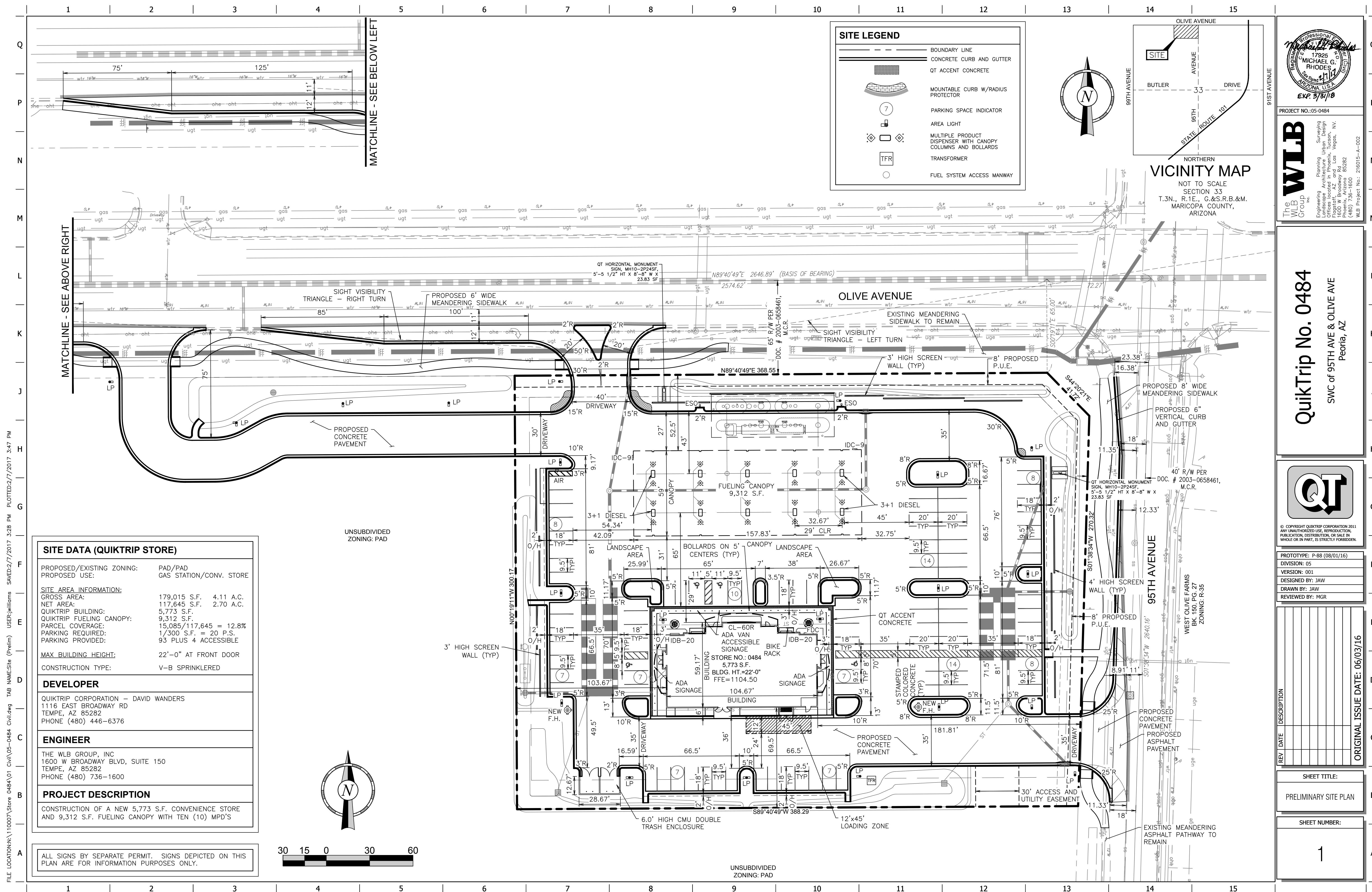
