NATURAL GAS: SOUTHWEST GAS  
CABLE TV: CENTURY LINK, COX COMMUNICATIONS

UTILITIES NOTES

HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLAN ARE APPROXIMATE ONLY AND WILL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO START OF CONSTRUCTION WORK. CALL BLUE STAKE @ (602) 263-1100.

DISTURBED AREA CALCULATIONS

EXISTING LOT AREA:	43,970 S.F. (1,009 AC.)
TOTAL AREA UNDER ROOF:	9,889 S.F.
FLOOR AREA RATIO:	22.03% < 25%
(AREA UNDER ROOF/AREA OF LOT)	
BUILDING PAD SLOPE:	6.05%
VERTICAL:	13 FT
HORIZONTAL:	214.7 FT
ALLOWABLE NET DISTURBED AREA:	60.00%
ALLOWABLE NET DISTURBED AREA:	26,382 S.F.
EXISTING GROSS DISTURBED AREA:	100%
EXISTING GROSS DISTURBED AREA:	43,970 S.F.
EXISTING BUILDING FOOTPRINT:	4,899 S.F.
EXISTING NET DISTURBED AREA:	39,071 S.F. (88.86%)
PROPOSED NEW DISTURBED AREA:	0 S.F. (0%)
TOTAL GROSS DISTURBED AREA:	43,970 S.F. (100%)
LESS AREAS OF DISTURBANCE:	
TOTAL LIVABLE FOOTPRINT:	6,426 S.F.
TOTAL GARAGE FOOTPRINT:	1,834 S.F.
DRIVEWAY CREDIT @25% 998 S.F.X25%=	250 S.F.
RETENTION BASIN CREDIT @50% 4,447 S.F.X50%=2,224 S.F.	
RESTORED AREAS:	0 S.F.
NET DISTURBED AREA:	33,236 S.F. (75.6%)
PERCENT OF LOT STEEPER THAN NATURAL GRADE (5% MAX.):	2,126 S.F. (4.83%)
VOLUME OF CUT:	2,414 C.Y.
VOLUME OF FILL:	411 C.Y.
TOTAL CUT&FILL:	2,825 C.Y.
HILLSIDE ASSURANCE = 35 TIMES THE GRADING PERMIT FEE.	
GRADING PERMIT FEE:	\$2,856
(\$168 FIRST 100 CY / \$96 EA. ADDITIONAL 100 CY).	
ASSURANCE AMOUNT:	\$99,960
ALL QUANTITIES LISTED ON THESE PLANS ARE ESTIMATES ONLY. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF THE QUANTITIES AND BASE THEIR BIDS ON THEIR ESTIMATES.	

GRADING SPECIFICATIONS

- EXCAVATION AND GRADING OF THIS SITE IS CLASSIFIED AS "ENGINEERED GRADING" PER 2015 I.B.C. AND WILL BE PERFORMED ACCORDINGLY.
- THE CONTRACTOR WILL RETAIN A SOILS ENGINEER DURING CONSTRUCTION TO INSPECT PROGRESS OF CONSTRUCTION, CONCERNING PREPARATION OF GROUND TO RECEIVE FILLS, TESTING AND REQUIRED COMPACTION STABILITY OF ALL FINISH SLOPES INCLUDING CUT SLOPES.
- COMPACTION SHALL COMPLY WITH M.A.G. SECTION 601 AND PROVISIONS AS SET FORTH IN THE SOILS REPORT.
- BEARING MATERIALS FOR FILL RESIDENCE PAD IF NATIVE MATERIAL IS USED. LARGE ROCK FRAGMENTS MUST BE REMOVED THAT ARE IN EXCESS OF SIX INCHES. REMAINING MATERIAL MUST BE SMALLER PARTICLES OF SAND AND ROCK THAT CAN BE COMPACTED INTO A DENSE CONDITION.  
MAXIMUM PARTICLE SIZE . . . . . 6 INCHES  
PERCENT PASSING NO. 4 SIEVE . . . . . 35% TO 70%  
PERCENT PASSING NO. 200 SIEVE . . . . . 25% MAX.  
PLASTICITY INDEX . . . . . 10% MAX.
- CUT-SLOPES: MAXIMUM ROCK CUT SLOPE TO BE 1.0 FEET HORIZONTAL TO 3.0 FEET VERTICAL PER GEOTECHNICAL STUDY.
- FILL SLOPES: MAXIMUM FILL SLOPE TO BE 2.0 FEET HORIZONTAL TO 1.0 FEET VERTICAL.
- COMPACTION FILL MATERIAL MUST BE PLACED ON LEVELED BENCHES CUT INTO UNDISTURBED EXISTING HILLSIDE. PLACE FILL IN HORIZONTAL LIFTS OF THICKNESS COMPATIBLE WITH THE COMPACTION EQUIPMENT USED. COMPACT TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM A.S.T.M. DENSITY AT THE OPTIMUM MOISTURE CONTENT OF ± TWO PERCENT. THIS PERTAINS TO ALL ENGINEERED STRUCTURAL FILL SUPPORTING STRUCTURES AND INCLUDING FILL UNDER ANY OF THE RETAINING WALLS. COMPACTION TEST RESULTS SHALL BE SUBMITTED TO THE SOILS ENGINEER AND TOWN OF PARADISE VALLEY BUILDING AND SAFETY DEPARTMENT.
- ANY RETAINING WALLS ADJACENT TO THE PROPERTY LINES WILL BE UNDER THE SCOPE OF SPECIAL INSPECTION BY THE SOILS ENGINEER. THE DEVELOPER SHALL NOTIFY THE ADJOINING PROPERTY OWNERS IN WRITING, TEN DAYS PRIOR TO START OF CONSTRUCTION ON THESE WALLS PER SECTION 2903-B OF IBC. THE DEVELOPER WILL HAVE TO PROVIDE MEANS OF PROTECTION OF ADJACENT PROPERTY WHILE THIS WORK IS UNDER CONSTRUCTION.
- ALL EXPOSED CUT AND FILL SHALL BE TREATED WITH AN APPROVED AGING AGENT TO MINIMIZE TO VISUAL CONTINUITY.
- NO CERTIFICATE OF OCCUPANCY SHALL BE ISSUED UNTIL ALL HILLSIDE STIPULATIONS AND ALL TOWN CODE REQUIREMENTS ARE COMPLIED INCLUDING, BUT NOT LIMITED TO LANDSCAPING, GROUND RESTORATION, FIRE FLOW, FIRE SAFETY AND ALL ONSITE AND OFFSITE IMPROVEMENTS.
- ALL OUTDOOR LIGHTING SHALL BE IN CONFORMANCE WITH ARTICLE XXII OF THE TOWN ZONING ORDINANCE.
- ALL EXCESS FILL MATERIAL SHALL BE REMOVED FROM THE SITE WITH NO NEW SPILL SLOPES.
- THE USE OF HYDRAULIC RAM HAMMERS, OR OTHER HEAVY EQUIPMENT USED TO CUT THROUGH ROCK, INCLUDING MACHINERY WITH AUDIBLE BACK UP WARNING DEVICES SHALL BE LIMITED TO USE BETWEEN THE HOURS OF 7:00AM OR SUNRISE, WHICHEVER IS LATER, AND 6:00PM OR SUNSET, WHICHEVER IS EARLIER, MONDAY THROUGH FRIDAY, WITH LIMITED WORK ON SATURDAY AND NO WORK ON SUNDAY OR LEGAL HOLIDAYS.
- CONSTRUCTION STAKING AND/OR FENCING SHALL BE PLACED AROUND THE CONSTRUCTION SITE SO AS TO PROTECT THE UNDISTURBED NATURAL AREAS.