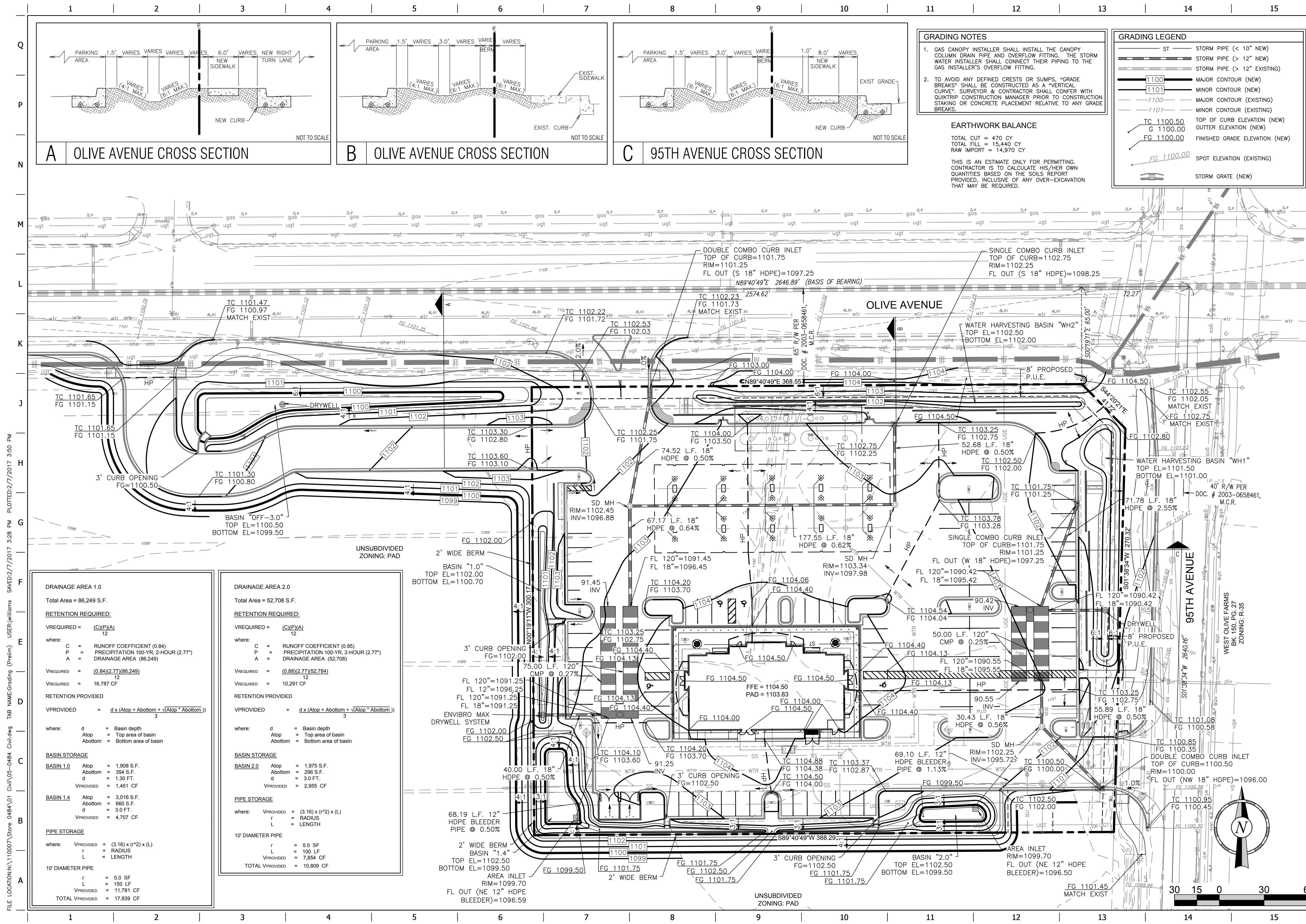