DRAINAGE STATEMENT

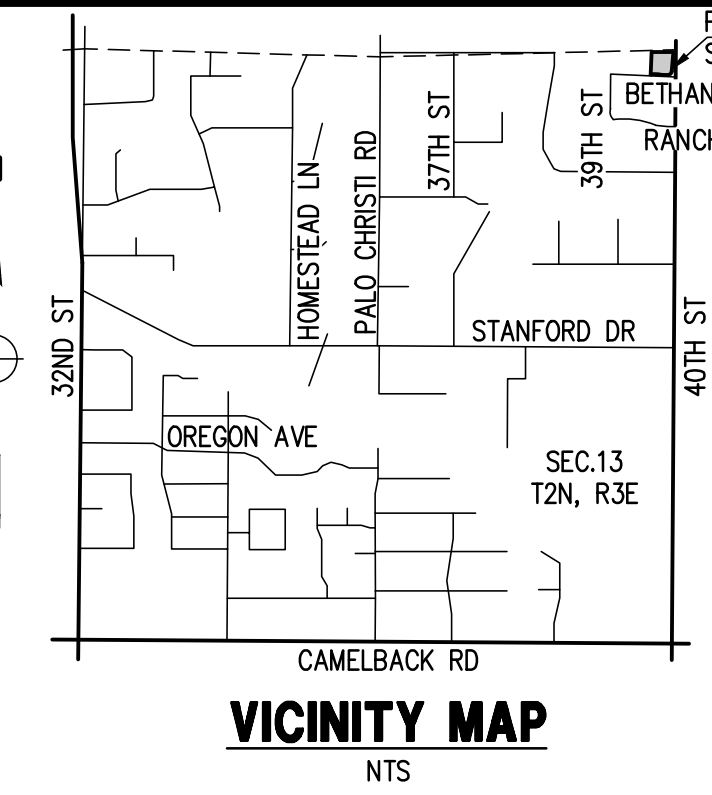
- ULTIMATE STORM OUTFALL IS LOCATED AT THE SOUTHEASTERLY PROPERTY CORNER AT ELEVATION OF 1295.75.
- NEW SINGLE FAMILY RESIDENCE, NEW GARAGE, NEW GUEST HOUSE, NEW DRIVEWAY, NEW POOL & SPA AND SITE IMPROVEMENTS ARE PROPOSED WITH THIS PROJECT.
- PROPOSED DEVELOPMENT DOES NOT IMPACT DRAINAGE CONDITIONS OF ADJOINING LOTS.
- HISTORIC DRAINAGE PATTERNS ARE RESTORED AND PRESERVED.
- THE MINIMUM FINISH FLOOR ELEVATIONS SHOWN ARE SAFE FROM INUNDATION DURING A 100-YEAR PEAK RUN-OFF EVENT IF CONSTRUCTED PER THE APPROVED CIVIL PLANS.
- PROPOSED STORM DRAIN SYSTEM SHALL BE INSPECTED AND CLEANED FROM DEBRIS AND SILT AFTER EVERY MAJOR STORM EVENT.
- CHECK DAMS, RIPRAP AND BOULDERS ARE SPECIFIED AT ALL POINTS OF DISCHARGE TO MITIGATE EROSION AND TO CONVERT CONCENTRATED FLOWS BACK TO SHEET FLOWS.
- ON-SITE RETENTION IS PROVIDED FOR THE FIRST FLUSH STORM EVENT FOR THE LIMITS OF DISTURBANCE.

PROJECT DESCRIPTION

NEW SINGLE FAMILY RESIDENCE, NEW ATTACHED GARAGE, NEW CASITA, NEW DRIVEWAY, NEW POOL & SPA AND SITE IMPROVEMENTS WITH ON-SITE RETENTION.

SHEET INDEX

- C-1 - COVER SHEET
- C-2 - PRELIMINARY IMPROVEMENT PLAN DETAILS
- C-3 - STORM DRAIN PLAN CROSS SECTIONS DETAILS



ARCHITECT

MATTHEW THOMAS ARCHITECTURE, LLC  
PO BOX 27851  
SCOTTSDALE, AZ 85255  
P: 602-301-3618  
F: 602-467-3018  
E: MATTH@MARCHITECTURE.COM

SITE DATA

APN: 170-01-006  
ADDRESS: 3924 E BETHANY HOME RD., PARADISE VALLEY, AZ 85253  
ZONING: R-43  
LOT AREA: 43,970 S.F. (1,009 AC.)  
OS #: 20-36  
MAIN HOUSE:  
MAIN LVL LIVABLE 5,334 SF  
UPPER LVL LIVABLE 429 SF  
MAIN LVL. NON-LIVABLE 1,834 SF  
UPPER LVL. NON-LIVABLE 14 SF  
COVERED PATIOS 587 SF  
UPPER LVL. WALK DECK 114 SF  
(INCL'D. W/ COVRD. PATIO TOTAL BELOW)  
DETACHED CASTA:  
LIVABLE 1,092 SF  
NON-LIVABLE 56 SF  
COVERED PATIOS 0 SF  
MISC. TRELLISES 229 SF  
ROOF EAVES 0 SF  
TOTAL LIVABLE 6,855 SF  
TOTAL NON-LIVABLE 1,904 SF  
TOTAL COVRD. PATIO 701 SF  
TOTAL COV'RG. 9,889 SF  
LOT COVRG. 22.03%

LAND SURVEYOR

J.L.D. ENGINEERING, PPC  
2822 S BUCKSKIN WAY,  
CHANDLER, AZ 85286  
P: 602-790-7958  
CONTACT: REED DALBIK, PE  
REED@JLD-ENGINEERING.COM

NOTE: CIVIL ENGINEERING DESIGN PRESENTED HEREIN IS BASED ON THE TOPOGRAPHIC SURVEY MAP, PROVIDED IN AN ELECTRONIC FORMAT BY SURVEYOR LISTED ABOVE.  
LAND DEVELOPMENT GROUP, LLC ASSUMES NO LIABILITY FOR ERRORS AND OMISSIONS SHOWN ON THE SURVEY AND INFORMATION PROVIDED BY OTHERS.

LEGAL DESCRIPTION

LOT 5, OF ARROYO HEIGHTS, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 110 OF MAPS, PAGE 50.

FLOOD INSURANCE RATE MAP (FIRM) DATA

COMMUNITY #	PANEL #	SUFFIX L	BASE FLOOD ELEVATION
040049	1765 OF 4425		
MAP #	PANEL DATE	FIRM INDEX DATE	ZONE
04013C	09/19/2020	11/04/2015	X*

- \*AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- \*AREAS OF 0.2% ANNUAL CHANCE FLOOD:  
AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE;  
AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD

FINISH FLOOR CERTIFICATION

I HEREBY CERTIFY THAT FINISHED FLOOR ELEVATIONS SHOWN ON THE PLAN OF 1484.85 IS MINIMUM OF 12" ABOVE THE 100-YEAR STORM ELEVATION OF 1483.85 ACCORDING TO THE TOWN OF PARADISE VALLEY CODE OF ORDINANCE.

*Nick Prodanov*

REGISTERED CIVIL ENGINEER 10/06/25

APPROVAL

THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH TOWN OF PARADISE VALLEY REQUIREMENTS PRIOR TO ISSUANCE OF PERMIT. THE TOWN NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. THIS COMPLIANCE APPROVAL SHALL NOT PREVENT THE TOWN ENGINEER FROM REQUIRING CORRECTIONS OF ERRORS OR OMISSIONS IN THE PLANS TO BE FOUND IN VIOLATION OF LAWS OR ORDINANCES.

TOWN ENGINEER  
TOWN OF PARADISE VALLEY

DATE



DATE: 10/06/25  
JOB: 2503070  
DESIGNED BY: NP  
VERSION: 1.3  
DRAWN BY: ZA  
CHECKED BY: JJ  
PLOT DATE: 10/06/25

SCALE: N.T.S.