DRAINAGE AREA 1.0	
Total Area = 86,249 S.F.	
RETENTION REQUIRED:	
VREQUIRED =	$\frac{(C)(P)(A)}{12}$
where:	
C =	RUNOFF COEFFICIENT (0.84)
P =	PRECIPITATION 100-YR, 2-HOUR (2.77")
A =	DRAINAGE AREA (86,249)
VREQUIRED =	$\frac{(0.84)(2.77)(86,249)}{12}$
VREQUIRED =	16,787 CF
RETENTION PROVIDED:	
VPROVIDED =	$\frac{d \times (A_{top} + A_{bottom} + \sqrt{A_{top} \times A_{bottom}})}{3}$
where:	
d =	Basin depth
A _{top} =	Top area of basin
A _{bottom} =	Bottom area of basin
BASIN STORAGE	
BASIN 1.0	
A _{top} =	1,808 S.F.
A _{bottom} =	354 S.F.
d =	1.30 FT.
V _{PROVIDED} =	1,451 CF
BASIN 1.4	
A _{top} =	3,016 S.F.
A _{bottom} =	660 S.F.
d =	3.0 FT.
V _{PROVIDED} =	4,707 CF
PIPE STORAGE	
where:	
V _{PROVIDED} =	$(3.16) \times (r^2) \times (L)$
r =	RADIUS
L =	LENGTH
10" DIAMETER PIPE	
r =	5.0 SF
V _{PROVIDED} =	150 LF
V _{PROVIDED} =	11,781 CF
TOTAL V _{PROVIDED} =	17,939 CF

DRAINAGE AREA 2.0	
Total Area = 52,708 S.F.	
RETENTION REQUIRED:	
VREQUIRED =	$\frac{(C)(P)(A)}{12}$
where:	
C =	RUNOFF COEFFICIENT (0.85)
P =	PRECIPITATION 100-YR, 2-HOUR (2.77")
A =	DRAINAGE AREA (52,708)
VREQUIRED =	$\frac{(0.85)(2.77)(52,708)}{12}$
VREQUIRED =	10,291 CF
RETENTION PROVIDED:	
VPROVIDED =	$\frac{d \times (A_{top} + A_{bottom} + \sqrt{A_{top} \times A_{bottom}})}{3}$
where:	
d =	Basin depth
A _{top} =	Top area of basin
A _{bottom} =	Bottom area of basin
BASIN STORAGE	
BASIN 2.0	
A _{top} =	1,975 S.F.
A _{bottom} =	296 S.F.
d =	3.0 FT.
V _{PROVIDED} =	2,955 CF
PIPE STORAGE	
where:	
V _{PROVIDED} =	$(3.16) \times (r^2) \times (L)$
r =	RADIUS
L =	LENGTH
10" DIAMETER PIPE	
r =	5.0 SF
V _{PROVIDED} =	100 LF
V _{PROVIDED} =	7,854 CF
TOTAL V _{PROVIDED} =	10,809 CF

A OLIVE AVENUE CROSS SECTION

B OLIVE AVENUE CROSS SECTION

C 95TH AVENUE CROSS SECTION

- GRADING NOTES**
1. GAS CANOPY INSTALLER SHALL INSTALL THE CANOPY COLUMN DRAIN PIPE AND OVERFLOW FITTING. THE STORM WATER INSTALLER SHALL CONNECT THEIR PIPING TO THE GAS INSTALLER'S OVERFLOW FITTING.
 2. TO AVOID ANY DEFINED CRESTS OR SUMPS, "GRADE BREAKS" SHALL BE CONSTRUCTED AS A "VERTICAL CURVE". SURVEYOR & CONTRACTOR SHALL CONFER WITH QUIKTRIP CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION STAKING OR CONCRETE PLACEMENT RELATIVE TO ANY GRADE BREAKS.