REVISIONS:

PRELIMINARY  
GRADING & DRAINAGE PLAN  
COVER SHEET

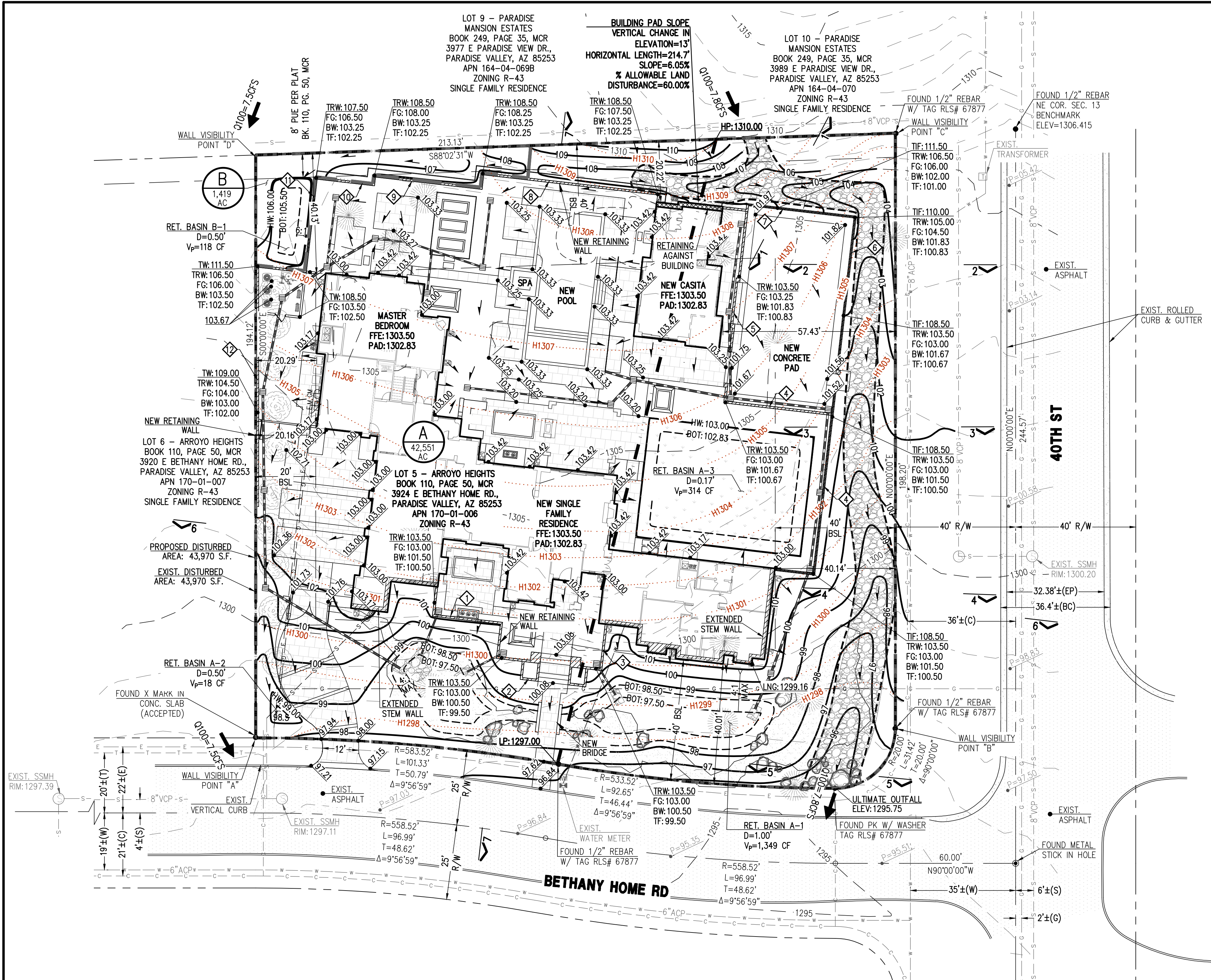
WOLFSWINKEL RESIDENCE  
3924 E BETHANY HOME RD.,  
PARADISE VALLEY, AZ 85253

P 602 869 1984 | F 602 443 9482  
8808 N CENTRAL AVE., SUITE 208  
PHOENIX, AZ 85020  
PHOENIX@LDGSG.COM

Land  
DEVELOPMENT GROUP

REGISTERED PROFESSIONAL ENGINEER  
11006  
NICKOLA  
J. PRODANOV  
LICENSED IN U.S.A.  
C-1  
1 OF 3





# RETENTION CALCULATIONS

ON-SITE RETENTION FOR THE PRE VS. POST DEVELOPMENT RUNOFF FROM 100-YEAR, 2-HOUR STORM EVENT											
V=DxAx(Cw,post-Cw,pre)/12   D - RAINFALL DEPTH = 2.22"   A - TRIBUTARY AREA, SF   Cw - WEIGHTED RUNOFF COEFFICIENT											
Vf=(DfxAxCw,post)/12   Df - RAINFALL DEPTH = 0.5" FIRST FLUSH   A - TRIBUTARY AREA, SF   Cw - WEIGHTED RUNOFF COEFFICIENT											
DRAINAGE AREA	AREA	RUNOFF COEFFICIENT	VOLUME REQUIRED PRE VS POST	VOLUME REQUIRED FIRST FLUSH	RETENTION BASIN ID	CONTOUR ELEVATION		CONTOUR AREA	DEPTH	VOLUME PROVIDED	AS-BUILT VOLUME PROVIDED
	S.F.		C.F.	C.F.							
A	42,551	0.07	551	1,436 (GOVERNS)	A1	HW	98.50	1,850	1.00	1,349	
						BOTTOM	97.50	848			
					A2	HW	99.00	61	0.50	18	
						BOTTOM	98.50	9			
					A3	HW	103.00	2,197	0.17	314	
						BOTTOM	102.83	1,498			
TOTAL A			551	1,436						1,681	
B	1,419	0.00	0	41 (GOVERNS)	B1	HW	106.00	339	0.50	118	
						BOTTOM	105.50	132			
TOTAL B			0	41						118	
TOTAL			551	1,477						1,798	

(1) RAINFALL DEPTH IS PER NOAA ATLAS 14, VOLUME 1, VERSION 5.

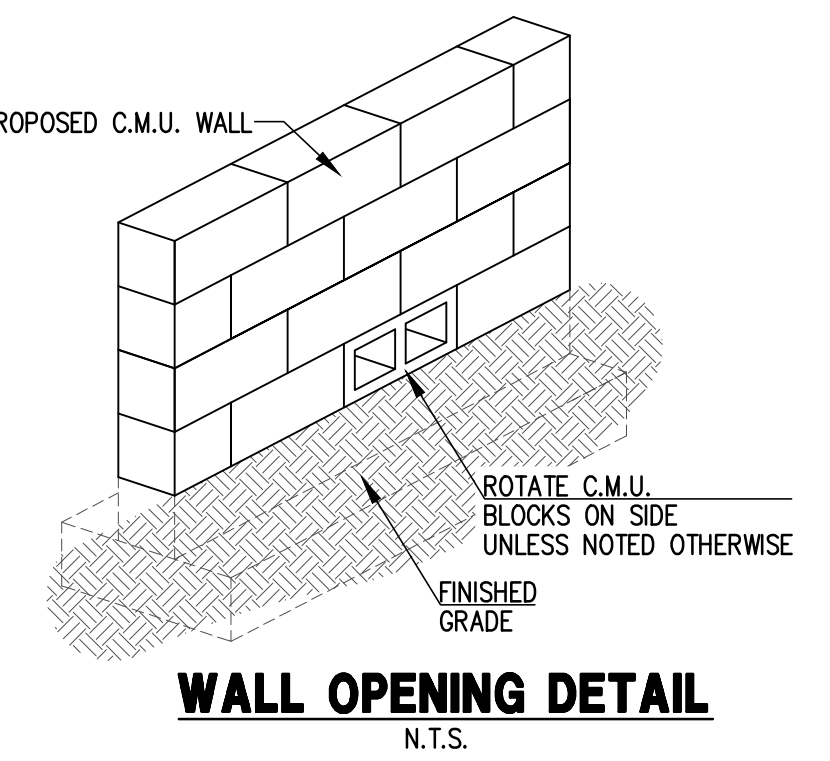
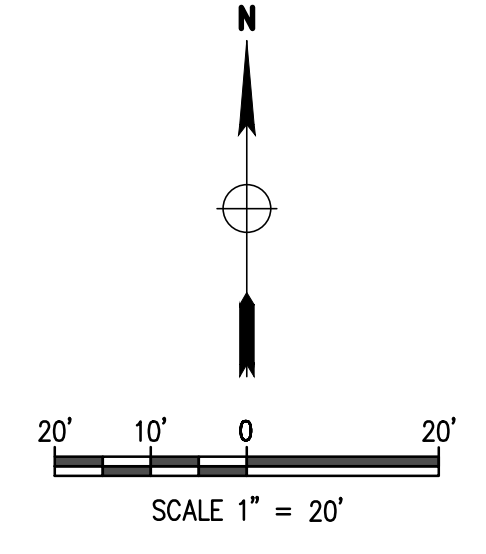
WEIGHTED RUNOFF COEFFICIENT, C <sub>w</sub> PRE- DEVELOPMENT AREA A				WEIGHTED RUNOFF COEFFICIENT, C <sub>w</sub> POST- DEVELOPMENT AREA A			
SURFACE TYPE	RUNOFF COEFFICIENT	AREA	C*AREA	SURFACE TYPE	RUNOFF COEFFICIENT	AREA	C*AREA
PAVEMENT & ROOF	0.95	7,782	7,393	PAVEMENT & ROOF	0.95	19,384	18,415
NATIVE HILLSIDE	0.70	34,769	24,338	NATIVE HILLSIDE	0.70	23,167	16,217
TOTAL		42,551	31,731	TOTAL		42,551	34,632
C <sub>w</sub> = C * AREA / TOTAL AREA			0.75	C <sub>w</sub> = C * AREA / TOTAL AREA			0.81

WEIGHTED RUNOFF COEFFICIENT, C <sub>w</sub> PRE- DEVELOPMENT AREA B				WEIGHTED RUNOFF COEFFICIENT, C <sub>w</sub> POST- DEVELOPMENT AREA B			
SURFACE TYPE	RUNOFF COEFFICIENT	AREA	C*AREA	SURFACE TYPE	RUNOFF COEFFICIENT	AREA	C*AREA
PAVEMENT & ROOF	0.95	0	0	PAVEMENT & ROOF	0.95	0	0
NATIVE HILLSIDE	0.70	1,419	993	NATIVE HILLSIDE	0.70	1,419	993
TOTAL		1,419	993	TOTAL		1,419	993
C <sub>w</sub> = C * AREA / TOTAL AREA			0.70	C <sub>w</sub> = C * AREA / TOTAL AREA			0.70

## RETAINING WALL TABLE

ID NUMBER	MAX. HEIGHT	LENGTH	VISIBLE WALL LENGTH			
			A	B	C	D
1	2	32.60	32.60			
2	3	31.50	31.50			
3	3	31.17		31.17		
4	2	76.17		76.17		
5	1.67	48.50				
6	3.17	52.25		52.25	52.25	
7	4.5	46.40			46.40	
8	5.25	61.67			61.67	61.67
9	5.25	40.67			40.67	40.67
10	4.25	22.10				22.10
11	4.25	47.50				47.50
12	3	80.00	80.00			80.00
TOTAL		570.53	144.10	191.09	200.99	251.94

FOR LOCATIONS IDENTIFIED WITH KEYNOTE  
MAXIMUM LENGTH OF RETAINING WALLS  
VISIBLE FROM ANY POINT ON THE PROPERTY  
LINE = 251.94 < 300'.  
ALL WALL LENGTHS LISTED ABOVE ARE FOR  
PERMITTING PURPOSES ONLY. CONTRACTOR  
IS RESPONSIBLE FOR VERIFYING ACCURACY  
OF WALL QUANTITIES AS SHOWN. REFER TO  
ARCHITECTURAL AND STRUCTURAL PLANS  
AND DETAILS FOR WALL CONSTRUCTION,  
HEIGHT AND FINISH.



WALL OPENING DETAIL  
N.T.S.

PERCENT PASSING	SIZE	D <sub>50</sub> CLASS, INCHES			
100 TO 90	2.0 D <sub>50</sub>	4	6	8	12
85 TO 70	1.5 D <sub>50</sub>	6	8	12	24
50 TO 30	1.0 D <sub>50</sub>	4	6	8	12
15 TO 5	0.67 D <sub>50</sub>	3	4	5	8
5 TO 0	0.35 D <sub>50</sub>	1	2	3	4

RIP-RAP GRADATION TABLE

Contact Arizona 811 at least two full  
working days before you begin excavation  
**ARIZONA811**  
Call 811 or click Arizona811.com

DATE: 10/06/25  
JOB: 2503070  
DESIGNED BY: NP  
DRAWN BY: ZA  
CHECKED BY: JJ  
PLOT DATE: 10/06/25

REVISIONS:  
DATE: SCALE: 1"=20'

PRELIMINARY  
GRADING & DRAINAGE  
IMPROVEMENT PLAN  
DETAILS

WOLFENKEL RESIDENCE  
3924 E BETHANY HOME RD.,  
PARADISE VALLEY, AZ 85253

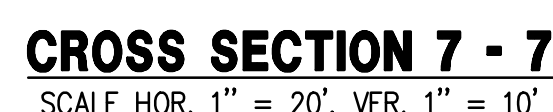
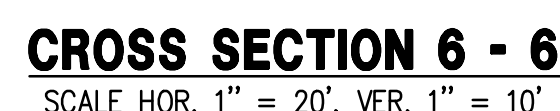
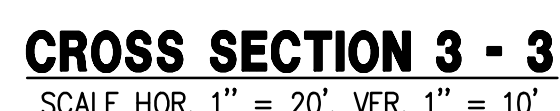
P 602.889.1984 | F 602.445.9482  
8808 N CENTRAL AVE., SUITE 288  
PHOENIX, AZ 85020  
PHOENIX@LDGEN.COM

Land  
DEVELOPMENT GROUP

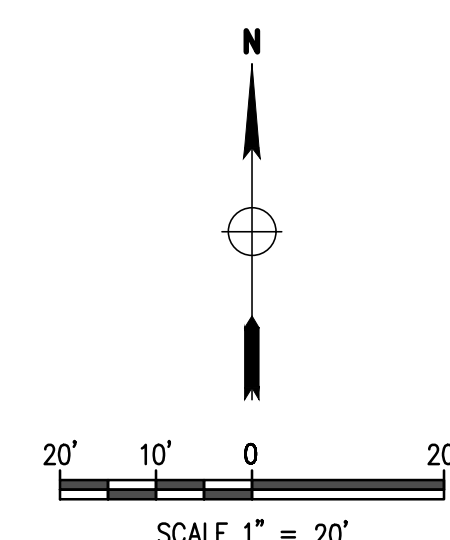
REGISTERED PROFESSIONAL ENGINEER  
NICKOLA J. PRODANOV  
No. 41005  
STATE OF ARIZONA

C-2  
2 OF 3





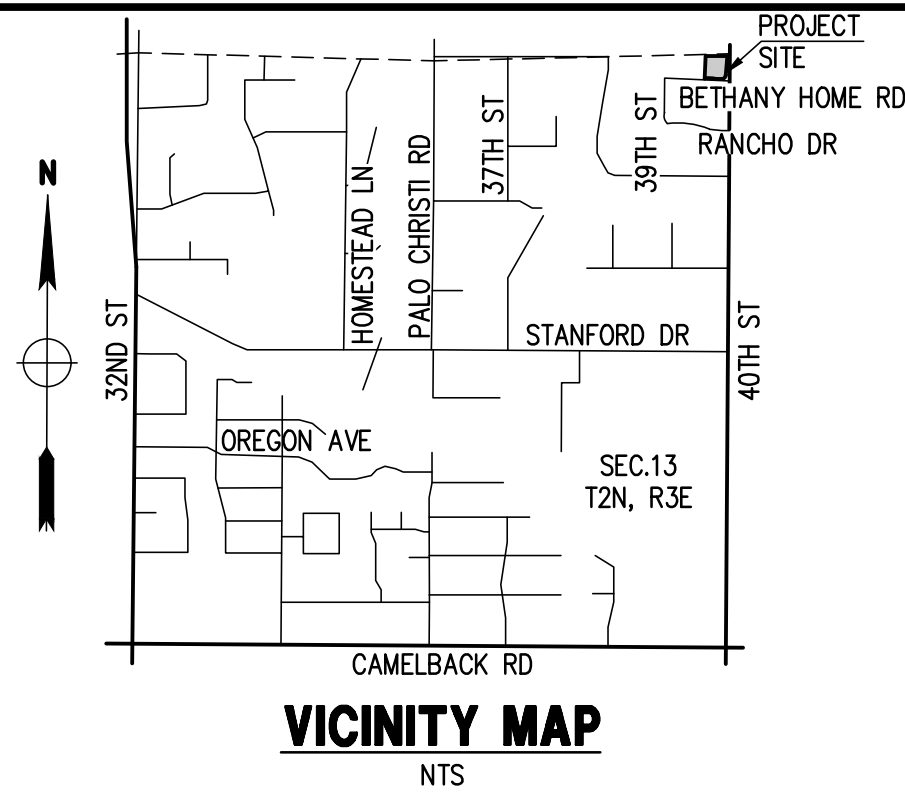
50. INSTALL 6" PVC STORM DRAIN PIPE, INCLUDING ALL FITTINGS PER MANUFACTURER'S SPECIFICATIONS, DETAILS AND INSTALLATION INSTRUCTIONS.
51. INSTALL 8" PVC STORM DRAIN PIPE, INCLUDING ALL FITTINGS PER MANUFACTURER'S SPECIFICATIONS, DETAILS AND INSTALLATION INSTRUCTIONS.
52. INSTALL NDS 120206B 12" CATCH BASIN WITH VERTICAL RISER AND 12" GRATE, OR APPROVED EQUAL.
53. INSTALL NDS SUL CHANNEL 9206 TRENCH DRAIN SYSTEM, COMPLETE WITH ALL REQUIRED FITTINGS OR APPROVED EQUAL. REFER TO MANUFACTURER'S SPECIFICATIONS, DETAILS AND INSTALLATION INSTRUCTIONS. CONNECT NEW TRENCH DRAIN TO NEW STORM DRAIN PIPE WITH OUTLET ADAPTER AND ALL REQUIRED FITTINGS.
54. INSTALL SLOTTED/TRENCH DRAIN END/BOTTOM OUTLET CONNECTION TO STORM DRAIN PIPE INCLUDING ALL FITTINGS PER MANUFACTURER'S SPECIFICATIONS, DETAILS AND INSTALLATION INSTRUCTIONS.
55. STORM DRAIN PIPE TO DAYLIGHT AT FINISHED GRADE, SEE DETAIL ON THIS SHEET.