EARTHWORK BALANCE

TOTAL CUT = 470 CY
TOTAL FILL = 15,440 CY
RAW IMPORT = 14,970 CY

THIS IS AN ESTIMATE ONLY FOR PERMITTING. CONTRACTOR IS TO CALCULATE HIS/HER OWN QUANTITIES BASED ON THE SOILS REPORT PROVIDED, INCLUSIVE OF ANY OVER-EXCAVATION THAT MAY BE REQUIRED.

GRADING LEGEND	
ST	STORM PIPE (< 10" NEW)
ST	STORM PIPE (> 12" NEW)
ST	STORM PIPE (> 12" EXISTING)
1100	MAJOR CONTOUR (NEW)
1101	MINOR CONTOUR (NEW)
1100	MAJOR CONTOUR (EXISTING)
1101	MINOR CONTOUR (EXISTING)
TC 1100.50	TOP OF CURB ELEVATION (NEW)
G 1100.00	GUTTER ELEVATION (NEW)
FG 1100.00	FINISHED GRADE ELEVATION (NEW)
FG 1100.00	SPOT ELEVATION (EXISTING)
STORM GRATE (NEW)	



PROJECT NO.: 05-0484

The WLB Group Inc.
Professional Engineer
Surveying
Urban Design
Landscape Architecture
Civil Engineering
Flagstaff, AZ and Las Vegas, NV
Phoenix, Arizona 85282
(480) 736-1600
WLB Project No.: 216015-A-002

QuikTrip No. 0484
SWC of 95TH AVE & OLIVE AVE
Peoria, AZ



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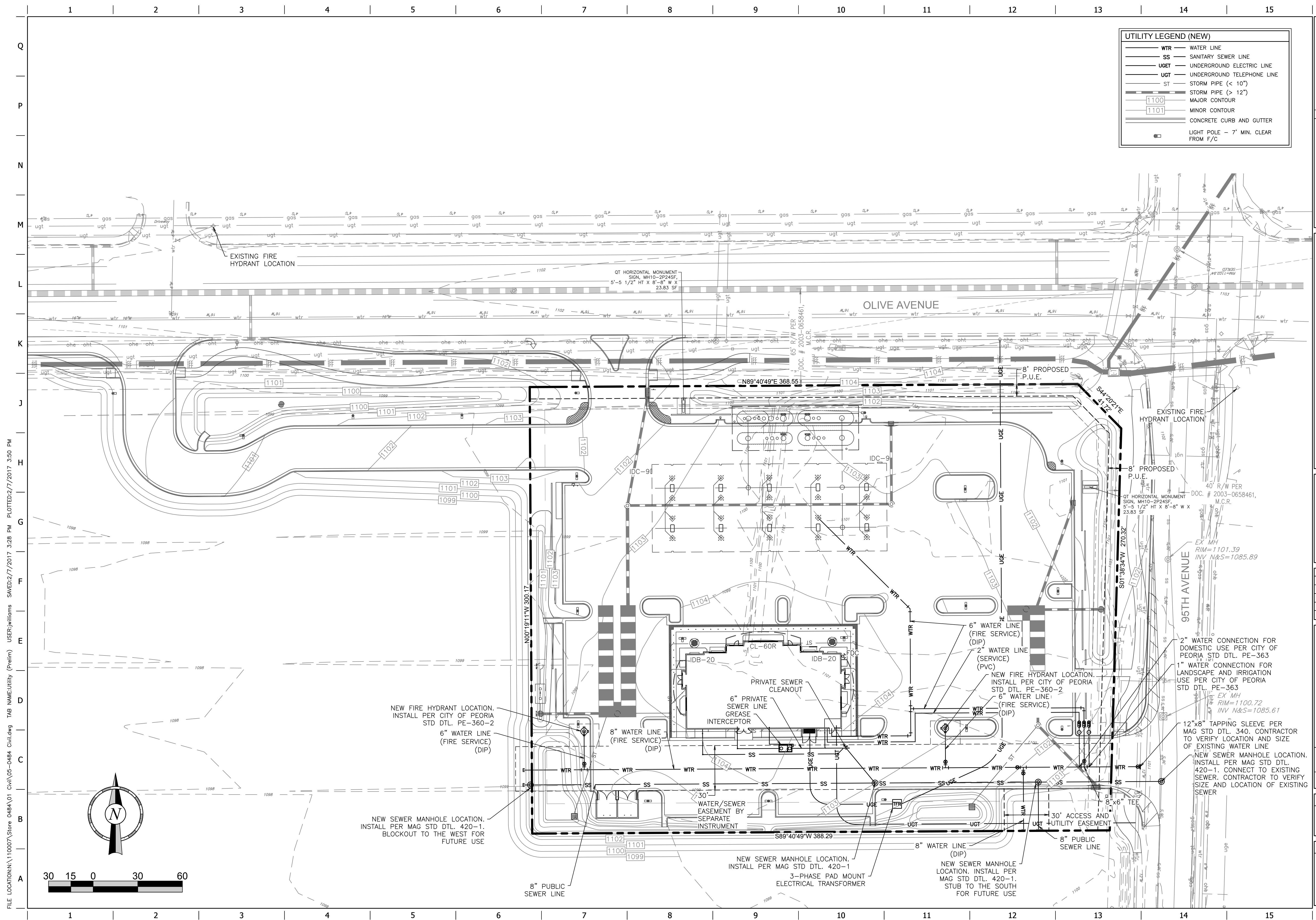
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PRELIMINARY GRADING
PLAN