**AERIAL MAP/HISTORIC TOPOGRAPHY EXHIBIT**  
**WOLFSWINKEL RESIDENCE**  
**3924 E BETHANY HOME RD., PARADISE VALLEY, AZ 85253**  
**LOT 5 - ARROYO HEIGHTS**

A SUBDIVISION PLAT RECORDED IN BOOK 110 OF MAPS, PAGE 50, MCR.,  
LOCATED IN A PORTION OF THE NE 1/4 OF THE NE 1/4 OF THE NE 1/4 OF SECTION 13, T.2N, R.3E  
OF THE GILA & SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA



**OWNER**  
ASHTON A. WOLFSWINKEL AND  
SARAH BESS WOLFSWINKEL  
3924 E BETHANY HOME RD.,  
PARADISE VALLEY, AZ 85253

**ARCHITECT**  
DUNCAN DESIGN GROUP, LLC  
3723 W BARNES LN.,  
PHOENIX, AZ 85051  
P: 602-841-1284  
F: 602-841-7517  
DUNCANDESIGNGROUPPHX@GMAIL.COM

**SITE DATA**  
APN: 170-01-006  
ADDRESS: 3924 E BETHANY HOME RD.,  
PARADISE VALLEY, AZ 85253  
ZONING: R-43  
LOT AREA: 43,970 S.F. (1.009 AC.)  
QS #: 20-36

**LANDSCAPE ARCHITECT**  
GREEKY PICKETT  
7144 E STETSON DR, # 205,  
SCOTTSDALE, AZ 85251  
CONTACT: KATRIN SQUIRES  
P: 480-609-0009  
KSQUIRES@GREEKYPICKETT.COM

**LAND SURVEYOR**  
J.L.D. ENGINEERING, P.C.  
2822 S BUCKSKIN WAY,  
CHANDLER, AZ 85286  
P: 602-790-7958  
CONTACT: REED DALBIK, PE  
REED@JLD-ENGINEERING.COM

**CIVIL ENGINEER**  
LAND DEVELOPMENT GROUP, LLC  
8808 N CENTRAL AVE, SUITE 288  
PHOENIX, AZ 85020  
CONTACT: NICK PRODANOV, PE  
P: 602 889 1984

NOTE: CIVIL ENGINEERING DESIGN PRESENTED HEREIN IS BASED ON THE  
TOPOGRAPHIC SURVEY MAP, PROVIDED IN AN ELECTRONIC FORMAT BY  
SURVEYOR LISTED ABOVE.  
LAND DEVELOPMENT GROUP, LLC ASSUMES NO LIABILITY FOR ERRORS AND  
OMMISSIONS SHOWN ON THE SURVEY AND INFORMATION PROVIDED BY OTHERS.

**LEGAL DESCRIPTION**

LOT 5, OF ARROYO HEIGHTS, ACCORDING TO THE PLAT OF RECORD IN THE  
OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA,  
RECORDED IN BOOK 110 OF MAPS, PAGE 50.

**BENCHMARK**

FOUND 1/2" REBAR NE COR. SEC. 13 HAVING AN ELEVATION OF  
1306.415, CITY OF PHOENIX DATUM, NAVD 88.

**FLOOD INSURANCE RATE MAP (FIRM) DATA**

COMMUNITY #	PANEL #	SUFFIX	BASE FLOOD ELEVATION
040049	1765 OF 4425	L	N/A
MAP #	PANEL DATE	FIRM INDEX DATE	ZONE
04013C	09/19/2020	11/04/2015	X*

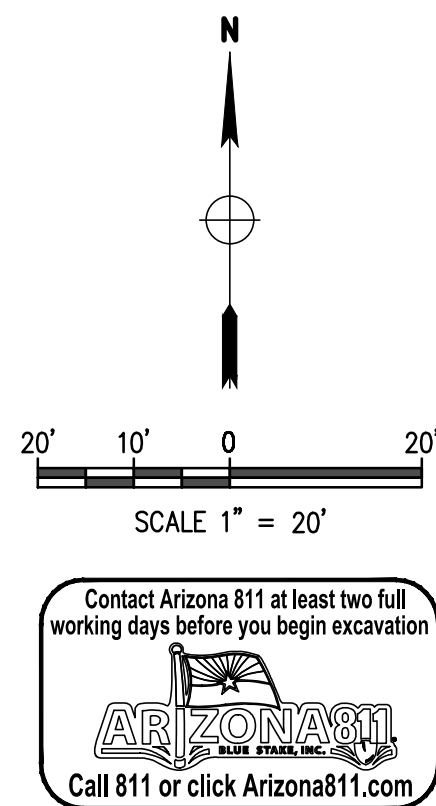
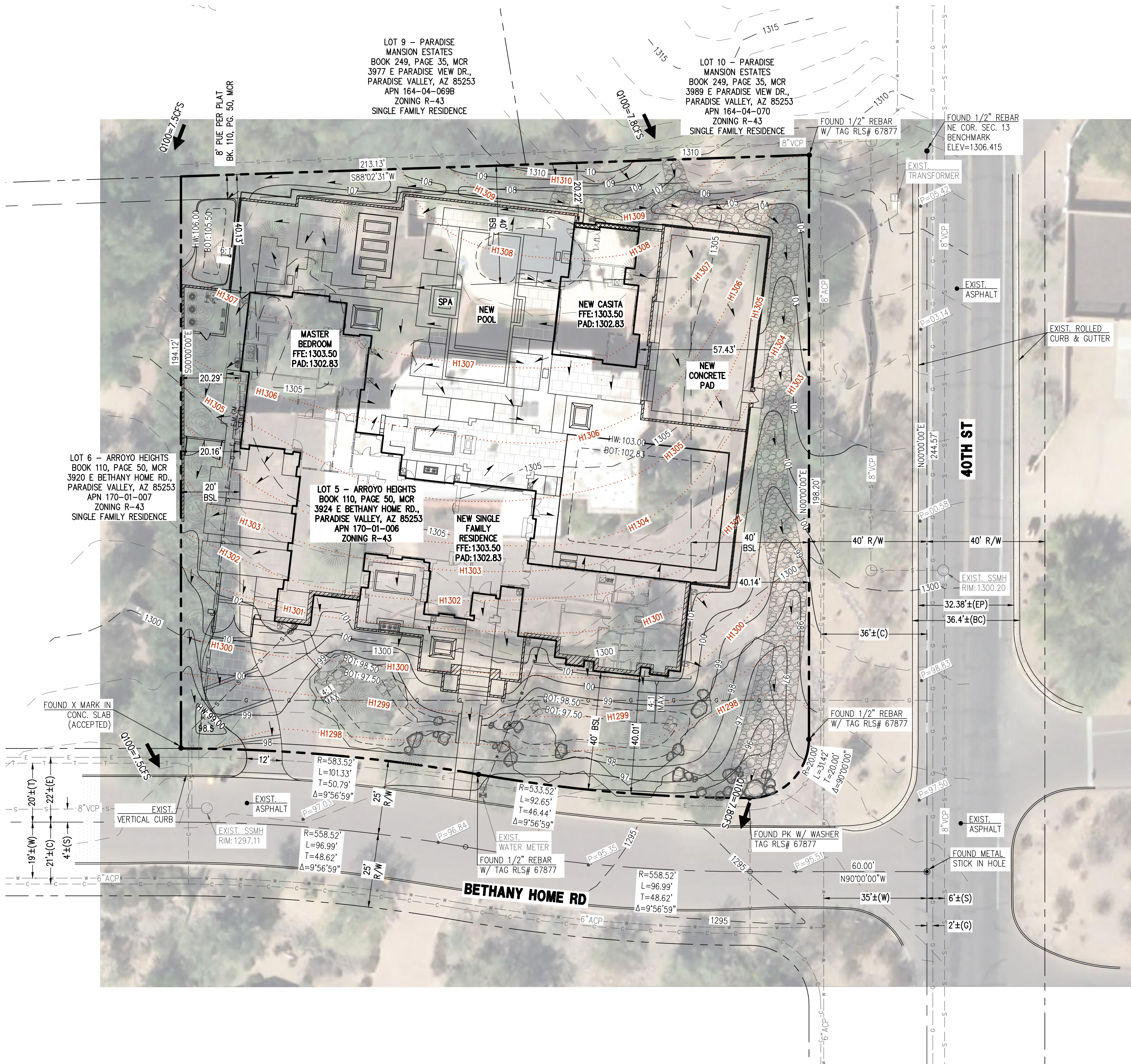
\*AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.  
\*AREAS OF 0.2% ANNUAL CHANCE FLOOD;  
AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE;  
AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD

**UTILITIES**

WATER: CITY OF PHOENIX  
SANITARY SEWER: CITY OF PHOENIX  
ELECTRIC: SRP  
TELEPHONE: CENTURY LINK, COX COMMUNICATIONS  
NATURAL GAS: SOUTHWEST GAS  
CABLE TV: CENTURY LINK, COX COMMUNICATIONS

- LEGEND**
- BRASS CAP FLUSH
  - FOUND REBAR OR AS NOTED
  - CALCULATED POINT
  - PROPERTY LINE
  - EASEMENT LINE
  - MONUMENT LINE
  - WATER METER
  - MAILBOX
  - SEWER MANHOLE
  - TRANSFORMER
  - CATV, PHONE
  - SEWER LINE
  - GAS LINE
  - WATER LINE
  - ELECTRIC LINE
  - TELECOMM. LINE
  - COMM. LINE
  - EXISTING CONTOUR
  - EXIST. DRAINAGE FLOW
  - EXIST. SPOT ELEVATION
  - CITRUS TREE
  - PALO VERDE

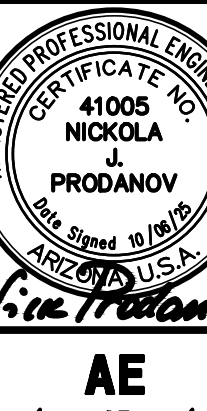
- ABBREVIATIONS**
- BC BACK OF CURB
  - BSL BUILDING SETBACK LINE
  - (C) CALCULATED
  - EG EXISTING GRADE
  - EL, ELEV ELEVATION
  - EP EDGE OF PAVEMENT
  - ESMT EASEMENT
  - EX, EXIST. EXISTING
  - FG FINISH GRADE
  - G GUTTER, GAS
  - INV INVERT
  - (M) MEASURED
  - MCR MARICOPA COUNTY RECORDER
  - P, PWM PAVEMENT
  - PUE PUBLIC UTILITY EASEMENT
  - REC RECORDED
  - (R), REC. RADIUS
  - R/W RIGHT OF WAY
  - T TANGENT, TELEPHONE
  - W WEST, WATERLINE
  - WM WATER METER



**AERIAL MAP  
HISTORIC TOPOGRAPHY  
EXHIBIT**

**WOLFSWINKEL RESIDENCE  
3924 E BETHANY HOME RD.,  
PARADISE VALLEY, AZ 85253**

P 602 889 1984 | F 602 445 9482  
8808 N CENTRAL AVE., SUITE 288  
PHOENIX, AZ 85020  
PHOENIX@LDGNG.COM



**AE**  
1 OF 1



STORM WATER POLLUTION PREVENTION PLAN  
WOLFSWINKEL RESIDENCE  
3924 E BETHANY HOME RD., PARADISE VALLEY, AZ 85253  
LOT 5 - ARROYO HEIGHTS  
A SUBDIVISION PLAT RECORDED IN BOOK 110 OF MAPS, PAGE 50, MCR.,  
LOCATED IN A PORTION OF THE NE 1/4 OF THE NE 1/4 OF THE NE 1/4 OF SECTION 13, T.2N, R.3E  
OF THE GILA & SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA

GENERAL NOTES

1. THIS PROJECT IS SUBJECT TO THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS FOR CONSTRUCTION SITES UNDER THE ENVIRONMENTAL PROTECTION AGENCY (EPA) GENERAL PERMIT FOR ARIZONA. OWNERS, DEVELOPERS, ENGINEERS, AND/OR CONTRACTORS ARE REQUIRED TO PREPARE ALL DOCUMENTS REQUIRED BY THIS REGULATION, INCLUDING BUT NOT LIMITED TO STORM WATER POLLUTION PROTECTION PLAN (SWPPP), NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT).
2. A COPY OF THE APPROVED GRADING AND DRAINAGE PLAN FOR THIS PROJECT, TOGETHER WITH A COPY OF THE NOTICE OF INTENT (NOI) AND THIS STORM WATER POLLUTION PROTECTION PLAN (SWPPP), SHALL BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW. THOSE ELEMENTS OF THE GRADING AND DRAINAGE PLAN PERTINENT TO OR REFERENCED ON THE SWPPP SHALL BE CONSIDERED A PART OF THE SWPPP.
3. COMMUNITY DEVELOPMENT DEPARTMENT'S FIELD INSPECTION GROUP SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON-SITE AND/OR OFF-SITE CONSTRUCTION BEGINS, AT (480) 348-3692.
4. 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. ALL PERMITTEES MUST SUBMIT A TENTATIVE CONSTRUCTION SCHEDULE AND COMPLETION TIME.
5. 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 SWPPP CONTROLS AND NOTE ANY EROSION PROBLEM AREAS. THE OPERATOR'S REPORT IS TO BE SUBMITTED TO THE DEVELOPMENT SERVICES DEPARTMENT PROJECT ENGINEERING DIVISION CONSTRUCTION INSPECTOR FOR REVIEW AND APPROVAL. FACILITIES SHALL BE MAINTAINED AS NEEDED TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY SILTATION 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.
6. THE PERMITTEE 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.
7. THE PERMITTEE SHALL FILE A NOTICE OF TERMINATION (NOT) AFTER COMPLETION OF CONSTRUCTION AND PLACEMENT OF FINAL LANDSCAPE MATERIALS. THE NOT IS TO BE SUBMITTED TO THE DEVELOPMENT SERVICES DEPARTMENT PROJECT ENGINEERING INSPECTOR TO FINAL THE SWPPP PERMIT.
8. THE PERMITTEE SHALL SAVE ALL RECORDS, INCLUDING THE NOI, SWPPP, NOT, AND INSPECTION REPORTS, ON FILE FOR A MINIMUM OF THREE YEARS FROM THE DATE OF FILING THE NOT.
9. 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 DEVELOPMENT SERVICES DEPARTMENT PROJECT ENGINEERING INSPECTOR.
10. 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-LADEN 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.
11. THE CONTRACTOR'S NOI MUST BE RECEIVED PRIOR TO THE SWPPP PERMIT BEING ISSUED. THE CONTRACTOR THAT WILL BE PULLING THE G&D PERMIT MUST HAVE THE SWPPP PERMIT ISSUED IN THEIR NAME.
12. 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. THE NATURAL FLOW OF RAINWATER AND OTHER SURFACE DRAINAGE FROM THE PROPERTY MAY NOT BE ALTERED IN ANY WAY.
13. CONTRACTOR SHALL PROVIDE STABILIZATION FABRIC TO ALL SLOPES EQUAL TO OR GREATER THAN 3H:1V.
14. STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES WILL ENTER AND EXIT THE CONSTRUCTION SITE.
15. REFER TO SHEET 2 FOR STANDARD DETAILS OF BEST MANAGEMENT PRACTICES.
16. WHEN DEEMED NECESSARY, A 6-FOOT HIGH CHAIN LINK FENCE MUST BE INSTALLED AROUND THE CONSTRUCTION AREA TO PREVENT ANY POTENTIAL SAFETY HAZARD FOR THE PUBLIC.

SWPPP KEY-NOTES

1. USE EXISTING PAVERS DRIVEWAY FOR CONSTRUCTION ENTRANCE.
2. DUST CONTROL PER FCDMC BMP-43 THROUGH BMP-46
3. SILT FENCE PER FCDMC BMP-63 THROUGH BMP-68, EPA STANDARDS AND DETAILS, AND DETAILS ON SHEET SP-2 OR STRAW WATTLES PER MARICOPA COUNTY EROSION CONTROL MANUAL SPC-1 ORGANIC FILTER BARRIER.
4. DESIGNATED CONCRETE WASHOUT VESSEL PER FCDMC BMP-99 THROUGH BMP-100 AND DETAILS ON SHEET SP-2
5. DUMPSTER/TRASH CONTAINER
6. DESIGNATED PAINT/SOLVENT WASHOUT VESSEL PER FCDMC BMP-99 THROUGH BMP-100 AND DETAILS ON SHEET SP-2
7. DESIGNATED HAZARDOUS WASTE CONTAINMENT AREA. SEGREGATE POTENTIALLY HAZARDOUS WASTE FROM NON-HAZARDOUS CONSTRUCTION SITE WASTE. HAZARDOUS WASTES ARE NOT TO BE DISPOSED OF IN DUMPSTER AND SHALL BE HAULED TO AN APPROPRIATE DISPOSAL AND/OR RECYCLING FACILITY.
8. DROP INLET PROTECTION.
9. RETENTION/SEDIMENTATION BASIN.
10. ROCK OUTLET PROTECTION.

LEGEND

- XX PROPOSED CONTOUR
- SF SILT FENCE/STRAW WATTLES
- SCE STABILIZED CONSTRUCTION ENTRANCE
- W.A. DESIGNATED WASHOUT AREA
- DESIGNATED HAZARDOUS WASTE CONTAINMENT AREA
- TRASH CONTAINER

ABBREVIATIONS

- BC BACK OF CURB
- BSL BUILDING SETBACK LINE
- EG EXISTING GRADE
- EL ELEV
- EP EDGE OF PAVEMENT
- ESMT EASEMENT
- EX EXIST.
- FG FINISH GRADE
- G GUTTER, GAS
- MCR MARICOPA COUNTY RECORDER
- P, PVMT PAVEMENT
- PUE PUBLIC UTILITY EASEMENT
- R RADIUS
- R/W RIGHT OF WAY
- T TANGENT, TELEPHONE
- W WEST, WATERLINE
- WM WATER METER

UTILITIES

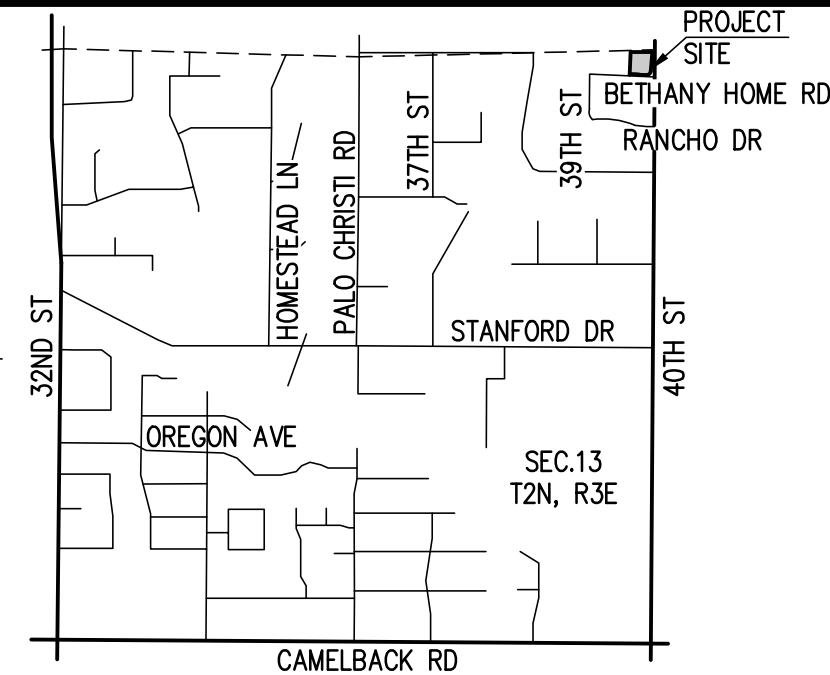
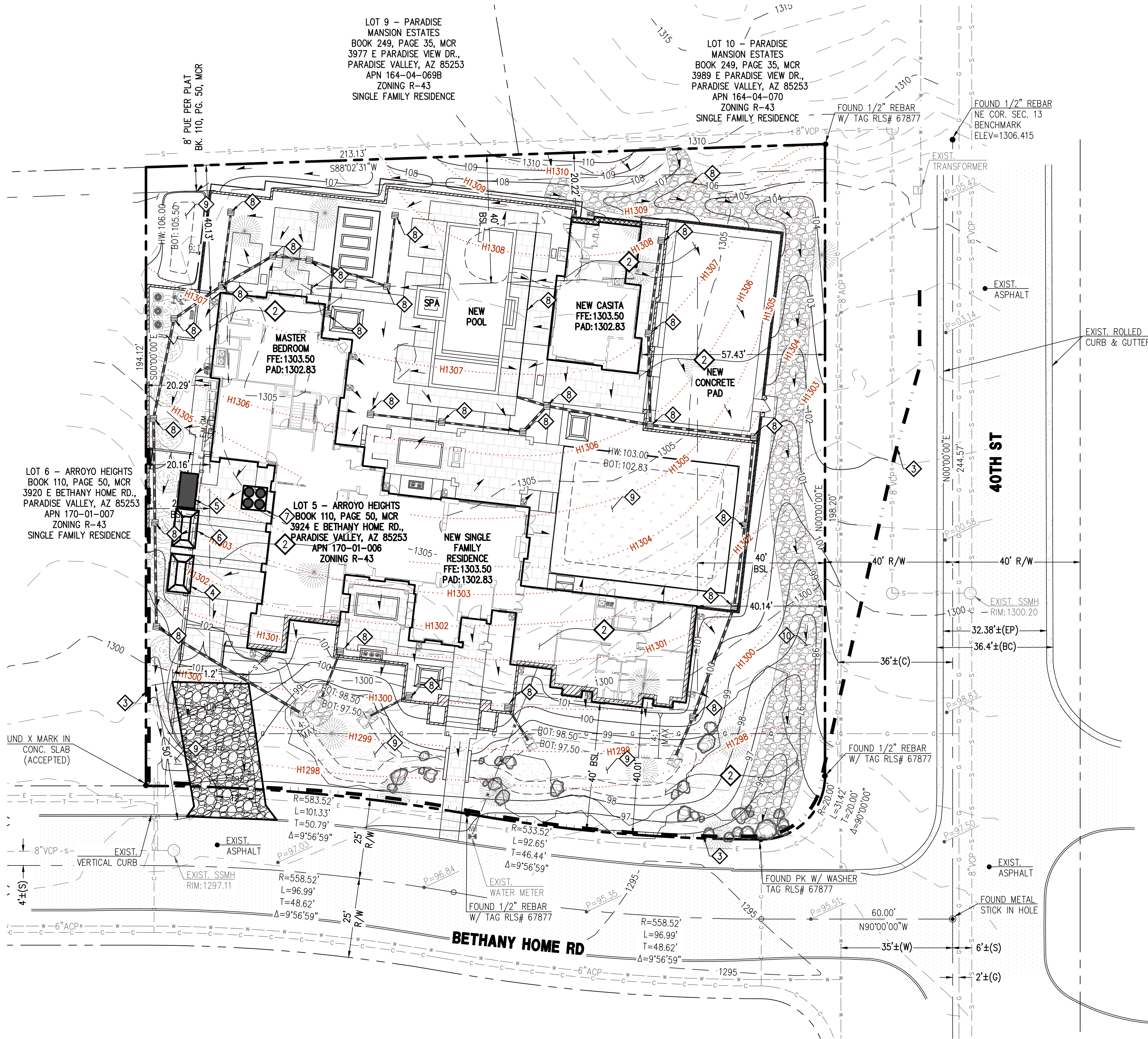
WATER: CITY OF PHOENIX  
SANITARY SEWER: CITY OF PHOENIX  
ELECTRIC: SRP  
TELEPHONE: CENTURY LINK, COX COMMUNICATIONS  
NATURAL GAS: SOUTHWEST GAS  
CABLE TV: CENTURY LINK, COX COMMUNICATIONS