SHEET NUMBER:

2

ORIGINAL ISSUE DATE: 06/03/16



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QuikTrip No. 0484



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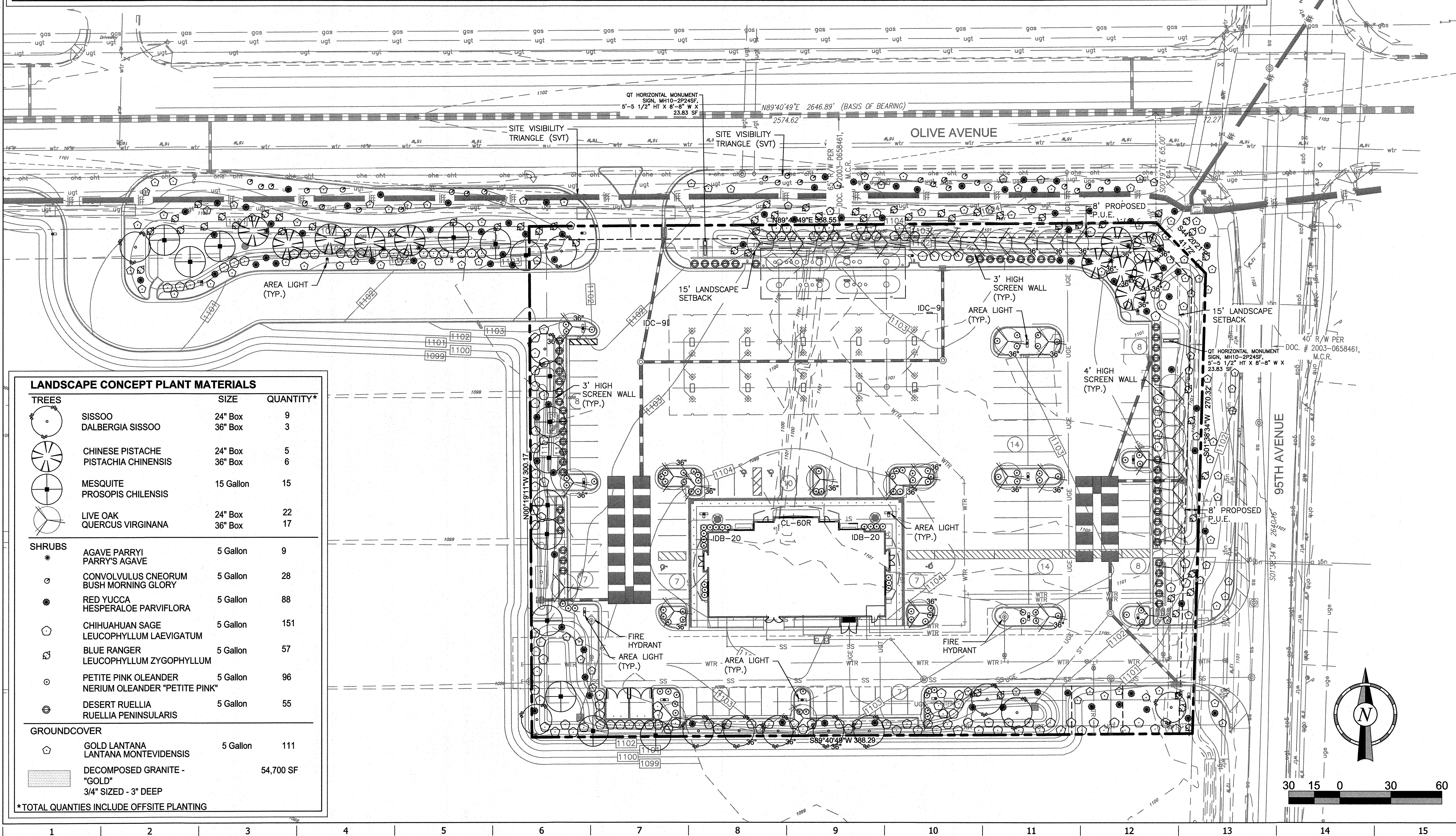
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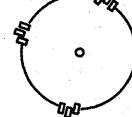
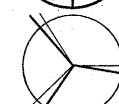
SHEET TITLE:
PRELIMINARY UTILITY PLAN

SHEET NUMBER:
3

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1	2	3	4	5	6	7	8	9	10	11	12	13					
LANDSCAPE AREAS				Required	Provided	PLANT QUANTITIES				Required	Provided	TOTALS		Required	Provided		
A. On-Site Landscape Areas [14-35-4.A.1]						On-Site Landscape Areas [14-35-4.A.1.a]						Total landscape Areas (A + B + C)		21,567 sq. ft	35,716 sq. ft		
1. Overall On-Site				21,567 sq. ft	35,716 sq. ft	Multi-Family and Non-Residential						Total Trees (D + F + H + J)		67 trees	72 trees		
• Industrial: 10% of Net Site Area**						D. Trees: 1 per 400 sq. ft. of req. landscaping (see A.1) (54 Trees Required)				45 trees	45 trees	Total 24" Box Trees (50% of total required trees)		40 trees	40 trees		
• Multi-Family: 20% of Net Site Area**						per [14-35-4.B.1.] 27 / 1.5 = [18 Trees] - (27) 24" Box and (18) 36" Box ²						Total Shrubs (E + G + I + K)		400 shrubs	420 shrubs		
• Commercial/Other Non-Residential: 20% of Net Site Area**						E. Shrubs: 5 per 400 sq. ft. of req. landscaping (see A. 1)				270 shrubs	290 shrubs						
(** Net out land use buffer & school play fields, if applicable [C])						Schools						GENERAL NOTES					
B. Street Frontage Buffer [14-35-4.A.2]						F. Trees: 1 per 800 sq. ft. of req. landscaping (see A. 1)				n/a trees	n/a trees	1. Turf (lawn) is limited to a maximum of 20% of the site area.					
1. Commercial/ Multi-Family: 15' wide strip (on-site) along street frontage				654 lf. ft	654 lf. ft	G. Shrubs: 1 per 800 sq. ft. of req. landscaping (see A. 1)				n/a shrubs	n/a shrubs	2. A development may substitute a 36" Box or larger tree in place of a 15 Gallon tree at a substitution rate of 1.5 trees for every required (15) Gallon tree.					
2. Schools: 15' wide strip (on-site) along arterial street frontage / 10' others				n/a lf. ft	n/a lf. ft	Street Frontage Buffer Plantings [14-35-4.A.2]						3. All landscaped areas shall be supported by an automatic irrigation system which may be spray, flood or drip system.					
3. Industrial: 10' wide strip (on-site) along street frontage				n/a lf. ft	n/a lf. ft	H. Trees: 1 per 25 (in.ft. of street frontage) ⁵ (26 Trees Required)				22 trees	27 trees	4. Plant materials utilized in landscaped areas in the ROW must be included on the most recent edition of the Phoenix Active Management Area Low Water Use / Drought Tolerant Plant List.					
C. Land Use Buffer [14-35-4.A.3]						per [14-35-4.B.1.] 13 / 1.5 = [9 Trees] - (13) 24" Box and (9) 36" Box ²						5. The Property Owner and/or Lessee shall be responsible to install/maintain all landscaping within the Right-of-Way (landscaping within ROW will count towards Street Frontage Buffer Planting requirements).					
1. O-1 /C-1 Districts abutting all residential districts: 20' wide				n/a sq. ft	n/a sq. ft	I. Shrubs: 5 per 25 lin.ft. of street frontage ⁵				130 shrubs	130 shrubs	6. A 3 foot clear space is required around all fire suppression equipment. No plants may be installed that will encroach when mature.					
2. Other Non-Residential Districts abutting all residential districts: 30' wide				n/a sq. ft	n/a sq. ft	Land Use Buffer Plantings [14-35-4.A.3]											
3. Multi-Family Districts abutting single-family districts: 20' wide				n/a sq. ft	n/a sq. ft	J. Trees: 3 per 1,000 sq.ft. of required buffer area (24" Box min.)				n/a trees	n/a trees						
						K. Shrubs: 5 per 1,000 sq.ft. of required buffer area (5 Gallon min.)				n/a shrubs	n/a shrubs						



LANDSCAPE CONCEPT PLANT MATERIALS			
TREES		SIZE	QUANTITY*
	SISSOO	24" Box	9
	DALBERGIA SISSOO	36" Box	3
	CHINESE PISTACHE	24" Box	5
	PISTACHIA CHINENSIS	36" Box	6
	MESQUITE	15 Gallon	15
	PROSOPIS CHILENSIS		
	LIVE OAK	24" Box	22
	QUERCUS VIRGINANA	36" Box	17
SHRUBS			
	AGAVE PARRYI PARRY'S AGAVE	5 Gallon	9
	CONVOLVULUS CNEORUM BUSH MORNING GLORY	5 Gallon	28
	RED YUCCA HESPERALOE PARVIFLORA	5 Gallon	88
	CHIUHUAHUA SAGE LEUCOPHYLLUM LAEVIGATUM	5 Gallon	151
	BLUE RANGER LEUCOPHYLLUM ZYGOPHYLLUM	5 Gallon	57
	PETITE PINK OLEANDER NERIUM OLEANDER "PETITE PINK"	5 Gallon	96
	DESERT RUELLIA RUELLIA PENINSULARIS	5 Gallon	55
GROUND COVER			
	GOLD LANTANA LANTANA MONTEVIDENSIS	5 Gallon	111
	DECOMPOSED GRANITE - "GOLD" 3/4" SIZED - 3" DEEP		54,700 SF
*TOTAL QUANTIES INCLUDE OFFSITE PLANTING			

PROJECT NO.: 05-0484

The WTLB Group, Inc.

Planning
Engineering
Architectural
Landscape
Design

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SWC of 95TH AVE & OLIVE AVE
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