SHEET INDEX

- SP1 - SWPPP PLAN  
SP2 - DETAILS

NOTE

1. NO WORK OF ANY KIND CAN COMMENCE UNTIL ALL STORM WATER POLLUTION BMP'S ARE IN PLACE AND INSPECTED BY THE TOWN. ONLY UNTIL THE TOWN HAS APPROVED THE STORM WATER BMP'S MAY ANY CONSTRUCTION BEGIN.
2. SEDIMENTATION CONTROL DEVICES (SILT BARRIERS) SHALL REMAIN IN PLACE AT ALL TIME. SEDIMENTATION CONTROL DEVICES SHALL BE KEPT IN GOOD REPAIR, INSPECTED MONTHLY, INSPECTED AFTER EACH RAIN EVENT, AND MAINTAINED AS NEEDED BY THE APPLICANT/OWNER.
3. SEDIMENTATION CONTROL DEVICE INSPECTION LOG SHALL BE MAINTAINED BY APPLICANT AND/OR OWNER AND MADE AVAILABLE TO THE TOWN UPON REQUEST.



VICINITY MAP  
NTS

OWNER

ASHTON A. WOLFSWINKEL AND  
SARAH BESS WOLFSWINKEL  
3924 E BETHANY HOME RD.,  
PARADISE VALLEY, AZ 85253

ARCHITECT

DUNCAN DESIGN GROUP, LLC  
3723 W BARNES LN.,  
PHOENIX, AZ 85051  
P: 602-841-1284  
F: 602-841-7517  
DUNCANDESIGNGROUPPHX@GMAIL.COM

SITE DATA

APN: 170-01-008  
ADDRESS: 3924 E BETHANY HOME RD.,  
PARADISE VALLEY, AZ 85253  
ZONING: R-43  
LOT AREA: 43,970 S.F. (1.009 AC.)  
QS #: 20-36

LANDSCAPE  
ARCHITECT

GREEY PICKETT  
7144 E STETSON DR, # 205,  
SCOTTSDALE, AZ 85251  
CONTACT: KATRIN SQUIRES  
P: 480-609-0009  
KSQUIRES@GREEYPICKETT.COM

LAND SURVEYOR

JLD ENGINEERING, PPC  
2822 S BUCKSKIN WAY,  
CHANDLER, AZ 85286  
P: 602-790-7958  
CONTACT: REED DALBIK, PE  
REED@JLD-ENGINEERING.COM

CIVIL ENGINEER

LAND DEVELOPMENT GROUP, LLC  
8808 N CENTRAL AVE, SUITE 288  
PHOENIX, AZ 85020  
CONTACT: NICK PRODANOV, PE  
P: 602 889 1984

NOTE: CIVIL ENGINEERING DESIGN PRESENTED HEREIN IS BASED ON THE TOPOGRAPHIC SURVEY MAP, PROVIDED IN AN ELECTRONIC FORMAT BY SURVEYOR LISTED ABOVE. LAND DEVELOPMENT GROUP, LLC ASSUMES NO LIABILITY FOR ERRORS AND OMISSIONS SHOWN ON THE SURVEY AND INFORMATION PROVIDED BY OTHERS.

LEGAL DESCRIPTION

LOT 5, OF ARROYO HEIGHTS, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 110 OF MAPS, PAGE 50.

BENCHMARK

FOUND 1/2" REBAR NE COR. SEC. 13 HAVING AN ELEVATION OF 1306.415, CITY OF PHOENIX DATUM, NAVD 88.

FLOOD INSURANCE RATE MAP (FIRM) DATA

COMMUNITY #	PANEL #	SUFFIX L	BASE FLOOD ELEVATION
040049	1765 OF 4425		N/A
MAP #	PANEL DATE	FIRM INDEX DATE	ZONE X*
04013C	09/19/2020	11/04/2015	

\*AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.  
\*AREAS OF 0.2% ANNUAL CHANCE FLOOD;  
AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE;  
AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD

CONSTRUCTION SEQUENCE

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. CLEAR AND GRUB.
3. CONSTRUCT RETENTION/SEDIMENTATION BASINS.
4. ROUGH GRADE SITE WHILE PROVIDING POSITIVE DRAINAGE TO BASINS.
5. STABILIZE BARE AREAS AND STOCKPILES AS SOON AS PRACTICABLE.
6. FINAL GRADE AND CONSTRUCT BUILDING PADS.
7. INSTALL UNDERGROUND STORM DRAIN PIPES AND ALL UNDERGROUND UTILITIES.
8. COMPLETE BUILDING CONSTRUCTION.
9. CONSTRUCT PAVING AND SIDEWALKS.
10. COMPLETE FINAL GRADING, INSTALL PERMANENT SEEDING AND LANDSCAPING.

APPROVAL

THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH TOWN OF PARADISE VALLEY REQUIREMENTS PRIOR TO ISSUANCE OF PERMIT. THE TOWN NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. THIS COMPLIANCE APPROVAL SHALL NOT PREVENT THE TOWN ENGINEER FROM REQUIRING CORRECTIONS OF ERRORS OR OMISSIONS IN THE PLANS TO BE FOUND IN VIOLATION OF LAWS OR ORDINANCES.

TOWN ENGINEER  
TOWN OF PARADISE VALLEY

DATE

STORM WATER POLLUTION  
PREVENTION PLAN  
COVER SHEET

WOLFSWINKEL RESIDENCE  
3924 E BETHANY HOME RD.,  
PARADISE VALLEY, AZ 85253

Land  
DEVELOPMENT GROUP

REGISTERED PROFESSIONAL ENGINEER  
CERTIFICATE NO. 41005  
NICKOLA J. PRODANOV  
PHOENIX, AZ 85020  
PHOENIX@LDGNG.COM

Contact Arizona 811 at least two full working days before you begin excavation  
ARIZONA811  
Call 811 or click Arizona811.com

SP-1  
1 OF 2









1 3DPV-1 (FRONT LEFT SIDE VIEW)  
1/8" = 1'-0"



2 3DPV-2 ( FRONT RIGHT SIDE VIEW)  
1/8" = 1'-0"



3 3DPV-3 (REAR LEFT SIDE VIEW)  
1/8" = 1'-0"



4 3DPV-4 REAR RIGHT SIDE VIEW  
1/8" = 1'-0"

CUSTOM NEW HOME  
WOLFSWINKEL RESIDENCE  
3924 E BETHONY HOME ROAD  
PARADISE VALLEY, AZ 85253  
MARICOPA COUNTY

DDG  
DUNCAN DESIGN GROUP, LLC  
3723 WEST BARNES LANE  
PHOENIX, ARIZONA 85051  
PHONE: 602.841.1284  
FAX: 602.841.7517  
DUNCANDESIGNGROUPPHX@GMAIL.COM

DATE: 12.23.2024

No.	Description	Date

SHEET NAME:  
RENDERINGS

SHEET NUMBER:  
R-1

PROJECT #:

\*\*\*  
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